Superabsorbent Polymers from South Korea

Investigation No. 731-TA-1574 (Final)

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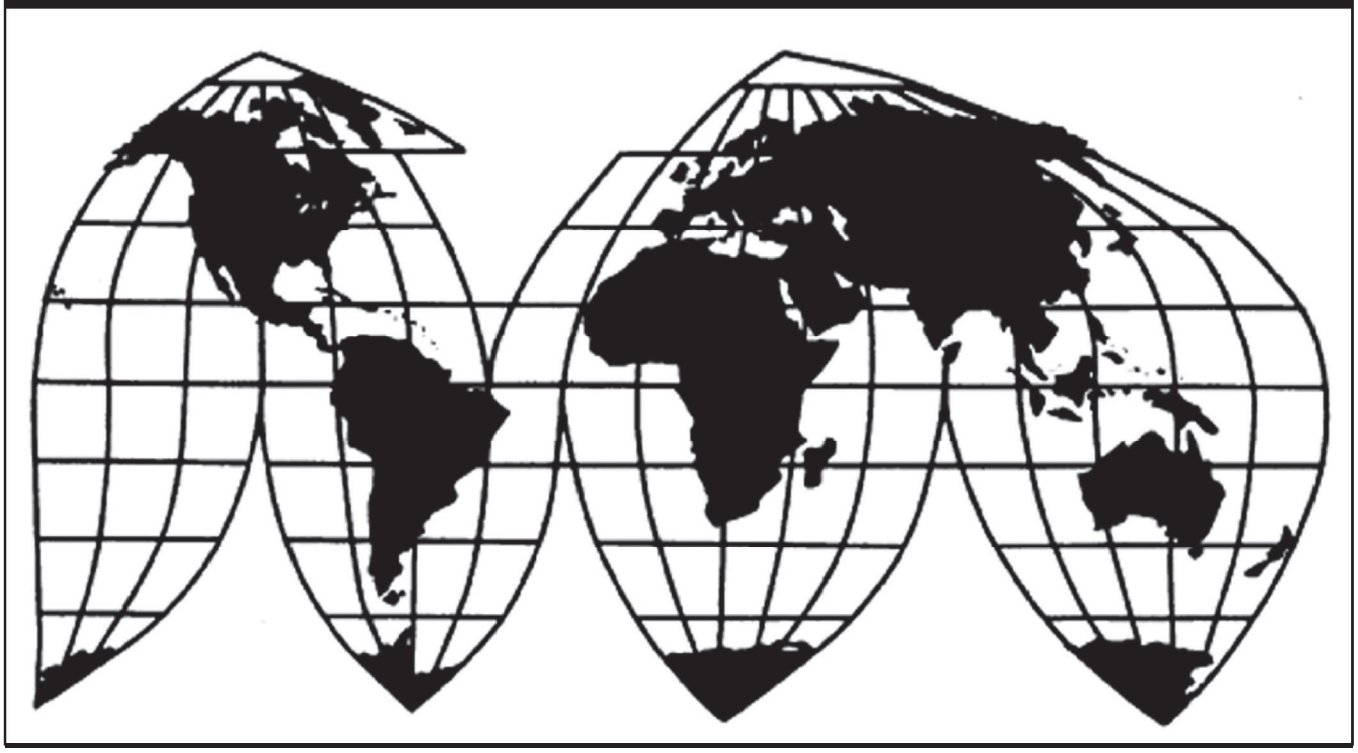
U.S. International Trade Commission



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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-1574 (Final)

Superabsorbent Polymers from South Korea

DETERMINATION

On the basis of the record[1] developed in the subject investigation, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that an industry in the United States is materially injured by reason of imports of superabsorbent polymers (SAP) from South Korea, provided for in subheadings 3906.90.50 and 3906.10.00 of the Harmonized Tariff Schedule of the United States, that have been found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value ("LTFV").[2]

BACKGROUND

The Commission instituted this investigation effective November 2, 2021, following receipt of a petition filed with the Commission and Commerce by the Ad Hoc Coalition of American SAP Producers, whose members include BASF Corporation, Florham Park, New Jersey; Evonik Superabsorber LLC, Greensboro, North Carolina; and Nippon Shokubai America Industries, Inc., Pasadena, Texas. The Commission scheduled the final phase of the investigation following notification of a preliminary determination by Commerce that imports of SAP from South Korea were being sold at LTFV within the meaning of section 733(b) of the Act (19 U.S.C. 1673b(b)). Notice of the scheduling of the final phase of the Commission's investigation and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* of June 28, 2022 (87 FR 38422). The Commission conducted its hearing on October 18, 2022. All persons who requested the opportunity were permitted to participate.

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[1] The record is defined in § 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR 207.2(f)).

[2] 87 FR 65035 (October 27, 2022).

Views of the Commission

Based on the record in the final phase of this investigation, we determine that an industry in the United States is materially injured by reason of imports of superabsorbent polymers ("SAP") from South Korea found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value ("LTFV").

I. Background

The Ad Hoc Coalition of American SAP Producers ("Petitioner" or "the Coalition"), filed the petition in this investigation on November 2, 2021. The Coalition's members consist of three domestic producers of SAP: BASF Corporation ("BASF"), Evonik Superabsorber LLC ("Evonik"), and Nippon Shokubai America Industries, Inc. ("NSAI"). Representatives from members of the Coalition provided written testimony, appeared at the hearing accompanied by counsel, and submitted joint prehearing and posthearing briefs and final comments.

Three respondent entities participated in the final phase of this investigation. LG Chem Inc., Ltd. ("LG Chem"), a South Korean producer of SAP, and The Procter & Gamble Company and The Procter & Gamble Paper Products Company (collectively, "P&G"), a U.S. importer and purchaser of subject merchandise from South Korea, provided written testimony, appeared at the hearing accompanied by counsel, and submitted prehearing and posthearing briefs and final comments. Kimberly-Clark Corporation ("KCC"), a purchaser of subject merchandise from South Korea, submitted prehearing and posthearing briefs.

U.S. industry data are based on the questionnaire responses from three firms that accounted for all U.S. production of SAP in 2021.[1] U.S. import data are based on the questionnaire responses of nine firms that accounted for at least *** percent of imports of SAP from South Korea in 2021.[2] Foreign industry data are based on the questionnaire responses of two SAP producers in South Korea that accounted for *** percent of SAP production in South Korea and *** U.S. imports of subject merchandise from South Korea in 2021.[3]

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[1] Confidential Report ("CR") at I-4, Memorandum INV-UU-107 (Nov. 4, 2022) and Public Report, *Superabsorbent Polymers from South Korea*, Inv. No. 731-TA-1574 (Final), USITC Pub. 5388 (Dec. 2022) ("PR") at I-4.

[2] CR/PR at I-4 and IV-1 n.3.

[3] CR/PR at I-4 and VII-3.

II. Domestic Like Product

A. In General

In determining whether an industry in the United States is materially injured or threatened with material injury by reason of imports of subject merchandise, the Commission first defines the "domestic like product" and the "industry."[4] Section 771(4)(A) of the Tariff Act of 1930, as amended ("the Tariff Act"), defines the relevant domestic industry as the "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[5] In turn, the Tariff Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation."[6]

By statute, the Commission's "domestic like product" analysis begins with the "article subject to an investigation," *i.e.*, the subject merchandise as determined by Commerce.[7] Therefore, Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value is "necessarily the starting point of the Commission's like product analysis."[8] The Commission then defines the domestic like product in light of the imported articles Commerce has identified.[9] The decision regarding the appropriate domestic like product(s) in an investigation is a factual determination, and the Commission has applied the statutory standard of "like" or "most similar in characteristics and

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[4] 19 U.S.C. § 1677(4)(A).

[5] 19 U.S.C. § 1677(4)(A).

[6] 19 U.S.C. § 1677(10).

[7] 19 U.S.C. § 1677(10). The Commission must accept Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value. *See*, *e.g.*, *USEC, Inc. v. United States*, 34 Fed. App'x 725, 730 (Fed. Cir. 2002) ("The ITC may not modify the class or kind of imported merchandise examined by Commerce."); *Algoma Steel Corp. v. United States,* 688 F. Supp. 639, 644 (Ct. Int'l Trade 1988), *aff'd*, 865 F.3d 240 (Fed. Cir.), *cert. denied*, 492 U.S. 919 (1989).

[8] *Cleo Inc. v. United States,* 501 F.3d 1291, 1298 (Fed. Cir. 2007); *see also Hitachi Metals, Ltd. v. United States*, Case No. 19-1289, slip op. at 8-9 (Fed. Circ. Feb. 7, 2020) (the statute requires the Commission to start with Commerce's subject merchandise in reaching its own like product determination).

[9] *Cleo*, 501 F.3d at 1298 n.1 ("Commerce's {scope} finding does not control the Commission's {like product} determination."); *Hosiden Corp. v. Advanced Display Mfrs.,* 85 F.3d 1561, 1568 (Fed. Cir. 1996) (the Commission may find a single like product corresponding to several different classes or kinds defined by Commerce); *Torrington Co. v. United States*, 747 F. Supp. 744, 748–52 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991) (affirming the Commission's determination defining six like products in investigations where Commerce found five classes or kinds).

uses" on a case-by-case basis.[10] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[11] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[12]

B. Product Description

Commerce defined the scope of the imported merchandise under investigation as:

> …superabsorbent polymers (SAP), which is cross-linked sodium polyacrylate most commonly conforming to Chemical Abstracts Service (CAS) registry number 9003-04-7, where at least 90 percent of the dry matter, by weight on a nominal basis, corrected for moisture content, is comprised of a polymer with a chemical formula of $(C_3H_3O_2Na_xH_{1-x})_n$, where x is within a range of 0.00-1.00 and there is no limit to n. The subject merchandise also includes merchandise with a chemical formula of $\{(C_2H_3)\ COONa_yH_{(1-y)}\}_n$, where y is within a range of 0.00-1.00 and there is no limit to n. The subject merchandise includes SAP which is fully neutralized as well as SAP that is not fully neutralized.
>
> The subject merchandise may also conform to CAS numbers 25549-84-2, 77751-27-0, 9065-11-6, 9033-79-8, 164715-58-6, 445299-36-5, 912842-45-6, 561012-86-0, 561012-85-9, or 9003-01-4.

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[10] *See, e.g.*, *Cleo Inc. v. United States,* 501 F.3d 1291, 1299 (Fed. Cir. 2007); *NEC Corp. v. Department of Commerce*, 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); *Nippon Steel Corp. v. United States*, 19 CIT 450, 455 (1995); *Torrington Co. v. United States,* 747 F. Supp. 744, 749 n.3 (Ct. Int'l Trade 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991) ("every like product determination 'must be made on the particular record at issue' and the 'unique facts of each case'"). The Commission generally considers a number of factors, including the following: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) common manufacturing facilities, production processes, and production employees; and, where appropriate, (6) price. *See Nippon*, 19 CIT at 455 n.4; *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996).

[11] *See*, *e.g.*, S. Rep. No. 96-249 at 90-91 (1979).

[12] *Nippon*, 19 CIT at 455; *Torrington*, 747 F. Supp. at 748-49; *see also* S. Rep. No. 96-249 at 90-91 (Congress has indicated that the like product standard should not be interpreted in "such a narrow fashion as to permit minor differences in physical characteristics or uses to lead to the conclusion that the product and article are not 'like' each other, nor should the definition of 'like product' be interpreted in such a fashion as to prevent consideration of an industry adversely affected by the imports under consideration.").

> All forms and sizes of SAP, regardless of packaging type, including but not limited to granules, pellets, powder, fibers, flakes, liquid, or gel are within the scope of this investigation. The scope also includes SAP whether or not it incorporates additives for anticaking, anti-odor, antiyellowing, or similar functions.
>
> The scope also includes SAP that is combined, commingled, or mixed with other products after final sieving. For such combined products, only the SAP component is covered by the scope of this investigation. SAP that has been combined with other products is included within the scope, regardless of whether the combining occurs in third countries. A combination is excluded from this investigation if the total SAP component of the combination (regardless of the source or sources) comprises less than 50 percent of the combination, on a nominal dry weight basis.[13]

SAP is a class of polymers that have a high capacity to absorb and retain water and aqueous liquids.[14] SAP is typically produced in granular, powder form.[15] The absorption process causes a phase change of the polymer from a dry powder to a soft gel that is still capable of absorbing additional liquid.[16] The two primary components of SAP, comprising over *** percent of the product, are acrylic acid and sodium hydroxide (also called caustic soda), with propylene as a precursor to making acrylic acid.[17]

SAP is mainly used as an absorbent agent in hygiene applications, such as baby diapers, adult diapers, and feminine hygiene products.[18] Although less common, SAP can also be used in food-related applications, such as refrigerants or freshness-keeping agents, and in household products, such as disposable heating packs or environment fragrance.[19] SAP can be used for water retention in agriculture or civil engineering projects.[20]

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[13] *Certain Superabsorbent Polymers From the Republic of Korea: Final Determination of Sales at Less Than Fair Value*, 87 Fed. Reg. 65035, 65037 (Oct. 27, 2022).

[14] CR/PR at I-7.

[15] CR/PR at I-7.

[16] CR/PR at I-7.

[17] CR/PR at I-12.

[18] CR/PR at I-7.

[19] CR/PR at I-8.

[20] CR/PR at I-8.

C. Arguments of the Parties

Petitioner argues that the Commission should define a single domestic like product coextensive with Commerce's scope, as it did in its preliminary determination. Petitioner contends that the facts underlying the Commission's domestic like product analysis from its preliminary determination are unchanged and note that no party has asked the Commission to reconsider its prior domestic like product finding.[21]

No respondent party has argued for a different domestic like product definition.

D. Analysis

In its preliminary determination, the Commission found that all domestically produced SAP has similar chemistry, is made from the same raw materials, and shares the same basic use, primarily as an absorbent agent in infant diapers and adult incontinence and feminine hygiene products. In addition, the Commission found that all domestically produced SAP is generally manufactured in the same facilities using the same employees and is sold overwhelmingly to end users at prices that are within a reasonably close range. The information available indicated that all domestically produced SAP is perceived as comprising a single product category and is interchangeable when produced to the same specifications. Based on the foregoing, the Commission defined a single domestic like product coextensive with the scope.[22]

In the final phase of this investigation, there is no new information on the record concerning the characteristics of the product at issue that indicates the Commission should reconsider its definition of the domestic like product.[23] Therefore, and in the absence of argument to the contrary, we again define the domestic like product as all SAP, coextensive with Commerce's scope in this investigation.

III. Domestic Industry

The domestic industry is defined as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[24] In defining the domestic industry, the Commission's general practice has been to include in the industry producers of all

[21] Petitioner's Prehearing Br. at 8.
[22] Preliminary Determination at 11-12.
[23] *See* CR/PR at I-7-18.
[24] 19 U.S.C. § 1677(4)(A).

domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

Petitioner argues that the Commission should find that there is a single domestic industry comprised of all three domestic producers of SAP—BASF, Evonik, and NSAI.[25]

No respondent party disagrees with the domestic industry definition the Commission adopted in its preliminary determination.[26]

There are no issues arising under the related party provision in this investigation. Accordingly, based on our definition of the domestic like product and in the absence of contrary argument, we define a single domestic industry consisting of all U.S. producers of SAP.

IV. Material Injury by Reason of Subject Imports[27]

Based on the record in the final phase of this investigation, we find that an industry in the United States is materially injured by reason of imports of SAP from South Korea that Commerce has found to be sold in the United States at LTFV.

A. Legal Standards

In the final phase of antidumping and countervailing duty investigations, the Commission determines whether an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.[28] In making this determination, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic

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[25] Petitioner's Prehearing Br. at 9. Petitioner states that no related party issues are presented in this investigation. It indicates that ***. *Id.* at 9 n.39.

[26] LG Chem concurs that the related party provision does not apply in this investigation. LG Chem's Prehearing Br. at 4.

[27] Pursuant to Section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product that account for less than 3 percent of all such merchandise imported into the United States during the most recent 12 months for which data are available preceding the filing of the petition shall generally be deemed negligible. 19 U.S.C. §§ 1671b(a), 1673b(a), 1677(24)(A)(i), 1677(24)(B); *see also* 15 C.F.R. § 2013.1 (developing countries for purposes of 19 U.S.C. § 1677(36)). The exceptions to this general rule are not applicable here.

Based on questionnaire data, subject imports accounted for *** percent of total U.S. imports of SAP in the 12-month period (November 2020 to October 2021) preceding the filing of the petition. CR/PR at Table IV-4. Therefore, we find that that subject imports from South Korea are not negligible.

[28] 19 U.S.C. §§ 1671d(b), 1673d(b).

like product, but only in the context of U.S. production operations.[29] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[30] In assessing whether the domestic industry is materially injured by reason of subject imports, we consider all relevant economic factors that bear on the state of the industry in the United States.[31] No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[32]

Although the statute requires the Commission to determine whether the domestic industry is "materially injured or threatened with material injury by reason of" unfairly traded imports,[33] it does not define the phrase "by reason of," indicating that this aspect of the injury analysis is left to the Commission's reasonable exercise of its discretion.[34] In identifying a causal link, if any, between subject imports and material injury to the domestic industry, the Commission examines the facts of record that relate to the significance of the volume and price effects of the subject imports and any impact of those imports on the condition of the domestic industry. This evaluation under the "by reason of" standard must ensure that subject imports are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.[35]

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition

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[29] 19 U.S.C. § 1677(7)(B). The Commission "may consider such other economic factors as are relevant to the determination" but shall "identify each {such} factor ... and explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B).

[30] 19 U.S.C. § 1677(7)(A).

[31] 19 U.S.C. § 1677(7)(C)(iii).

[32] 19 U.S.C. § 1677(7)(C)(iii).

[33] 19 U.S.C. §§ 1671d(b), 1673d(b).

[34] *Angus Chemical Co. v. United States*, 140 F.3d 1478, 1484-85 (Fed. Cir. 1998) ("{T}he statute does not 'compel the commissioners' to employ {a particular methodology}."), *aff'g,* 944 F. Supp. 943, 951 (Ct. Int'l Trade 1996).

[35] The Federal Circuit, in addressing the causation standard of the statute, observed that "{a}s long as its effects are not merely incidental, tangential, or trivial, the foreign product sold at less than fair value meets the causation requirement." *Nippon Steel Corp. v. USITC*, 345 F.3d 1379, 1384 (Fed. Cir. 2003). This was further ratified in *Mittal Steel Point Lisas Ltd. v. United States*, 542 F.3d 867, 873 (Fed. Cir. 2008), where the Federal Circuit, quoting *Gerald Metals, Inc. v. United States*, 132 F.3d 716, 722 (Fed. Cir. 1997), stated that "this court requires evidence in the record 'to show that the harm occurred "by reason of" the LTFV imports, not by reason of a minimal or tangential contribution to material harm caused by LTFV goods.'" *See also Nippon Steel Corp. v. United States*, 458 F.3d 1345, 1357 (Fed. Cir. 2006); *Taiwan Semiconductor Industry Ass'n v. USITC*, 266 F.3d 1339, 1345 (Fed. Cir. 2001).

among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.[36] In performing its examination, however, the Commission need not isolate the injury caused by other factors from injury caused by unfairly traded imports.[37] Nor does the "by reason of" standard require that unfairly traded imports be the "principal" cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.[38] It is clear that the existence of injury caused by other factors does not compel a negative determination.[39]

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[36] SAA at 851-52 ("{T}he Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports."); S. Rep. 96-249 at 75 (1979) (the Commission "will consider information which indicates that harm is caused by factors other than less-than-fair-value imports."); H.R. Rep. 96-317 at 47 (1979) ("in examining the overall injury being experienced by a domestic industry, the ITC will take into account evidence presented to it which demonstrates that the harm attributed by the petitioner to the subsidized or dumped imports is attributable to such other factors;" those factors include "the volume and prices of nonsubsidized imports or imports sold at fair value, contraction in demand or changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology and the export performance and productivity of the domestic industry"); *accord Mittal Steel*, 542 F.3d at 877.

[37] SAA at 851-52 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports."); *Taiwan Semiconductor Industry Ass'n,* 266 F.3d at 1345 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports ... . Rather, the Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports." (emphasis in original)); *Asociacion de Productores de Salmon y Trucha de Chile AG v. United States*, 180 F. Supp. 2d 1360, 1375 (Ct. Int'l Trade 2002) ("{t}he Commission is not required to isolate the effects of subject imports from other factors contributing to injury" or make "bright-line distinctions" between the effects of subject imports and other causes.); *see also Softwood Lumber from Canada*, Inv. Nos. 701-TA-414 and 731-TA-928 (Remand), USITC Pub. 3658 at 100-01 (Dec. 2003) (Commission recognized that "{i}f an alleged other factor is found not to have or threaten to have injurious effects to the domestic industry, *i.e*., it is not an 'other causal factor,' then there is nothing to further examine regarding attribution to injury"), *citing Gerald Metals,* 132 F.3d at 722 (the statute "does not suggest that an importer of LTFV goods can escape countervailing duties by finding some tangential or minor cause unrelated to the LTFV goods that contributed to the harmful effects on domestic market prices.").

[38] S. Rep. 96-249 at 74-75; H.R. Rep. 96-317 at 47.

[39] *See Nippon Steel Corp*., 345 F.3d at 1381 ("an affirmative material-injury determination under the statute requires no more than a substantial-factor showing. That is, the 'dumping' need not be the sole or principal cause of injury.").

Assessment of whether material injury to the domestic industry is "by reason of" subject imports "does not require the Commission to address the causation issue in any particular way" as long as "the injury to the domestic industry can reasonably be attributed to the subject imports."[40] The Commission ensures that it has "evidence in the record" to "show that the harm occurred 'by reason of' the LTFV imports," and that it is "not attributing injury from other sources to the subject imports." [41] The Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[42]

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard.[43] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[44]

B. Conditions of Competition and the Business Cycle

The following conditions of competition inform our analysis of whether there is material injury by reason of subject imports.

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[40] *Mittal Steel*, 542 F.3d at 876 &78; *see also id.* at 873 ("While the Commission may not enter an affirmative determination unless it finds that a domestic industry is materially injured 'by reason of' subject imports, the Commission is not required to follow a single methodology for making that determination ... {and has} broad discretion with respect to its choice of methodology.") *citing United States Steel Group v. United States*, 96 F.3d 1352, 1362 (Fed. Cir. 1996) and S. Rep. 96-249 at 75. In its decision in *Swiff-Train v. United States*, 793 F.3d 1355 (Fed. Cir. 2015), the Federal Circuit affirmed the Commission's causation analysis as comporting with the Court's guidance in *Mittal*.

[41] *Mittal Steel*, 542 F.3d at 873 (quoting from *Gerald Metals*, 132 F.3d at 722), 877-79. We note that one relevant "other factor" may involve the presence of significant volumes of price-competitive nonsubject imports in the U.S. market, particularly when a commodity product is at issue. In appropriate cases, the Commission collects information regarding nonsubject imports and producers in nonsubject countries in order to conduct its analysis.

[42] *Nucor Corp. v. United States*, 414 F.3d 1331, 1336, 1341 (Fed. Cir. 2005); *see also Mittal Steel*, 542 F.3d at 879 ("*Bratsk* did not read into the antidumping statute a Procrustean formula for determining whether a domestic injury was 'by reason' of subject imports.").

[43] We provide in our discussion below a full analysis of other factors alleged to have caused any material injury experienced by the domestic industry.

[44] *Mittal Steel*, 542 F.3d at 873; *Nippon Steel Corp*., 458 F.3d at 1350, *citing U.S. Steel Group*, 96 F.3d at 1357; S. Rep. 96-249 at 75 ("The determination of the ITC with respect to causation is ... complex and difficult, and is a matter for the judgment of the ITC.").

1. Demand Considerations

Demand for SAP is driven by demand for the downstream products in which it is used.[45] In particular, demand for SAP is driven by demand for disposable infant diapers and adult incontinence products, and to a lesser extent, feminine hygiene and industry products.[46] Due to a lack of substitute products and small-to-moderate cost share of SAP in end-use products, demand for SAP is relatively price inelastic.[47]

Demand trends for infant diapers and adult incontinence products are based on population and demographics.[48] Nearly all responding market participants indicated that the SAP market was not subject to business cycles.[49] Ten out of 14 responding market participants reported that U.S. demand for SAP had increased and none reported that it had decreased since January 1, 2019.[50] Apparent U.S. consumption of SAP increased from *** metric tons (MT) in 2019 to *** MT in 2020 and *** MT in 2021, a level *** percent higher than in 2019.[51] It was *** percent higher in the January-June ("interim") 2022 period, at *** MT, than in the interim 2021 period, at *** MT.[52]

Purchases in the U.S. market for SAP are heavily concentrated with three downstream manufacturers of diapers and other hygiene products, ***, which accounted for *** percent of total reported purchases during the January 2019 to June 2022 period of investigation ("POI").[53] During the POI, the domestic SAP was sold overwhelmingly to hygiene end users, but was also sold in small quantities to non-hygiene end users and distributors.[54] Subject imports

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[45] CR/PR at II-1.

[46] CR/PR at II-12.

[47] CR/PR at II-11. Substitutes for SAP are extremely limited. All three U.S. producers, all nine responding purchasers and all but one responding importer reported that there were no substitutes for SAP. CR/PR at II-13. As to cost share, purchasers reported that SAP accounts for 4 to 30 percent of the cost of hygiene products. *Id.*

[48] CR/PR at II-12.

[49] CR/PR at II-12.

[50] CR/PR at Table II-4. Industry witnesses testified to a short-lived spike in demand for SAP in reaction to the COVID-19 pandemic that lasted from March 2020 through May 2020. CR/PR at VI-12.

[51] CR/PR at Tables IV-8 and C-1.

[52] CR/PR at Tables IV-8 and C-1.

[53] CR/PR at II-2, 3. *** accounted for *** percent of total reported purchases in 2021, ***, *** percent, and ***, *** percent. *Id.* at II-3.

[54] CR/PR at Table II-1. During the POI, the domestic industry's U.S. shipments to hygiene end users ranged from *** percent to *** percent of total shipments, with the remainder sold to non-hygiene end users (*** percent to *** percent of total shipments) and distributors (*** percent to *** percent of total shipments). *Id*.

also were sold overwhelmingly to hygiene end users throughout the POI, with *** accounting for *** percent of the reported purchases of South Korean SAP during the POI.[55]

2. Supply Considerations

The domestic industry was the largest supplier of SAP to the U.S. market throughout the POI.[56] It consisted of three firms: BASF, accounting for *** percent of domestic SAP production in 2021, Evonik, accounting for *** percent, and NSAI, accounting for the remaining *** percent.[57] The domestic industry supplied the full range of SAP products to the U.S. market during the POI, including P&G's proprietary grades (SAP-7 and SAP-8), although not all producers were qualified to supply all the products required by purchasers.[58] The domestic industry's market share decreased from *** percent in 2019 to *** percent in 2020 and *** percent in 2021; its market share was higher in interim 2022, at *** percent, than in interim 2021, at *** percent.[59]

Market participants reported that supply constraints affected the domestic supply of SAP during the POI.[60] *** domestic producers reported that they experienced supply constraints in 2021 due to Winter Storm Uri in February 2021 and Hurricane Ida in August 2021.[61] Two of the three producers (***), however, reported that in the aftermath of these weather events they were able to at least partially service their contracts in 2021 using inventories of domestic product.[62] Since the filing of the petition, *** reported no supply

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[55] CR/PR at II-3 and Table V-11. During the POI, U.S. importers' shipments of subject imports to hygiene end users ranged from *** percent to *** percent of their total U.S. shipments, with the remainder sold to non-hygiene end users (*** percent to *** percent) and distributors (*** percent to *** percent). CR/PR at Table II-1.

[56] CR/PR at Tables IV-8 and C-1.

[57] CR/PR at Table III-1. Evonik announced in September 2020 that it plans to spin-off (sell) its SAP division. CR/PR at Table III-4.

[58] Parties disagree as to whether the domestic industry could supply sufficient quantities of SAP-8. *** reported that ***. CR/PR at II-19; Petitioner's Posthearing Br. at Exh. 3, Declaration of ***, paras. 4-5. ***. P&G's Prehearing Br. at 12-14 and Exh. 1, ***. However, as discussed in more detail below, *** assert that they could have supplied additional volumes of SAP-8 to ***, but for low-priced subject import competition.

[59] CR/PR at Tables IV-8 and C-1.

[60] CR/PR at II-8-11.

[61] CR/PR at II-8-9.

[62] CR/PR at II-9.

NSAI reported that ***. *Id.* at II-8-9.

BASF reported ***. *Id*. at II-9.

Evonik ***. *Id*. ***. *Id.* ***. *Id.* ***. *Id.* at II-9.

constraints while *** continued to report such constraints.[63] Purchasers of SAP also reported experiencing supply constraints from domestic producers.[64]

Subject imports were the smallest source of supply to the U.S. market in 2019 but became the second largest source beginning in 2020.[65] Subject imports' market share increased from *** percent of apparent U.S. consumption in 2019 to *** percent in 2020 and *** percent in 2021; their market share was lower in interim 2022, at *** percent, than in interim 2021, at *** percent.[66]

Nonsubject imports were the smallest source of supply to the U.S. market beginning in 2020.[67] Nonsubject imports' market share increased from *** percent in 2019 to *** percent in 2020 and *** percent in 2021; their market share was lower in interim 2022, at *** percent, than in interim 2021, at *** percent.[68] The largest source of nonsubject imports was Japan.[69]

3. Substitutability and Other Conditions

We find that there is a moderate-to-high degree of substitutability between domestically produced SAP and imports of SAP from South Korea, with higher substitutability among qualified suppliers making products to the same specifications.[70] All three responding domestic producers reported that the domestic like product and subject imports were always or frequently interchangeable. The responses of importers and purchasers were mixed.[71] A majority of purchasers (four of seven) reported that domestically produced and South Korean SAP was always or frequently interchangeable but *** reported that the sources were

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[63] CR/PR at II-8. With respect to the COVID-19 pandemic, *** reported some additional costs and supply constraints for raw materials, and that some losses in production and shipments to customers were partially attributable to the effects of the COVID-19 pandemic. CR/PR at II-9. ***. *Id.*

[64] CR/PR at II-10. Specifically, ***. *** *Id.* at II-10-11; ***.

Purchaser *** reported that ***. *Id.* at II-11.

[65] CR/PR at Tables IV-8 and C-1.

[66] CR/PR at Tables IV-8 and C-1. LG Chem America, Inc. ("LGCAI") is the leading U.S. importer of subject imports, accounting for *** percent of imports of SAP from South Korea in 2021. CR/PR at I-3 n.9.

[67] CR/PR at Tables IV-8 and C-1.

[68] CR/PR at Tables IV-8 and C-1.

[69] CR/PR at VII-16.

[70] Factors contributing to this level of substitutability include the qualification of both subject import suppliers and domestic producers to produce to similar individual customer specifications, little preference for particular countries of origin, and similarities between domestically produced SAP and subject imports from qualified sources and when produced to similar specifications. CR/PR at II-15.

[71] CR/PR at Table II-11.

sometimes interchangeable and *** reported that they were never interchangeable.[72] One of two responding importers reported that domestically produced and South Korean SAP was frequently interchangeable and the other (***) reported that they were never interchangeable.[73] Additionally, most purchasers reported that U.S.-produced and South Korean SAP were comparable on 12 of 15 purchasing factors, including product range, product consistency, and quality meeting industry and the purchaser's standards.[74] A majority of purchasers reported that the domestic product was superior or comparable to subject imports in terms of availability and reliability of supply.[75]

The record indicates that customer grade and specification requirements may moderate substitutability to some extent. A large portion of the market consists of SAP products that are made to meet a purchaser's individual specifications and most purchasers described limitations to substituting different grades of SAP in their downstream production processes.[76] When asked whether certain grades/types/sizes of SAP were only available from certain country sources, four of nine purchasers responded "yes" and the other five responded "no."[77]

The record further indicates that price is an important factor in purchasing decisions for SAP, among other important factors, including quality and availability. Most purchasers (7 of 9) reported that they always or usually purchase the lowest-priced product.[78] The most frequently top-three cited factors firms consider in their purchasing decisions were quality and price (8 firms) followed by availability (7 firms).[79] Additionally, in rating the importance of 15

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[72] CR/PR at II-25, Table II-11. However, ***. *Id.* at II-26.

[73] CR/PR at II-25 and Table II-11. ***.

[74] CR/PR at II-23, Table II-10. There were three factors -- availability, delivery time, and price -- for which a majority did not rate the domestic and South Korean product as comparable. For one of these factors, delivery time, all eight responding purchasers reported that the U.S. product was superior to the South Korean product. For the other two factors, availability and price, purchasers' responses were mixed: with respect to availability, four firms rated the U.S. product as superior while three rated the U.S. product as inferior and one reported the sources to be comparable. With respect to price, three firms rated the U.S. product as superior (*i.e.*, lower-priced), three rated the U.S. and South Korean product as comparable, and two rated the domestic product as inferior. *Id.*

[75] CR/PR at Table II-10.

[76] *See* CR/PR at II-21-23. For instance, ***. *Id.* ***. *** *Id.*

[77] CR/PR at II-21.

[78] CR/PR at II-18. ***. *Id.* In its questionnaire response, ***. CR/PR at II-17 n.34.

***. CR/PR at II-18. We note that *** CR/PR at V-28 n.38. In its ***. *Id.* at II-17 n.35

[79] CR/PR at Table II-6. Quality was the most frequently cited first-most important factor (cited by 6 firms) followed by price (2 firms). *Id.*

purchasing factors, 8 of 9 purchasers rated price as very important, following availability and reliability of supply identified by 9 purchasers as very important.[80]

Purchasers require suppliers to go through an extensive qualification process and only accept SAP from qualified suppliers.[81] The qualification process varies by customer, but generally includes product development, trial runs, tests for product safety, supplier audits, an evaluation of a supplier's ability to produce consistent quality at volume, consumer testing, and patent clearance.[82] The average time to qualify a new supplier ranged from less than a month to two years.[83] The record indicates, however, that once a supplier is qualified to provide a particular SAP grade or product, that grade or product may be interchangeable among qualified suppliers, regardless of source.[84] Five of nine purchasers reported that U.S.-produced SAP always met minimum quality specifications and the other four reported it usually did; almost all responding firms also reported that South Korean SAP always or usually met minimum quality specifications.[85] Three of nine responding purchasers (***) reported that a domestic or foreign supplier had failed to qualify SAP or had lost approved status since 2019.[86]

Almost all U.S. shipments of SAP were sold via long-term or annual contracts during the POI.[87] The contracts provide for pricing by formula which includes a base price component

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[80] CR/PR at Table II-7. Product consistency and quality meeting specifications and standards were also listed as very important by eight purchasers. *Id.*

[81] CR/PR at II-19. Eight of the nine responding purchasers require their suppliers to become certified or qualified to sell SAP to their firm. *Id.*

[82] CR/PR at II-19.

[83] CR/PR at II-19. ***. *Id.*

[84] CR/PR at II-22-23. ***. ***. *Id.* at II-26-27. *** reported that it could substitute the same grade among different suppliers but noted the same caveats. *** also reported that it also could substitute the same grade among different suppliers, while *** and *** reported that they could not. *Id.* at II-21-22.

[85] CR/PR at II-19-20 and Table II-8. Purchasers reported factors that determine quality include absorbency (centrifugal retention capacity, absorbance under pressure, absorption speed, permeability capacity, free swell, Hydroxyl value, iodine value); particle size distribution (minimum and maximum, dust level); appearance (color, color stability); impurities (residual monomer, moisture content, foreign material); pH; and odor. ***. *Id.* at II-20.

[86] *** reported that ***; *** reported that *** are now able to produce the SAP it needs but there was a time when they could not; and ***. CR/PR at II-19; Petitioner's Posthearing Br. at Exh. 3, Declaration of ***, paras. 4-5.

[87] CR/PR at Table V-3. U.S. producers reported that *** percent of their 2021 sales were pursuant to long-term contracts, *** percent pursuant to annual contracts, *** percent pursuant to short-term contracts, and the remainder were spot sales. *Id.* ***. With respect to subject imports, *** were sold on a long-term contract basis in 2021, and ***. ***. ***. ***. *Id.* at V-7-8.

One U.S. producer (***) reported that its annual contracts fix quantity, two U.S. producers (***) reported that their annual and long-term contracts fix both price and quantity, and ***. CR/PR at V-8.

("base price" or "adder") and a raw material pass-through component to account for SAP's two primary raw materials, acrylic acid and caustic soda.[88] For the raw material pass-through, a multiplier is applied to published prices that are adjusted periodically for propylene (used to account for acrylic acid) and caustic soda.[89] The base price is intended to account for costs other than raw materials, including labor and other factory costs, selling, general and administrative (SG&A) expenses, as well as any profit margin.[90] Although contracts are typically negotiated in the third or fourth quarter of the year,[91] the record indicates that contracted prices may change during the contracted period aside from the raw material pass-through.[92]

The primary raw materials used to produce SAP are acrylic acid, which is produced from propylene, and sodium hydroxide (also called caustic soda).[93] U.S. producers' average unit raw material costs decreased from 2019 to 2020 but increased from 2020 to 2021, for an overall increase of *** percent, and were higher in the first of half of 2022 than in interim 2021.[94] Raw materials accounted for *** percent of the domestic industry's total cost of goods sold ("COGS") for SAP in 2019, and then decreased to *** percent in 2020 before increasing to *** percent in 2021; they accounted or *** percent of COGS in interim 2021, and *** percent in interim 2022.[95]

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[88] CR/PR at V-5.

[89] CR/PR at V-1, V-9. ***. LG Chem's prices are indexed to the prices of propylene and caustic soda ***, whereas U.S. producers' prices are ***. Raw material price adjustments are typically made quarterly but may also be adjusted more frequently and typically reflect published raw material prices from the prior quarter. *Id.* at V-1, V-2, V-8 and nn.4 & 5. For NSAI, the raw material provisions in its ***. *Id.* at V-7.

[90] Hearing Tr. at 31 (Terhart), 71 (Cauble).

[91] CR/PR at V-8. P&G reported that its ***. *Id.*

[92] *See* CR/PR at V-10-11. *See also, e.g.,* KCC's Posthearing Br. at Exh. 1 *and* Petitioner's Posthearing Br. at Exh. 2, Declaration of ***.

All three U.S. producers reported that prices had changed, aside from raw material indexed formula price changes, during the contracted period. Specifically, ***. CR/PR at V-10. Three purchasers reported that there were price changes during their contracts, although one described these changes as occurring after the contract had expired and another stated only "transport costs." *Id.*

[93] CR/PR at V-1 and Tables VI-3 and VI-4. Acrylic acid made up the largest share of raw material costs in 2021 (*** percent), followed by caustic soda (*** percent) and other raw materials (*** percent). *Id.*

BASF and NSAI ***. Specifically, ***. CR/PR at VI-15. ***. ***. *Id*.

[94] CR/PR at V-1 and Table V-1. Specifically, propylene prices generally declined in 2019 and the first half of 2020. They then increased, with a particularly steep increase from November 2020 to February 2021, and then fluctuated at prices well above those in 2019 until June 2022 when the price fell below 2021 prices. Caustic soda prices showed less variation and generally declined in 2019, fluctuated in 2020, and then increased steadily from January 2021 to July 2022 to well above 2019 prices. *Id.* at V-4.

[95] CR/PR at Table VI-1.

SAP is sold primarily from inventory. During the POI, domestically produced SAP was sold primarily from inventory, with lesser quantities produced to order.[96] Subject imports were sold *** from U.S. inventories.[97]

Effective April 2022, the European Commission imposed antidumping duties on imports of SAP from South Korea, with a duty rate of 13.4 percent for LG Chem and 18.8 percent for all other firms, effective until April 2027.[98]

C. Volume of Subject Imports

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[99]

The volume of subject imports increased by *** percent from 2019 to 2021, from *** MT in 2019 to *** MT in 2020 and *** MT in 2021; the volume was *** percent lower in interim 2022 (*** MT) than in interim 2021 (*** MT) but still higher than the full year subject import volume in 2019.[100]

Subject imports' share of apparent U.S. consumption, by quantity, increased by *** percentage points from 2019 to 2021, increasing from *** percent in 2019 to *** percent in 2020 and *** percent in 2021; their share was lower in interim 2022 (*** percent) than in interim 2021 (*** percent).[101] [102]

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[96] CR/PR at II-18. ***. *Id.*

[97] CR/PR at II-19. Importer *** reported that *** percent of its U.S. commercial shipments were from U.S. inventories. *Id.*

[98] CR/PR at VII-14; Commission Regulation (EU) 2022/547 of Apr. 6, 2022, imposing a definitive antidumping duty on imports of superabsorbent polymers originating in South Korea.

[99] 19 U.S.C. § 1677(7)(C)(i).

[100] CR/PR at Table IV-2 and IV-3.

U.S. importers' shipments of subject imports also increased by *** percent from 2019 to 2021, from *** MT in 2019 to *** MT in 2020 and *** MT in 2021; while they were *** percent lower in interim 2022 (*** MT) than in interim 2021 (***) MT, the volume in interim 2022 was still higher than the full year in 2019. CR/PR at Table C-1.

[101] CR/PR at Tables IV-8 and C-1.

[102] The quantity of U.S. shipments of subject imports of SAP-7 and SAP-8 increased from *** MT in 2019 to *** MT in 2020 and then decreased to *** in 2021. CR/PR at Table IV-12. As a share of the U.S. market for SAP-7 and SAP-8, subject imports increased from *** percent in 2019 to *** percent in 2020 and then decreased to *** percent in 2021. CR/PR at Table IV-12. The quantity of U.S. shipments of subject imports of all other SAP grades, excluding SAP-7 and SAP-8, increased from *** MT in 2019 to *** MT in 2020 and *** MT in 2021. As a share of the U.S. market for all grades other than SAP-7 and SAP-8, subject imports increased from *** percent in 2019 to *** percent in 2020 and *** percent in 2021. CR/PR at Table IV-13.

Based on the foregoing, we find that the volume of subject imports and the increase in that volume is significant on an absolute basis and relative to consumption in the United States.

D. Price Effects of the Subject Imports

Section 771(7)(C)(ii) of the Tariff Act provides that, in evaluating the price effects of the subject imports, the Commission shall consider whether

> (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and
>
> (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[103]

As previously discussed in Section IV.B.3, we find that the domestic like product and subject imports have a moderate-to-high degree of substitutability, and that price is an important factor in SAP purchasing decisions, among other important factors.

The Commission collected quarterly price data on three SAP products, for shipments sold pursuant to a contract of at least a year in duration.[104] All three U.S. producers and one

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[103] 19 U.S.C. § 1677(7)(C)(ii).

[104] CR/PR at V-13-14; U.S. Producer Questionnaire at IV-2; U.S. Importer Questionnaire at III-2. The price products were:

Product 1.-- Permeable and fast SAP for thin or ultra-thin hygiene products, including the following parameters:
- vortex speed of 45 seconds or less;
- gel bed permeability ("GBP") of 30 or greater; and
- centrifuge retention capacity ("CRC") within a range of 27 to 33 g/g.

Product 2.-- Balanced absorption under pressure ("AAP") SAP for balanced to thin hygiene products, including the following parameters:
- AAP 0.7 psi within a range of 18 to 24 g/g;
- GBP of less than 10; and
- CRC within a range of 34 to 42 g/g.

Product 3.-- Permeable and Pressure-resistant SAP for thin or ultra-thin hygiene products, including the following parameters:
- AAP under 0.7 psi ("AAP") within a range of 19 to 30 g/g; and
- CRC within a range of 26 to 33 g/g.

We note that the three pricing products in this final phase are almost identical to the products in the preliminary phase of this investigation, except for a slight modification of the AAP minimum from 20 to 19 for product 2, as requested by Petitioner. Respondents did not argue for any alternative data (Continued...)

importer, ***, provided useable pricing data for sales of the requested products, although not all firms reported pricing for all products.[105] Pricing data reported by these firms accounted for approximately *** percent of U.S. producers' U.S. shipments of SAP and *** percent of reported U.S. shipments of subject imports in 2021.[106] ***; domestic producer ***.[107] On the other hand, ***.[108]

The pricing data show that subject imports were priced below domestically produced product in *** of *** quarterly comparisons from the first quarter of 2019 through the second quarter of 2022, amounting to *** MT, at margins ranging from *** to *** percent and an average underselling margin of *** percent. In the other *** comparisons, amounting to *** MT, subject imports were priced higher than domestic product, at margins ranging between *** and *** percent and an average overselling margin of *** percent.[109] The quantity of subject imports in quarters involving underselling of the domestic like product was more than half (*** percent) of the total quantity of subject imports in the pricing data.[110]

For product 1, while underselling by subject imports occurred in *** quarterly comparisons, it was more prevalent when measured by quantity: *** MT of subject imports (*** percent of the total reported volume for product 1) involved underselling compared with *** MT involving overselling.[111] Additionally, subject imports of product 1 primarily undersold the domestic like product from the first quarter of 2021 through the fourth quarter of 2021, during which time the volume of subject imports of product 1 was greater than in any other quarter during the POI, and peaked in the fourth quarter of 2021.[112] For product 3, the underselling was more pervasive, occurring in *** quarterly comparisons and, by quantity, accounting for *** MT of subject imports, or *** percent, compared with *** MT involving

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collection in comments on the draft final phase questionnaires. Notably, respondents did not request that the Commission separate out SAP-8 into its own pricing product.

[105] CR/PR at V-14.

[106] CR/PR at V-14. *** did not provide pricing data for product 2.

[107] The technical specifications for *** fall within the parameters of product 3. CR/PR at Table V-4.

[108] CR/PR at V-14-15 and Table V-4.

[109] CR/PR at V-24 and Table V-10.

[110] CR/PR at Table V-10.

[111] *Derived from* CR/PR at Table V-10.

[112] CR/PR at Table V-5.

overselling.[113] Moreover, product 3 undersold the domestic like product in all but two quarters from the first quarter of 2019 through the third quarter of 2021.[114]

Additional record evidence regarding lost sales and revenue corroborates the pricing data in that subject imports were sold at lower prices than the domestic like product during the POI. Four of nine purchasers reported that they had purchased subject imports instead of U.S.-produced product since 2019, and all four reported that the subject import prices were lower than prices for the domestic product. [115] Two purchasers, *** reported that price was a primary reason for their decision to purchase *** MT of subject SAP instead of U.S.-produced product.[116] *** reported that subject imports were priced lower than domestically produced SAP throughout POI, and *** reported that ***[117] Further, at the request of the Commission, P&G provided quarterly pricing data by supplier, which demonstrates that it purchased both SAP-7 and SAP-8 from ***.[118] Additionally, Petitioner provided documentation, consisting of contemporaneous reports of sales meetings with purchasers, and affidavits of U.S. producers' representatives, indicating that subject imports were being offered at lower prices than product of domestic producers.[119]

Given the substitutability of SAP, the importance of price in purchasing decisions, the pricing and lost sales data, as well as other record information indicating that subject imports were lower priced than the domestic like product, we find that subject import underselling was significant during the POI. This underselling contributed to the subject imports gaining *** percentage points of market share as the domestic industry lost *** percentage points from 2019 to 2021; from 2019 to 2020, subject imports gained *** percentage points of market

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[113] *Derived from* CR/PR at Table V-10.

[114] CR/PR at Table V-7. U.S. importers' U.S. shipments of product 3 increased from *** MT in 2019 to *** MT in 2020. CR/PR at Table V-7. Subject imports of product 3 undersold the domestic product in *** quarterly comparisons in 2020, with *** MT of subject imports (*** percent) in quarters associated with underselling. *Id*.

[115] CR/PR at Table V-12.

[116] CR/PR at V-28 and Table V-12.

[117] CR/PR at V-28. While ***. ***'s Purchaser Questionnaire (Final) at II-3 and CR/PR at V-28 n.38.

[118] ***. P&G's Posthearing Br. at Exh. 3.

Additionally, P&G's pricing data show that ***. P&G's Posthearing Br. at Exh. 3. Thus, the record indicates that subject imports of ***. Moreover, both the Commission's pricing data and P&G's supplier pricing data show that subject imports purchased by *** were generally lower priced than its purchases of domestic product in 2020, when ***'s purchases of subject imports increased from *** MT in 2019 to *** MT in 2020. *See* CR/PR at Table V-7; P&G's Posthearing Br. at Exh. 3.

[119] *See* Petitioners' Posthearing Br. at Exhs. 2, 3, and 4. More detail on the domestic producers' experience is discussed below.

share as the domestic industry lost *** percentage points,[120] and from 2020 to 2021, subject imports gained an additional *** percentage points of market share and the domestic industry lost *** percentage points.[121] Thus, a substantial majority of subject imports' total increase in market share from 2019 to 2021 occurred from 2019 to 2020.

Respondents argue that the increase in subject imports' market share was not a result of lower prices and did not come at the expense of the domestic industry. Rather, they contend that the increase in subject imports' market share resulted from domestic producers' inability to respond to shifts in purchaser demand for SAP-8 with adequate supply.[122] Having examined the record as a whole, we find that the domestic industry was capable of shipping additional quantities of SAP-8 in 2020 and subject import underselling directly resulted in at least some of the market share shift from the domestic industry to subject imports.

From 2019 to 2020, U.S. importers' U.S. shipments of subject imports increased by *** MT, driven by *** whose purchases of subject imports increased from *** MT in 2019 to *** MT in 2020, an increase of *** MT.[123] While *** were qualified for *** in 2020.[124] *** describes that in ***.[125] ***.[126] ***.[127] Other record evidence supports this, as *** reported producing *** MT of SAP-8 in 2020 but U.S. shipments of SAP-8 of only *** MT in 2020, a difference of *** MT.[128] *** also reported operating at *** percent capacity utilization in 2020, with *** MT of unused capacity.[129] Similarly, the other producer qualified with ***,

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[120] CR/PR at Tables IV-8 and C-1.

[121] CR/PR at Tables IV-8 and C-1.

[122] LG Chem's Prehearing Br. at 8-10, 44-47; LG Chem's Posthearing Br. at 4-6; P&G's Prehearing Br. at 12-17; P&G's Posthearing Br. at 6-8.

[123] CR/PR at Tables IV-8; ***'s Purchaser Questionnaire at II-1. As Respondents' note, SAP-8 accounts for the large majority of the increase in U.S. importers' U.S. shipments of subject imports. U.S. importers' U.S. shipments of subject imports of SAP-8 increased by *** MT from 2019 to 2020 whereas total U.S. importers' U.S. shipments of subject imports increased by *** MT from 2019 to 2020. *Derived from* CR/PR at Table IV-5.

[124] *** produced *** MT of SAP-8 in 2020 and *** produced *** MT of SAP-8. They also produced *** MT and *** MT of SAP-7 in 2020, respectively. *** U.S. Producer Questionnaires at II-7.

[125] Petitioner's Posthearing Br. at Exh.2. P&G's claim that ***, is unsupported by record evidence. *See id.*

[126] Petitioner's Posthearing Br. at Exh.2.

[127] Petitioner's Posthearing Br. at Exh.2.

[128] *** U.S. Producer Questionnaire at II-7 and II-9.

[129] CR/PR at Table III-5.

reported producing *** MT of SAP-8 in 2020 and U.S. shipments of SAP-8 of *** MT; *** also reported *** MT of unused capacity in 2020.[130]

As discussed above, both the Commission's pricing data and P&G's pricing data show that subject imports were generally lower priced than the domestic like product in 2020, as subject imports of *** increased and as *** had excess inventories of *** and unused capacity. While the domestic industry may not have been able to supply all of the *** required by *** in 2020, the record establishes that it could have supplied *** with substantially more *** than it did in 2020 and that the lower prices of subject imports were a primary reason it did not. Accordingly, we find that subject import underselling directly resulted in a significant increase in subject imports' market share in 2020.

We have also considered whether subject imports depressed domestic prices or prevented price increases which otherwise would have occurred to a significant degree.[131] Overall, U.S. producers' prices for product 1 decreased from January 2019 to June 2022 by *** percent, prices for product 2 increased by *** percent, and prices for product 3 increased by *** percent.[132] Prices for all three pricing products followed similar trends, with decreases in 2019 through the third quarter of 2020, increases in 2021, and then decreases in the first or second quarter of 2022.[133] Subject import prices increased overall from January 2019 to June 2022 and followed a similar trend to domestic prices except that subject import prices increased in 2022.[134] As discussed above, SAP prices are set by contract formulas which include both an agreed-upon fixed component (often referred to as the base price) and a variable component, which includes prices for the raw material (adjusted quarterly based on published indices) and a multiplier for each.[135] Accordingly, prices for domestically produced SAP and subject imports followed similar trends as published prices for raw materials, with generally one quarter of lag.[136] U.S. producers' average per unit raw material costs followed the same

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[130] ***'s U.S. Producer Questionnaire at II-7 and II-9; CR/PR at Table III-5. Evonik maintained that it had the ability to supply additional volumes of SAP, but that "sometimes it made no economic sense due to customers' demands for unprofitable pricing structures." Hearing Tr. at 26-27 (Cauble). ***. Petitioner's Posthearing Br. at Exh. 4, Attach. K and L. In contract *** Petitioner's Posthearing Br. at Exh. 4.

[131] Five of the nine responding purchasers reported that U.S. producers had not reduced prices in order to compete with lower-priced subject imports and four reported that they did not know. CR/PR at Table V-13.

[132] CR/PR at Table V-8.

[133] *See* CR/PR at Tables V-5, V-6, and V-7.

[134] *See* CR/PR at Tables V-5, V-6, and V-7.

[135] *See* CR/PR at V-9 – V-10.

[136] *Compare* CR/PR Tables V-5, V-6, and V-7 *with* Table V-9.

general trend as SAP prices, decreasing from 2019 to 2020 and then increasing from 2020 to 2021.[137]

The domestic industry's total COGS-to-net-sales ratio, however, increased continuously from *** percent in 2019 to *** percent in 2020 and *** percent in 2021.[138] From 2019 to 2020, the domestic industry's net sales unit value declined by more than its per-unit COGS, and from 2020 to 2021 the domestic industry's net sales unit value increased by less than the increase in its per-unit COGS—all during an expanding market.[139] The record indicates that domestic producers' base prices, intended to account for profitability and costs other than primary raw materials, faced substantial pricing pressure from subject imports.[140] Despite robust demand growth, domestic producers generally had to maintain or lower their base prices from 2019 to 2021 as subject imports engaged in significant underselling and purchasers used low-priced subject imports as leverage in negotiations.[141] As a result of this negative pressure on domestic producers' contractual base prices from low-priced subject imports, the domestic industry's SAP prices were lower than they otherwise would have been to a significant degree during the POI.

Given the moderate-to-high degree of substitutability, the importance of price in purchasing decisions, and the increased and significant volume of low-priced subject imports, we find that the significant underselling by subject imports led to subject imports gaining significant market share in addition to exerting substantial downward pressure on domestic

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[137] CR/PR Table VI-1. Specifically, propylene prices generally declined in 2019 and the first half of 2020. They then increased, with a particularly steep increase from November 2020 to February 2021, and then fluctuated at prices well above those in 2019 until June 2022 when the price fell below 2021 prices. Caustic soda prices showed less variation and generally declined in 2019, fluctuated in 2020, and then increased steadily from January 2021 to July 2022 to well above 2019 prices. *Id.* at V-4.

Unit raw material costs were higher in the first of half of 2022 than in interim 2021. CR/PR at Table VI-1.

[138] CR/PR at Tables VI-1 and C-1. The COGS-to-net-sales ratio was lower in interim 2022 at *** percent compared to *** percent in interim 2021.

[139] From 2019 to 2020, the domestic industry's net sales unit value decreased by $*** per MT as per-unit COGS decreased by $*** per MT. CR/PR at Table VI-2. From 2020 to 2021, the domestic industry's net sales unit value increased by $*** per MT and its per-unit COGS increased by $*** per MT. *Id*.

[140] We note that *** during the POI. *See* ***'s Purchaser Questionnaire at II-1 and II-6. ***. *See* ***'s Purchaser Questionnaire at II-1 and II-6.

[141] The base prices for ***. *See* Petitioner's Posthearing Br. at Exh. 7; KCC Posthearing Br. at Exh. 1. ***. KCC's Posthearing Br. at Exh. 1. ***. Petitioner's Posthearing Br. at Exh. 3. In 2019, ***. Petitioner's Posthearing Br. at Exh. 4.

***. Petitioner's Posthearing Br. at Exh. 2. ***. Petitioner's Posthearing Br. at Exh. 4.

Additionally, ***. Petitioner's Posthearing Br. at Exh. 3.

prices and suppressing prices to a significant degree. Therefore, we find that subject imports had significant price effects.

E. Impact of the Subject Imports[142]

Section 771(7)(C)(iii) of the Tariff Act provides that examining the impact of subject imports, the Commission "shall evaluate all relevant economic factors which have a bearing on the state of the industry."[143] These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debts, research and development, and factors affecting domestic prices. No single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[144]

By most measures, the domestic industry's performance declined from 2019 to 2021. As subject imports captured market share from the domestic industry and suppressed domestic SAP prices, the domestic industry's output indicators did not increase commensurately with robust demand growth and its financial condition deteriorated as purchasers used low-priced subject imports as leverage in negotiations to reduce domestic producers' base prices. The domestic industry's performance was improved by nearly all measures in interim 2022 compared with interim 2021 as subject import quantities were lower and the domestic

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[142] The statute instructs the Commission to consider the "magnitude of the dumping margin" in an antidumping proceeding as part of its consideration of the impact of imports. 19 U.S.C. § 1677(7)(C)(iii)(V). In its final determination of sales at less value, Commerce found a dumping margin of 17.64 percent for LG Chem and all others. *Certain Superabsorbent Polymers From the Republic of Korea: Final Determination of Sales at Less Than Fair Value*, 87 Fed. Reg. 65035. We take into account in our analysis the fact that Commerce has made final findings that all subject producers in South Korea are selling subject imports in the United States at less than fair value. In addition to this consideration, our impact analysis has considered other factors affecting domestic prices. Our analysis of the significant underselling and price effects of subject imports, described in both the price effects discussion and below, is particularly probative to an assessment of the impact of the subject imports.

[143] 19 U.S.C. § 1677(7)(C)(iii); *see also* SAA at 851 and 885 ("In material injury determinations, the Commission considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they also may demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.").

[144] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act of 2015, Pub. L. 114-27.

industry's market share was higher after the filing of the petition.[145] Still, subject imports' market share in interim 2022 was higher (at *** percent) than at the beginning of the POI in 2019 (at *** percent), and the domestic industry's performance indicators were generally poorer in interim 2022 than in 2019.

The domestic industry's U.S. shipments declined from 2019 to 2021,[146] while its capacity,[147] production,[148] and capacity utilization[149] fluctuated—increasing from 2019 to 2020 and then decreasing from 2020 to 2021—for slight overall increases for capacity and production and a slight overall decrease for capacity utilization during the full years of the POI; production, U.S. shipments, and capacity utilization were higher in interim 2022 than in interim 2021, while capacity was lower. The domestic industry's share of the U.S. market decreased by *** percentage points from 2019 to 2021, declining from *** percent in 2019 to *** percent in 2020 and *** percent in 2021; it was higher in interim 2022 (*** percent) than in interim 2021 (*** percent).[150] End-of-period inventories declined overall during the POI.[151]

The domestic industry's employment indicia generally improved from 2019 to 2021 and was higher in interim 2022 than in interim 2021. The industry's number of production and

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[145] We note that the subject petition was filed on November 2, 2021, and the Commerce Department's preliminary affirmative determination in its antidumping investigation of SAP from South Korea was published on June 7, 2022.

[146] The domestic industry's U.S. shipments decreased by quantity by 4.6 percent from 2019 to 2021, decreasing from 354,793 MT in 2019 to 342,400 MT in 2020 and 338,361 MT in 2021; they were 6.3 percent higher in interim 2022 (176,041 MT) than in interim 2021 (165,530 MT). CR/PR at Tables III-7 and C-1.

[147] The domestic industry's production capacity increased from 469,400 MT in 2019 to 476,200 MT in 2020 and then decreased to 476,000 MT in 2021, for an overall increase of 1.4 percent; it was lower in interim 2022 (229,150 MT) than in interim 2021 (237,250 MT). CR/PR at Tables III-5 and C-1.

[148] The domestic industry's production increased from 398,533 MT in 2019 to 412,918 MT in 2020 and then decreased to 402,973 MT in 2021, for an overall increase of 1.1 percent; it was 11.8 percent higher in interim 2022 (214,020 MT) than in interim 2021 (191,465 MT). CR/PR at Tables III-5 and C-1.

[149] The domestic industry's capacity utilization rate increased from 84.9 percent in 2019 to 86.7 percent in 2020 and then decreased to 84.7 percent in 2021, for an overall decrease of 0.2 percentage points; it was higher in interim 2022 (93.4 percent) than in interim 2021 (80.7 percent). CR/PR at Tables III-5 and C-1.

[150] CR/PR at Tables IV-8 and C-1.

[151] U.S. producers' end-of-period inventories increased from *** MT in 2019 to *** MT in 2020 and then decreased to *** MT in 2021, for an overall decrease of *** percent; they were higher in interim 2022 (*** MT) than in interim 2021 (*** MT). CR/PR at Tables III-11 and C-1.

related workers (PRWs),[152] wages paid,[153] hourly wages,[154] and productivity[155] all improved overall from 2019 to 2021; and were higher in interim 2022 than in interim 2021. The industry's unit labor costs increased overall from 2019 to 2021 and were lower in interim 2022 than in interim 2021.[156]

The domestic industry's financial indicia generally deteriorated from 2019 to 2021 and were somewhat improved in interim 2022 compared with interim 2021. Although the industry's net sales values,[157] and net sales unit values,[158] increased overall from 2019 to 2021 after declining from 2019 to 2020, the industry's financial condition steadily deteriorated as its gross profit,[159] operating income,[160] and net income all declined,[161] resulting in operating losses and net losses in 2020 and 2021.[162] In turn, the domestic industry's operating and net margins worsened from 2019 to 2021, and were somewhat improved in interim 2022 compared with

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[152] The domestic industry's PRWs decreased from *** in 2019 to *** in 2020 and then increased to *** in 2021; they were higher in interim 2022 (***) than in interim 2021 (***). CR/PR at Tables III-12 and C-1.

[153] The industry's wages paid decreased from $*** in 2019 to *** in 2020 and then increased to $*** in 2021; they were higher in interim 2022 ($***) than in interim 2021 ($***). CR/PR at Tables III-12 and C-1.

[154] The industry's hourly wages increased from $*** in 2019 to $*** in 2020 and $*** in 2021; they were $*** in interim 2022 compared with $*** in interim 2021. CR/PR at Tables III-12 and C-1.

[155] The industry's productivity increased from *** MT per 1,000 hours to *** MT per 1,000 hours and then decreased to *** MT per 1,000 hours; it was higher in interim 2022 (*** MT per 1,000 hours) than in interim 2021 (*** MT per 1,000 hours). CR/PR at Tables III-12 and C-1.

[156] The industry's unit labor costs decreased from $*** per MT in 2019 to $*** per MT in 2020 and then increased to $*** per MT in 2021; they lower in interim 2022 ($*** per MT) than in interim 2021 ($*** per MT). CR/PR at Tables III-12 and C-1.

[157] The domestic industry's net sales by value declined from $*** in 2019 to $*** in 2020 and then increased to $*** in 2021, for an overall increase of *** percent; they were higher in interim 2022 ($***) than in interim 2021 ($***). CR/PR at Tables VI-1 and C-1.

[158] The domestic industry's unit net sales declined from $*** per MT in 2019 to $*** per MT in 2020 and then increased to $*** per MT in 2021 for an overall increase of *** percent; they were higher in interim 2022 ($*** per MT) than in interim 2021 ($*** per MT). CR/PR at Tables VI-1 and C-1.

[159] Gross profits decreased from $*** in 2019 to $*** in 2020 to a loss of $*** in 2021; they were higher in interim 2022 ($***) than in interim 2021 (a loss of $***). CR/PR at Tables VI-1 and C-1.

[160] Operating income was $*** in 2019, negative $*** in 2020, and negative $*** in 2021; it was $*** in interim 2022 compared with negative $*** in interim 2021.

[161] Net income was $*** in 2019, negative $*** in 2020 and negative $*** in 2021; it was $*** in interim 2022 compared with negative $*** in interim 2021. CR/PR at Tables VI-1 and C-1.

[162] The domestic industry's COGS-to-net-sales ratio increased from *** percent in 2019 to *** percent in 2020 and *** percent in 2021; it was lower in interim 2022 (*** percent) than in interim 2021 (*** percent). CR/PR at Tables VI-1 and C-1. The domestic industry's COGS declined from $*** in 2019 to $*** in 2020 and then increased to $*** in 2021, for an overall increase of *** percent; it was higher in interim 2022 ($***) than in interim 2021 ($***). CR/PR at Tables VI-1.

interim 2021. Operating income as a ratio to net sales declined from *** percent in 2019 to negative *** percent in 2020 and negative *** percent in 2021; it was higher in interim 2022 (*** percent) than in interim 2021 (negative *** percent).[163] Net income as a ratio to net sales declined from *** percent in 2019 to negative *** percent in 2020 and negative *** percent in 2021; it was higher in interim 2022 (*** percent) than in interim 2021 (negative *** percent).[164] The industry's total net assets were $*** in 2019, $*** in 2020, and $*** in 2021.[165] Capital expenditures and research and development ("R&D") declined slightly during the POI.[166]

Thus, from 2019 to 2021, as apparent U.S consumption increased by *** percent, significant volumes of subject imports entered the United States, increased significantly relative to apparent U.S. consumption, and significantly undersold the domestic like product, leading to significant price effects. From 2019 to 2020, subject imports gained *** percentage points of market share as domestic producers lost *** percentage points. As previously discussed, the domestic industry had the ability in 2020 to supply substantially greater volumes of ***, the grade of SAP which comprised most of the increase in subject import volume in 2020. As a result of the underselling by subject imports, the domestic industry's production, U.S. shipments, and revenues were lower than they otherwise would have been. Furthermore, downward pricing pressure from subject imports suppressed domestic industry's prices to a significant degree throughout the POI, resulting in the domestic industry receiving lower revenues than it otherwise would have. Based on the foregoing, we find that subject imports had a significant impact on the domestic industry.

We have also considered whether there are other factors that may have had an impact on the domestic industry to ensure that we are not attributing injury from such other factors to subject imports. Respondents argue that U.S. producers were adversely affected by the extreme weather events of 2021 that they contend led to significant production disruptions and necessitated a temporary increase in subject and nonsubject imports to fill the supply gap.[167] The record indicates, however, that subject imports began having a significant impact on the

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[163] CR/PR at Tables VI-1 and C-1.

[164] CR/PR at Tables VI-1 and C-1.

[165] CR/PR at Tables VI-9 and C-1.

[166] U.S. producers' capital expenditures decreased from $*** in 2019 to $*** in 2020 and $*** in 2021; they were $*** in interim 2022 compared with $*** in interim 2021. CR/PR at Tables VI-5 and C-1.

U.S. producers' R&D expenses were flat from 2019 to 2020 (at $***) and then decreased to $*** in 2021; they were $*** in interim 2022 compared with $*** in interim 2021. CR/PR at Tables VI-7 and C-1.

[167] LG Chem's Posthearing Br. at 11-12; *see* CR/PR at II-8–II-11.

domestic industry prior to the weather events of 2021. Subject imports were already a significant presence in the U.S. market in 2019 before significantly increasing in 2020, and domestic producers reported purchasers using low-priced subject imports as leverage in 2019 and 2020. Domestic producers generally had to maintain or lower their base prices from 2019 to 2021, while losing market share and sales to a substantial and increasing volume of subject imports. The initial injurious effects of subject imports persisted into 2021 as a result of the low contractual prices domestic producers agreed to in 2019 and 2020.[168] Moreover, the weather events of 2021 cannot explain the domestic industry's deteriorating financial performance in 2020, as its production, U.S. shipments, and revenues were lower than they otherwise would have been due to subject import competition. Therefore, we find that the adverse weather events in 2021 do not explain the injury to the domestic industry.

Respondents also contend that any alleged downward pricing pressure came not from subject imports but from competition among the U.S. producers.[169] The record, however, shows that low-priced subject imports were a significant source of downward pricing pressure for domestic producers' sales of SAP in the U.S. market, irrespective of any competitive pricing pressure between domestic producers.[170] Respondents also argue that the increase in the COGS-to-net-sales ratio was driven by increases in raw material costs that the domestic industry was not able to recoup through its long-term contracts and the lag associated with the contracts' quarterly pricing adjustments.[171] However, changes in raw material costs cannot explain purchasers using low-priced subject imports as leverage in negotiations to achieve reductions in domestic producers' base prices.[172] Moreover, when the domestic industry's cost

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[168] *See* Petitioners' Posthearing Br. at Exhs. 2, 3, and 4.

[169] LGC's Posthearing Br. at 10-11 and Exh. 3, Low Priced Supplier Analysis. LG Chem points out that ***. *Id.* KCC, for its part, adds that ***. KCC's Posthearing Br. at 1-2.

[170] *See, e.g.,* Petitioners' Posthearing Br. at Exhs. 2, 3, and 4. We further note that ***. U.S. Purchaser Questionnaire Response of *** at II-3(b).

P&G argues that subject imports of SAP-7 and SAP-8 are not responsible for downward pricing pressure because the *** percent of its purchases during the POI were made at prices locked in by contract prior to the POI. P&G's Posthearing Br. at 8-11. However, as discussed previously, subject imports of SAP-7 and SAP-8 *** and were frequently sold at prices lower than domestically produced product of the same grade. Moreover, it is apparent that existing contracts did not completely shield domestic producers from additional pricing pressure. As discussed previously, P&G ***. P&G's Posthearing Br. at 9 n.17; Petitioners' Posthearing Br. at Exh. 2, Declaration of ***. *** also documented negotiations for supply of SAP with P&G during the POI in which pricing was an important consideration. *See* Petitioner's Posthearing Br. at Exh. 4. Thus, subject imports of SAP-7 and SAP-8 contributed to the substantial downward pricing pressure experienced by domestic industry.

[171] LG Chem's Prehearing Br. at 64-67; LG Chem's Posthearing Br. at 11.

[172] *See* Petitioners' Posthearing Br. at Exhs. 2, 3, and 4.

data for 2019 are adjusted to account for the change in how BASF accounted for ***,[173] from 2019 to 2020 the domestic industry's net sales unit value decreased by a greater amount ($*** per MT) than the decrease in raw material unit costs ($*** per MT), and from 2020 to 2021 its net sales unit value increased by less ($*** per MT) than the increase in raw material unit costs ($*** per MT).[174] These unfavorable trends reflect, in part, the downward pressure on domestic producers' base prices from subject imports previously described.

Respondents argue that the 2021 increase in nonsubject imports' market share is additional evidence that any decline in the domestic industry's condition was unrelated to subject imports.[175] We recognize that nonsubject imports increased during the POI but by less of an increase than subject imports.[176] Moreover, the average unit values (AUVs) of nonsubject imports were consistently higher than the AUVs of subject imports throughout the POI, even for U.S. shipments of the same SAP grades.[177] Therefore, nonsubject imports cannot fully explain the domestic industry's loss of market share, the downward pricing pressure experienced by the domestic industry, or the magnitude of its financial decline.[178]

We consequently conclude that any impact from other factors are distinct from and cannot explain the injury we have attributed to subject imports. We accordingly determine that the domestic industry is materially injured by reason of subject imports.

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[173] *See* CR/PR at VI-14, VI-16, and n.22.

[174] *See* Staff Worksheet: Other Factory Costs Alternative Calculation in 2019, EDIS Doc. No. 783696.

[175] LG Chem's Posthearing Br. at 11-12.

[176] Nonsubject imports increased from *** MT in 2019 to *** MT in 2020 and *** MT in 2021; they were lower in interim 2022 (*** MT) than in interim 2021 (*** MT). CR/PR at Table IV-2. As a share of apparent U.S. consumption, nonsubject imports increased from *** percent in 2019 to *** percent in 2020 and *** percent in 2021, a level *** percentage points higher than in 2019; they accounted for *** percent in interim 2022 compared with *** percent in interim 2021. CR/PR at Tables IV-8 and C-1.

[177] CR/PR at Tables IV-2, IV-5, and IV-6.

[178] To the extent that domestic producers needed to rely on imports from affiliated firms in nonsubject countries to make up for production shortfalls, we observe that the ratio of domestic producers' imports from affiliated firms to U.S. production was small throughout the POI: *** percent in 2019, *** percent in 2020, and *** percent in 2021. *Derived from* CR/PR at Tables III-5 and IV-3. Increased nonsubject imports in 2021 were reported in response to the adverse weather events that year but remained small and do not explain injury to the domestic industry from subject imports which began prior to 2021. CR/PR at II-8–II-9.

V. Conclusion

For the reasons stated above, we determine that an industry in the United States is materially injured by reason of subject imports of SAP from South Korea found by Commerce to be sold in the United States at LTFV.

Part I: Introduction

Background

This investigation results from a petition filed with the U.S. Department of Commerce ("Commerce") and the U.S. International Trade Commission ("USITC" or "Commission") by the Ad Hoc Coalition of American SAP Producers, whose members include BASF Corporation ("BASF"), Florham Park, New Jersey; Evonik Superabsorber LLC ("Evonik"), Greensboro, North Carolina; and Nippon Shokubai America Industries, Inc. ("NSAI"), Pasadena, Texas, on November 2, 2021, alleging that an industry in the United States is materially injured and threatened with material injury by reason of less-than-fair-value ("LTFV") imports of superabsorbent polymers ("SAP")[1] from South Korea. Table I-1 presents information relating to the background of this investigation.[2] [3]

Table I-1
SAP: Information relating to the background and schedule of this proceeding

Effective date	Action
November 2, 2021	Petition filed with Commerce and the Commission; institution of the Commission's investigation (86 FR 62565, November 10, 2021)
November 30, 2021	Commerce's notice of initiation (86 FR 67915)
December 17, 2021	Commission's preliminary determination (86 FR 72993, December 23, 2021)
March 28, 2022	Commerce's postponement of preliminary determination in LTFV investigation (87 FR 17270)
June 7, 2022	Commerce's preliminary affirmative determination of sales at LTFV, postponement of final determination (87 FR 34647, June 7, 2022); scheduling of final phase of Commission investigation (87 FR 38422, June 28, 2022)
October 18, 2022	Commission's hearing
October 27, 2022	Commerce's final determination of sales at LTFV (87 FR 65035)
November 17, 2022	Commission's vote
December 8, 2022	Commission's views

[1] See the section entitled "The subject merchandise" in Part I of this report for a complete description of the merchandise subject in this proceeding.

[2] Pertinent Federal Register notices are referenced in appendix A, and may be found at the Commission's website (www.usitc.gov).

[3] Appendix B presents the witnesses appearing at the Commission's hearing.

Statutory criteria

Section 771(7)(B) of the Tariff Act of 1930 (the "Act") (19 U.S.C. § 1677(7)(B)) provides that in making its determinations of injury to an industry in the United States, the Commission--

> *shall consider (I) the volume of imports of the subject merchandise, (II) the effect of imports of that merchandise on prices in the United States for domestic like products, and (III) the impact of imports of such merchandise on domestic producers of domestic like products, but only in the context of production operations within the United States; and. . . may consider such other economic factors as are relevant to the determination regarding whether there is material injury by reason of imports.*

Section 771(7)(C) of the Act (19 U.S.C. § 1677(7)(C)) further provides that--[4]

> *In evaluating the volume of imports of merchandise, the Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States is significant.. . .In evaluating the effect of imports of such merchandise on prices, the Commission shall consider whether. . .(I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.. . . In examining the impact required to be considered under subparagraph (B)(i)(III), the Commission shall evaluate (within the context of the business cycle and conditions of competition that are distinctive to the affected industry) all relevant economic factors which have a bearing on the state of the industry in the United States, including, but not limited to. . . (I) actual and potential decline in output, sales, market share, gross profits, operating profits, net profits, ability to service debt, productivity, return on investments, return on assets, and utilization of capacity, (II) factors affecting domestic prices, (III) actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, (IV) actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and (V) in {an antidumping investigation}, the magnitude of the margin of dumping.*

[4] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

In addition, Section 771(7)(J) of the Act (19 U.S.C. § 1677(7)(J)) provides that—[5]

(J) EFFECT OF PROFITABILITY.—The Commission may not determine that there is no material injury or threat of material injury to an industry in the United States merely because that industry is profitable or because the performance of that industry has recently improved.

Organization of report

Part I of this report presents information on the subject merchandise, dumping margins, and domestic like product. Part II of this report presents information on conditions of competition and other relevant economic factors. Part III presents information on the condition of the U.S. industry, including data on capacity, production, shipments, inventories, and employment. Parts IV and V present the volume of subject imports and pricing of domestic and imported products, respectively. Part VI presents information on the financial experience of U.S. producers. Part VII presents the statutory requirements and information obtained for use in the Commission's consideration of the question of threat of material injury as well as information regarding nonsubject countries.

Market summary

SAP is generally used for hygiene applications, such as infant diapers, adult diapers, and feminine hygiene products. The leading U.S. producers of SAP are BASF, [6] Evonik,[7] and NSAI,[8] while leading producers of SAP in South Korea include *** and ***. The leading U.S. importers of SAP from South Korea are ***.[9] Leading importers of SAP from nonsubject countries (primarily Belgium, France,

[5] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.
[6] ***. *** U.S. producer questionnaire, I-7.
[7] ***. *** U.S. producer questionnaire, I-7.
[8] ***. *** U.S. producer questionnaire, I-7.
[9] ***. See also table IV-1 in Part IV.

Japan, and Singapore) include ***.[10] U.S. purchasers of SAP are firms that produce hygiene products; leading purchasers include Kimberly Clark Corporation ("KCC") and Procter & Gamble ("P&G").

Apparent U.S. consumption of SAP totaled approximately *** metric tons[11] ($***) in 2021. Currently, three firms are known to produce SAP in the United States. U.S. producers' U.S. shipments of SAP totaled 338,361 metric tons ($579.7 million) in 2021, and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. importers' U.S. shipments of imports from South Korea totaled *** metric tons ($***) in 2021 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. importers' U.S. shipments of imports from nonsubject sources totaled *** metric tons ($***) in 2021 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value.

Summary data and data sources

A summary of data collected in this investigation is presented in appendix C, table C-1. Except as noted, U.S. industry data are based on questionnaire responses of three firms that accounted for all U.S. production of SAP during 2021. U.S. imports from South Korea are based on the questionnaire responses of nine firms that accounted for *** percent of subject SAP imports from South Korea during 2021. Reported U.S. imports from all sources accounted for approximately *** percent of total imports under HTS statistical reporting number 3906.90.5000. Foreign producer/export data are based on the questionnaire response of two firms, LG Chem and Sumitomo. LG Chem indicated that it believes it represented *** percent of all SAP production in South Korea during 2021 and *** percent of exports from South Korea to the United States.[12]

Previous and related investigations

SAP has not been the subject of any prior countervailing or antidumping duty investigations in the United States.

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[10] ***. Table IV-1.

[11] Data for this investigation were collected in metric tons dry weight, and from here on out, will be referred to as "metric tons" or "MT" throughout this report.

[12] *** foreign producer questionnaire, II-6a and II-6b.

Nature and extent sales at LTFV

Sales at LTFV

On October 27, 2022, Commerce published a notice in the Federal Register of its final determination of sales at LTFV with respect to imports from South Korea.[13] Table I-2 presents Commerce's dumping margins with respect to imports of SAP from South Korea.

Table I-2
SAP: Commerce's final weighted-average LTFV margins with respect to imports from South Korea

Exporter/producer	Final dumping margin (percent)
LG Chem, Ltd.	17.64
All others	17.64

Source: 87 FR 65035, October 27, 2022.

The subject merchandise

Commerce's scope

In the current proceeding, Commerce has defined the scope as follows:[14]

> *The merchandise covered by this investigation is superabsorbent polymers (SAP), which is cross-linked sodium polyacrylate most commonly conforming to Chemical Abstracts Service (CAS) registry number 9003-04-7, where at least 90 percent of the dry matter, by weight on a nominal basis, corrected for moisture content, is comprised of a polymer with a chemical formula of* $(C_3H_3O_2Na_xH_{1-x})_n$*, where x is within a range of 0.00-1.00 and there is no limit to n.*
>
> *The subject merchandise also includes merchandise with a chemical formula of* $\{(C_2H_3)\ COONa_yH(_{1-y})\}_n$*, where y is within a range of 0.00-1.00 and there is no limit to n.*
>
> *The subject merchandise includes SAP which is fully neutralized as well as SAP that is not fully neutralized.*
>
> *The subject merchandise may also conform to CAS numbers 25549-84-2, 77751-27-0, 9065-11-6, 9033-79-8, 164715-58-6, 445299-36-5, 912842-45-6, 561012-86-0, 561012-85-9, or 9003-01-4.*

[13] 87 FR 65035, October 27, 2022.
[14] Ibid.

All forms and sizes of SAP, regardless of packaging type, including but not limited to granules, pellets, powder, fibers, flakes, liquid, or gel are within the scope of this investigation. The scope also includes SAP whether or not it incorporates additives for anticaking, anti-odor, antiyellowing, or similar functions.

The scope also includes SAP that is combined, commingled, or mixed with other products after final sieving. For such combined products, only the SAP component is covered by the scope of this investigation. SAP that has been combined with other products is included within the scope, regardless of whether the combining occurs in third countries. A combination is excluded from this investigation if the total SAP component of the combination (regardless of the source or sources) comprises less than 50 percent of the combination, on a nominal dry weight basis.

Tariff treatment

SAP is provided for in HTS subheading 3906.90.50, a residual or "basket" category for a range of non-elastomeric acrylic polymers in primary forms. SAP may also be imported into the United States under subheading 3906.10.00, which provides by name for poly(methyl methacrylate). SAP imported from South Korea under these two subheadings has a column 1-general duty rate of 4.2 percent and 6.3 percent ad valorem, respectively.[15]

Eligible goods of South Korea, under the U.S.-Korea Free Trade Agreement, can be imported free of duty upon proper importer claim. Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection. Effective August 23, 2018, SAP produced in China is subject to an additional 25 percent ad valorem duty under Section 301 of the Trade Act of 1974, as provided for in heading 9903.88.02.[16]

---

[15] *Harmonized Tariff Schedule of the United States (2022)*, Revision 10, USITC publication 5373, September 2022, Chapter 39, p. 39-9.

[16] The U.S. Trade Representative has not granted any exclusions for subheading 3906.10.00 from Section 301 duties under 9903.88.02. *Harmonized Tariff Schedule of the United States (2022)*, Revision 10, USITC publication 5373, September 2022, Chapter 99, footnote 20(c), p. 99-III-23; 83 FR 40823, pp. 40823-40838, August 23, 2018. The U.S. Trade Representative granted exclusions for three products under subheading 3906.90.50. One of the excluded products was an SAP product, which was "pet urine collection and disposal kits, put up in retail packaging, each comprising seven disposable trays of plastics measuring 8.3 cm in depth, 27.9 cm in length, and 16.5 cm in width, one scoop of plastics and one bottle containing 42 g of absorbent sodium acrylate powder." However, the exclusions expired in 2020. *Harmonized Tariff Schedule of the United States (2022)*, Revision 10, USITC publication 5373, September (continued...)

The product

Description and applications

SAP is a class of polymers that have a high capacity to absorb and retain water and aqueous liquids. These polymers are a fine white substance that is typically produced in granular, powder form. It is the product of a polymerization of acrylic monomer molecules with crosslinkers to form crosslinked polymer networks. SAP is insoluble in water but can absorb and retain from 100 to 1,000 times its own weight in water or from 20 to 60 times its own weight in body fluids (such as urine). Upon contact with aqueous liquid, the sodium ions in the material become dissociated, generating an osmotic pressure which drives more liquid into the SAP and binding it tightly within. The liquid is not only absorbed but also retained inside the particles, even under external pressure. The absorption process causes a phase change of the polymer from a dry powder to a soft gel that is still capable of absorbing further liquid.

SAP is mainly used in hygiene applications, such as baby diapers, adult diapers, and feminine hygiene products. The purpose of the SAP in these end-use products is to absorb aqueous fluids of urine or blood. The market has moved toward thinner diapers, and innovations in design and materials have helped achieve that goal.[17] Manufacturers of baby diapers can combine SAP with conventional fluff or place SAP within a thinner nonwoven sheet (figure I-1).[18] In order to manufacturer a less bulky diaper, P&G does not use conventional fluff and instead uses SAP-8 for the diaper's core.[19]

2022, Chapter 99, footnote 20(v), p. 99-III-105; footnote 20(y)(1), p. 99-III-117; footnote 20(lll)(1), p. 99-III-212; 85 FR 59595, September 22, 2020.

[17] Hearing transcript, pp. 175, 207 (McCuster), 79 (Cauble); Conference transcript, p. 96 (Cauble); LG Chem's postconference brief, Exhibit 19, p. 11.

[18] Fluff can be made of materials such as wood pulp or cotton. Conference transcript, p. 93 (Clark); p. 96 (Cauble), p. 128 (Gordon); LG Chem's postconference brief, Exhibit 19, p. 11. Before SAP was widely available, the first fully disposable diapers were made of 100 percent fluff core. Later, SAP was mixed into the fluff fibers, compressed into a pad to trap the SAP in place, and this allowed liquid to wick via the fibers to the SAP for absorption and storage as a soft gel. Diapers can contain varying ranges of SAP and fluff. As diapers have transitioned to using more SAP and less fluff in order to become thinner, an Acquisition Distribution Layer ("ADL") was added. This can be a compressed fluff pad or a high-loft nonwoven layer placed above the diaper core to allow faster initial fluid-intake and improved spreading to drier parts of the core. Petitioner's postconference brief, Exhibit 1, Answers to Staff Questions, question #16, p. 6.

[19] Hearing Transcript, p. 165 (Yang), pp. 171-172, 176 (McCuster); pp. 185, 206-208 (Gordon). P&G adds other material that is not cotton or wood pulp to its SAP-8 used in diapers. As of the end of the preliminary phase period of investigation (September 2021), 100 percent of P&G's diapers in the United

(continued...)

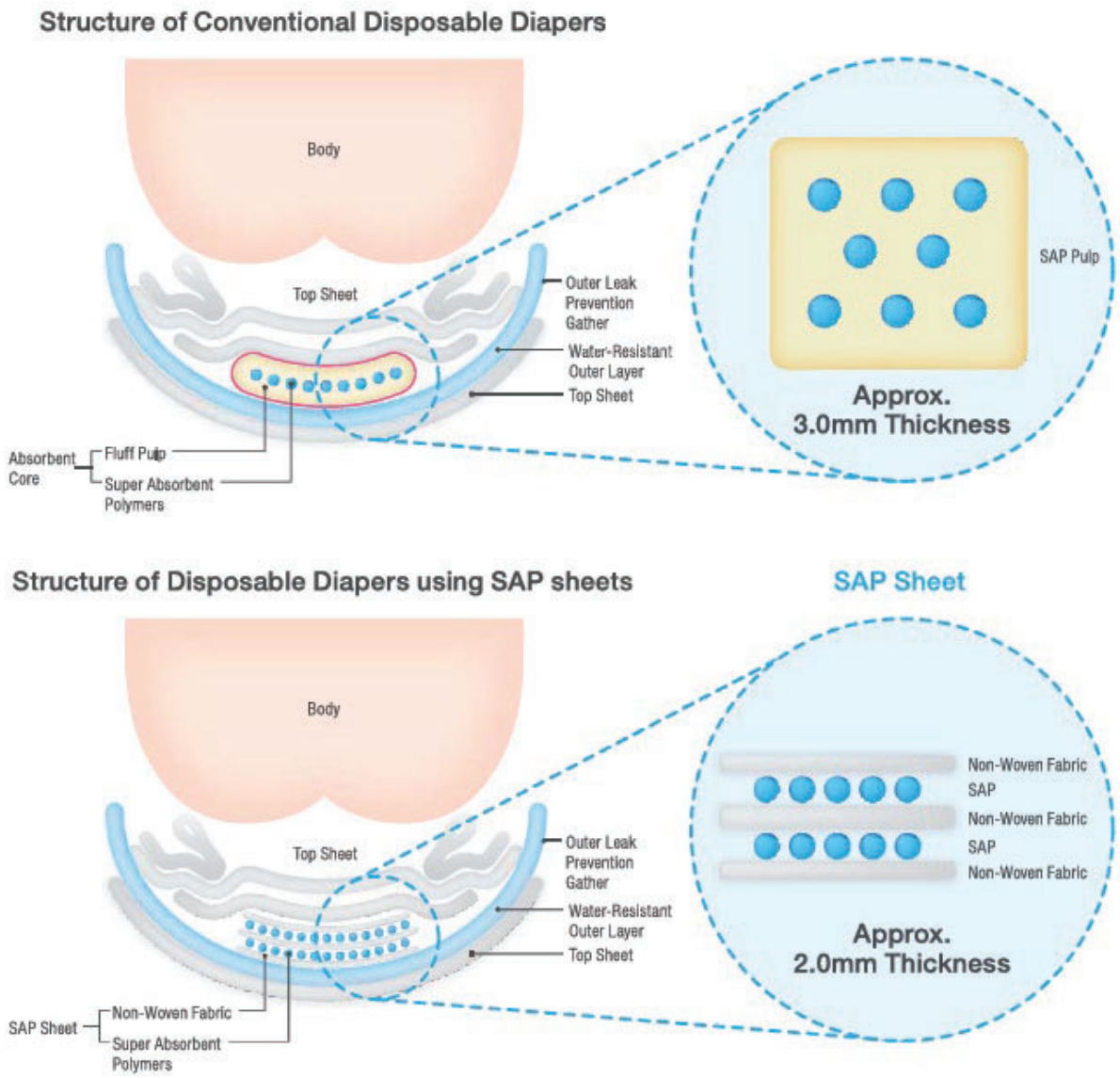
SAP can also be used in food-related areas, for example as refrigerants or freshness-keeping agents, and in household products, such as disposable heating packs or environment fragrance. Finally, SAP can be used for water retention in agriculture or civil engineering projects.[20]

States were made with SAP-8. Conference transcript, p. 128, 158 (Gordon). SAP-8 was not introduced into the United States until *** 2019, and in 2019 ***. LG Chem's postconference brief, p. 18.

SAP-8 is a specific grade for P&G that was developed in partnership with its suppliers. P&G states that ***. P&G's Virtual Plant Tour Staff Memo, September 26, 2022, p. 12.

[20] Petition, pp. 3-4; Hearing transcript, p. 29 (Terhart).

Figure I-1
SAP: SAP within the larger context of the main end-use product, a diaper



Source: LG Chem's postconference brief, Exhibit 19, 2021 Fact Book, Sumitomo Seika Chemicals, Ltd., p. 11.

The scope lists multiple Chemical Abstracts Service (CAS) Registry numbers indicative of unique chemicals, as shown in table I-3. In general, Evonik, NSAI and BASF have around 10 SAP products each at any given time that are available to customers.[21] When water is added to sodium polyacrylate, as in a wet diaper, the dry powder form of the polymer binds water and changes into a solidified gel, as shown in figure I-2.

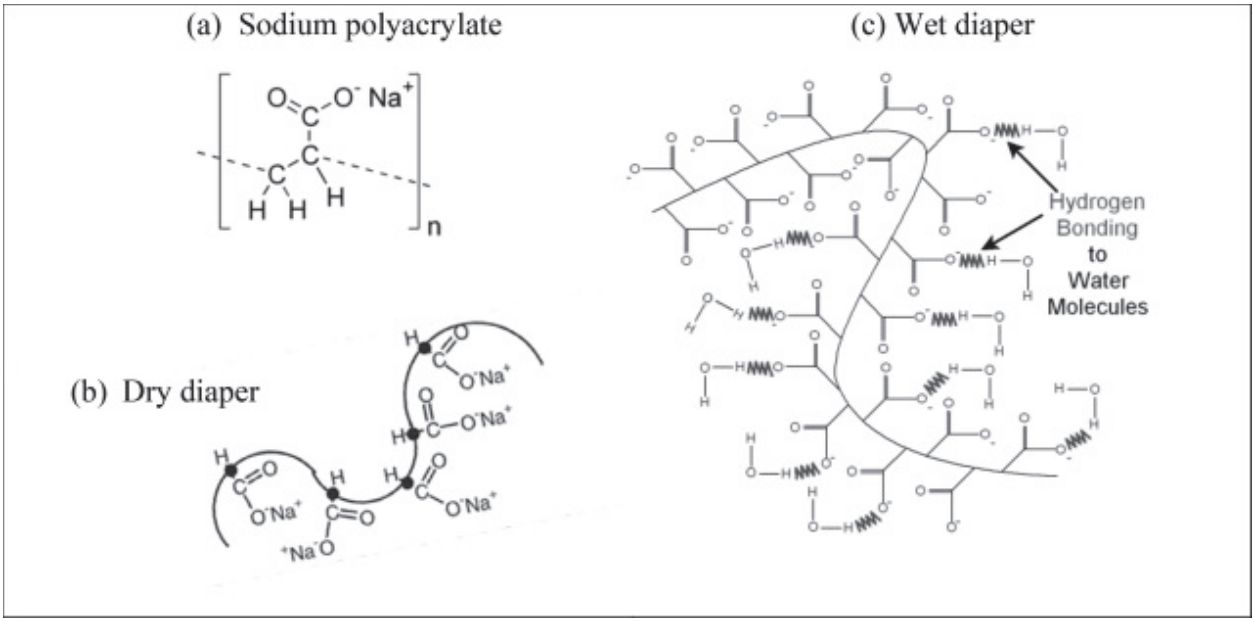
Table I-3
SAP: Identification of chemicals listed in the scope of the investigation

Chemical Abstracts Service (CAS) Registry Number	International Union of Pure and Applied Chemistry (IUPAC) Name	Chemical Name or Synonyms
9003-04-7	Poly(sodium prop-2-enoate)	Sodium polyacrylate
25549-84-2	Poly(sodium prop-2-enoate)	2-Propenoic acid,sodium salt (1:1), homopolymer
9065-11-6	Unknown or not designated	Acrylic polymers
9033-79-8	Poly(sodium prop-2-enoate) 2-Propenoic acid, polymer with sodium 2-propenoate	Poly(Acrylic Acid) Sodium salt Acrylic acid-sodium acrylate copolymer
9003-01-4	2-propenoic acid homopolymer	Polyacrylic acid (homopolymer)
Additional CAS numbers identified in the scope but not enumerated above are for legacy products known with a chemical name of "sodium polyacrylate." This includes 77751-27-0, 164715-58-6, 445299-36-5, 912842-45-6, 561012-86-0, and 561012-85-9.		

Source: Petitioner's postconference brief, Exhibit 15, with acronyms defined.

[21] Conference transcript, p. 76 (Cauble, Gu, and Nebel). In 2021, LG Chem produced ***. A list of grades sold to multinational customers and the name of the customer buying each grade are provided in Exhibit 26 of LG Chem's postconference brief. Approximately ***. LG Chem's postconference brief, Answers to Staff Questions, question #4, p. 5.

Figure I-2
SAP: SAP changes in a wet diaper



Source: Manan et al. (2021), "Physicochemical properties of absorbent hydrogel polymers in disposable baby diapers," *Chemical Physics Letters*, Vol. 774, 138605, https://doi.org/10.1016/j.cplett.2021.138605.

Note: (a) is the chemical structure of sodium polyacrylate; (b) shows the dry polymer in a cross-linked structure. The negatively charged oxygen atoms are bound to the positively charged sodium atoms; (c) when water is added, the dry polymer becomes hydrogen bonded to water molecules. The entire structure expands and changes into a gel. The result is that the gel keeps the water away from the infant's skin and from leaking outside the diaper.

There are multiple grades of SAP, and the Commission questionnaire collected information about them. The definitions of certain grades are described below.[22]

- "SAP-7."-- Proprietary SAP Generation 7 ("SAP-7") is designed for use in baby diapers and features an effective capacity ("EFFC") of more than 25.0 g/g and a T20 rating of less than 170 seconds. SAP-7 excludes the product that meets the more stringent test parameters defined as SAP-8.
- "SAP-8."-- Proprietary grade of SAP is designed to be used without wood pulp in baby diapers and features EFFC of more than 25.5 g/g and a T20 rating of less than 145 seconds.
- "Next LK-1."-- Proprietary Next LK-1 ("LK-1") features a guaranteed absorbency under load value tested at 0.9 psi and vortex with less than 50 seconds. LK-1 excludes the product that meets the more stringent test parameters defined as Next LK-2.
- "Next LK-2."-- Proprietary Next LK-2 ("LK-2") features a guaranteed absorbency under load value tested at 0.9 psi and vortex with less than 35 seconds.

[22] Commission questionnaires.

Manufacturing processes

SAP is made by combining (polymerizing) monomer molecules of sodium acrylate to form long molecular chains, as shown in figure I-3. The two primary components of SAP, comprising over *** percent of the product, are acrylic acid and sodium hydroxide (same as caustic soda) with propylene as a precursor to making acrylic acid.[23] Crude acrylic acid is made by the oxidation of propylene and may then be purified to *** by distillation or crystallization to produce glacial acrylic acid ("GAA").[24] That product, in turn, is eventually converted to polyacrylic acid in a continuous polymerization process. Chemicals used in the manufacturing process can vary by manufacturer; however, the same functional steps are utilized to achieve polymerization. The input raw materials are shown in (table I-4).

The polymerization is activated by an initiator, and a crosslinker forms the crosslinked polymer networks. The crosslinker ensures that the granules remain insoluble when exposed to liquid, maintaining their absorbent properties and structure. There are no impurities from the reaction, and very little off-spec material results.[25] The production is a highly efficient process targeting almost 100 percent yield.[26]

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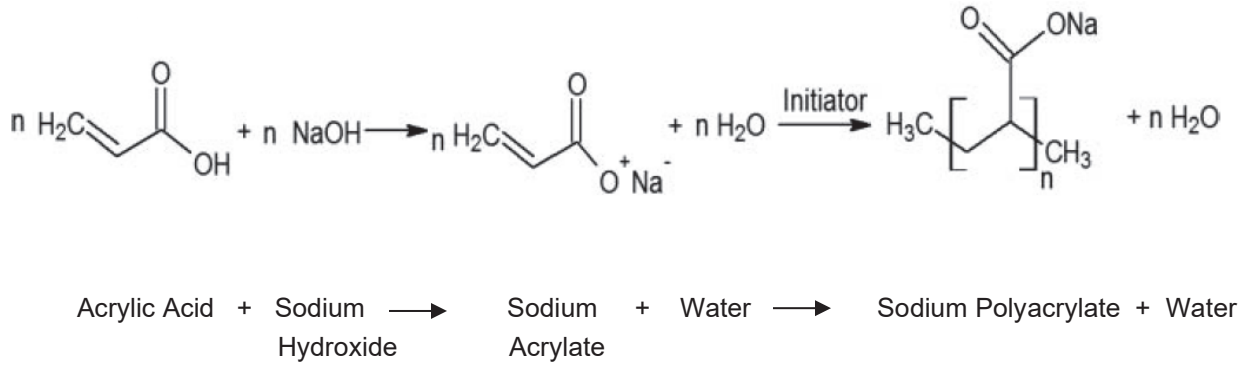
[23] Some companies manufacture their own acrylic acid, while others purchase it. ***. Email from ***, November 18, 2021. Petitioner stated that ***. Email from ***, November 2, 2021.

[24] IHS Markit, *Chemical Economics Handbook: Acrylic Acid and Esters*, December 2020 (Revised), p. 9. According to this publication, GAA production accounts for *** of total acrylic acid production, and approximately *** percent of GAA produced was used in the production of SAP in 2020. See also IHS Markit, *Chemical Economics Handbook: Superabsorbent Polymers*, December 2020, p. 11.

[25] Petitioner's postconference brief, Exhibit 1, Answers to Staff Questions, question #9, p. 4 and question #10, pp. 4-5.

[26] Petitioner's postconference brief, Exhibit 1, Answers to Staff Questions, question #9, p. 4.

Figure I-3
SAP: Chemical reaction for the manufacturing process of sodium polyacrylate



Source: Based on Khanlari, Samaneh & Dubé, Marc. (2015). Effect of pH on Poly(acrylic acid) Solution Polymerization. *Journal of Macromolecular Science Part A Pure and Applied Chemistry,* 52.

Note: n is an integer of repeating units.

Table I-4
SAP: Chemicals utilized during the manufacturing process

Identification	Chemicals
Main raw materials	acrylic acid (derived from propylene) and sodium hydroxide
Initiators	***
Crosslinkers	***
Additives	***
Solvents	***
Catalysts	none

Source: Petitioner's postconference brief, Exhibit 1, p. 2; Catalyst information from conference transcript, p. 106 (Clark); Petitioner's postconference brief, Exhibit 1, Answers to Staff Questions, question #13, p. 5.

The main steps of the SAP production process are generally as follows:

1) **Neutralization**: in most cases, the acrylic acid is partially neutralized with sodium hydroxide (also called caustic soda). Such a partial neutralization during the reaction will maintain the polymer in a dissolved state, which enhances the rate of reaction. Generally, acrylic acid is 60-80 percent neutralized prior to polymerization and further neutralization will be carried out either during or after the completion of the reaction.

2) **Polymerization**: Certain large-scale plants employ the aqueous polymerization process to produce SAP ("belt polymerization"). In this process, GAA, crosslinker, water, a neutralizing agent, and an initiator (such as a UV initiator, a redox initiator, thermally-activated initiators, or a combination) are blended and placed either on a moving belt or in large tubs. Reaction initiators such as *** are added in very dilute concentrations, and crosslinking agents are added in low concentrations.[27] The liquid then goes through a long chamber with a series of strong UV lights (a "reactor"). The UV radiation drives the polymerization and starts the crosslinking reactions. Polymerization may occur though inverse suspension polymerization ("ISP"), in which the sodium acrylate solution is polymerized in batch in the presence of an organic liquid. The alternative to a belt polymerization process, where the polymerization takes place on a conveyor belt, is the kneader process, where polymerization takes place in a unit similar to a bread dough maker such that the material is continuously pressed together by counter-rotating stirring shafts.[28]

3) **Gel modification and drying**: Since the product resulting from the polymerization step is a viscous gel that is difficult to process and transport, SAP is usually further transformed just after the polymerization step through a chopping or extrusion process to obtain particles. Particles are then transported via conveyors for drying in continuous hot air ovens or rotary vacuum dryers to obtain a powder.

4) **Grinding and sieving and surface crosslinking**: Dried SAP powder is ground and sieved to obtain the desired particle size before surface crosslinking, and low concentrations of cross-linking agents are added.[29] To improve performance characteristics, for example

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[27] Described as either a water solution process or a solvent suspension process. IHS Markit, *Chemical Economics Handbook: Superabsorbent Polymers*, December 2020, p. 11. Also see petitioner's postconference brief, Answers to Staff Questions, #4 (common inputs) and Evonik's Virtual Plant Tour Staff Memo, October 27, 2022.

[28] Hearing transcript, p. 181 (Gordon); IHS Markit, "Continuous SAP Production via Double Kneader Reactor," 2011, https://ihsmarkit.com/products/chemical-technology-pep-reviews-continuous-sap-production-2011.html.

[29] Low concentrations of cross-linking agents are added to avoid excess cross-linking, which reduces absorption capacity of fluids. One type of cross-linking agent cross-links the SAP by internal branches and another type cross-links the polyacrylate externally to make a more tridimensional network. ***. The polymerization is of single molecules of sodium acrylate; the crosslinker ensures that the granules remain insoluble when exposed to liquid, and a crosslinker connects the single molecules together to (continued...)

permeability, SAP particles are generally surface crosslinked. Additional cross-linking agent is sprayed on the particles' surface to increase the product's ability to swell under pressure – a property measured as absorbency under load. Another round of heating causes a reaction that yields the final cross-linked product. SAP produced through the ISP process does not always undergo grinding, sieving, and surface crosslinking. Finally, further treatments could be applied to develop the performance profile, such as anti-yellowing treatment and odor control.[30]

At the end of the production process, SAP is supplied in white irregular, round-shaped, or agglomerated powder/granules. SAP is typically packed in large plastic bags for shipment.[31]

Once the product has been manufactured, the finished product will need to meet various standards from the industry. The SAP industry has standards set by the International Organization for Standardization ("ISO") as well as regional standards issued by the European Disposables and Nonwovens Association ("EDANA").[32] Typical characteristics required in the industry include, but are not limited to, the following:[33]

a. Capacity – the total amount of liquid an SAP can absorb either in free-swelling (no load) conditions ("Free Swell Capacity" or "FSC") or after a centrifugation process to remove unabsorbed liquid ("Centrifuge Retention Capacity" or "CRC"), which is important for hygiene manufacturers that want to meet a certain liquid absorption capacity in their products.

b. Absorption Against Pressure – the amount of liquid absorbed by an SAP under an external pressure, which is important to avoid "gel blocking" and subsequent leakage in hygiene products.

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form a polymer network; the crosslinker ensures that the granules remain insoluble when exposed to liquid. Upon contact with an aqueous liquid the sodium ions become dissociated generating an osmotic pressure which drives more liquid into the SAP. BASF, personal-care-hygiene.basf.com/global/en/hygiene/superabsorbents.html, retrieved November 10, 2021.

[30] Petition, pp. 4-6. See also Evonik's Virtual Plant Tour Staff Memo, October 27, 2022.

[31] Petition, p. 6. See also Evonik's Virtual Plant Tour Staff Memo, October 27, 2022.

[32] Petitioner's postconference brief, Exhibit 1, Answers to Staff Questions, question #5, p. 2; Conference transcript, p. 100 (Terhart).

[33] Petitioner's postconference brief, Exhibit 1, Answers to Staff Questions, question #7, p. 3; Conference transcript, p. 101 (Cauble). See also Evonik's Virtual Plant Tour Staff Memo, October 27, 2022.

c. Permeability – the ability of liquid to pass between already swollen SAP particles, which is important for better SAP utilization in absorbent cores.

d. Absorption Speed – the time it takes for liquid to be absorbed by an SAP, which is important as rapid absorption of free liquid in the hygiene product minimizes the risk of leakage.[34]

Petitioner states that across the SAP industry, the manufacturing processes are similar.[35] Evonik states there are a limited number of production processes, with differences in methodology primarily having to do with the functional step of polymerization.[36] Petitioner also states it is not technically difficult to build a new production line.[37] Respondents state that SAP-8 is a new generation product that has better performance characteristics than other SAP, and it is therefore not interchangeable with other SAP.[38] P&G argues that the differences in production methods result in differences in the physical characteristics and performance properties of SAP-8, which is measurably superior to other SAP and previous formulations according to P&G's laboratory testing.[39] P&G stated that the standard most important and consumer-relevant for diapers is the speed of absorption under pressure. It contends no SAP on the market takes less than 200 seconds to absorb 20 grams of saline solution (a proxy for urine) under pressure, except for SAP-8, which takes only 130 seconds. When the test for absorbency speed is graphed against the aforementioned standard of centrifuge retention capacity, P&G observes that SAP-8 is set apart from all other SAP in the market. These characteristics allow diapers produced using SAP-8 to better maintain their shape and fit and to be thinner and more comfortable for the baby. This leads to superior dryness, which can be directly linked to infant skin health.[40]

Respondents state that SAP-8 has design and production processes that are different from other SAP products, and P&G and LG Chem state they have multiple patents to support

[34] For SAP-8, P&G uses the tests of ***. P&G's Virtual Plant Tour Staff Memo, September 26, 2022.
[35] Petition, p. 5; Conference transcript, p. 37 (Greer).
[36] Conference transcript, pp. 99-100 (Terhart).
[37] Petitioner's posthearing brief, Answers to Commissioners' Questions, #8, pp. 17-18.
[38] LGC's postconference brief, p. 1. SAP-8 has the chemical name sodium polyacrylate, and it has the same CAS number as sodium polyacrylate (CAS 9003-04-7). Conference transcript, pp. 157-158 (Won): LG Chem's postconference brief, Answers to Staff Questions, question #7, p. 6.
[39] Hearing transcript, pp. 184-185, 207 (Gordon), 174 (McCusker).
[40] Conference transcript, p. 131 (Gordon).

this claim.[41] In the experience of P&G, SAP-8 must be produced using a belt polymerization process, and not all companies are qualified to meet specifications.[42] In the SAP industry, there are hundreds of patents related to SAP production, and some representative ones are shown in table I-5.[43] Licensing and royalties are not common in the SAP industry, although they have been used in the past and are used when necessary.[44]

Table I-5
SAP: Representative patents in the SAP industry

Publication Number	Owner
US10711095	Novomer
US10632451	LG Chem
US10653812	LG Chem
US10730026	Sumitomo
US10850260	Nippon Shokubai
US10711074	LG Chem
US10843170	LG Chem
US10894245	LG Chem
US10843169	LG Chem

Table continued.

[41] P&G holds patents to the performance characteristics and defining test method of SAP-8 as well as to the diaper design that is enabled by the use of SAP-8. Conference transcript, p. 130 (Gordon). LG Chem has *** patents around SAP-8: ***. LG Chem's postconference brief, p. 6; Exhibit 25.

[42] Conference transcript, p. 129 (Gordon). ***. P&G states the alternate kneader polymerization process cannot produce an SAP product that meets the specifications for P&G's SAP-8 product. Hearing transcript, p. 181 (Gordon); LG Chem's postconference brief, Answers to Staff Questions, question #3, p. 4. However, ***, SAP BASF verification report, October 28, 2022, p. 7. Petitioner notes that the domestic industry makes products that meet the parameters for SAP-8 identified in the Commission's questionnaire. Petitioner's posthearing brief, Exhibit 1, pp. 10-11.

[43] Petitioner's postconference brief, Exhibit 1, Answers to Staff Questions, question #18, p. 8.

[44] For example, ***. U.S. producers' questionnaire response (final), section III-11; Petitioner's postconference brief, Exhibit 1, Answers to Staff Questions, question #18, p. 8.

Table I-5 Continued
SAP: Representative patents in the SAP industry

Publication Number	Owner
US10731024	Formosa Plastic
US10550243	Formosa Plastic
US10814308	LG Chem
US9550213	BASF
US9822203	BASF
US0186042	Evonik
US0306155	Evonik
US0060418	Evonik
US0306156	Evonik

Source: Petitioner's postconference brief, Exhibit 17.

Domestic like product issues

No issues with respect to domestic like product have been raised in this investigation. The petitioner contends that SAP comprises a single domestic like product coextensive with Commerce's scope.[45] During the preliminary phase of the investigation, no respondent party expressly objected to the petitioner's proposed domestic like product definition and the Commission defined a single domestic like product consisting of all SAP, coextensive with Commerce's scope.[46] In the final phase of the investigation, no party provided comments relating to the domestic like product definition in their submissions addressing the Commission's draft questionnaires and no party argued for a different domestic like product definition in their prehearing or posthearing briefs.

[45] Petitioner's prehearing brief, p. 8.

[46] Superabsorbent Polymers from South Korea, Investigation No. 731-TA-1574 (Preliminary), USITC Publication 5273, December 2021, pp. 8-9.

Part II: Conditions of competition in the U.S. market[1]

U.S. market characteristics

SAP is a granular powder that can absorb large amounts of liquid. Most SAP is used in hygiene products, particularly infant diapers, as well as adult incontinence products and feminine hygiene products.[2] According to ***, baby diapers/training pants was the largest end use of SAP in the United States (*** percent of U.S. consumption), followed by adult incontinence products (*** percent), and feminine hygiene products (*** percent), with technical/industrial uses accounting for *** percent.[3] SAP performance characteristics include the capacity to absorb liquids, absorption against pressure, permeability, and absorption speed.[4] Capacity is a more important factor for some hygiene products such as incontinence products that have a high fluff content whereas factors such as absorption under pressure, permeability, and absorption speed are more important for thin and ultra-thin hygiene products.[5]

SAP is produced by a relatively small number of global producers. Three firms produce SAP in the United States: BASF, Evonik, and NSAI, ***. All three U.S. producers also produce SAP in other countries (in Europe and Asia) and all three firms imported SAP ***.

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[1] The three U.S. producers submitted responses to both the U.S. producer's and importer's questionnaires. Their responses to questions that appear in both questionnaires are not included in the importer counts in part II. In addition, responses of purchasers that also submitted an importer questionnaire (***) are counted with purchasers, but not importers.

[2] It is also used in non-hygiene applications, such as food packaging, storage, agriculture, and civil engineering. Petition, p. 1 and petitioner's postconference brief, pp. 12-13.

[3] ***.

[4] Petitioner's postconference brief, exhibit 1, p. 3 and hearing transcript, p. 62 (Cauble).

[5] Petitioner's postconference brief, exhibit 1, pp. 3-4.

Global purchases of SAP are concentrated among a small number of firms. Purchasers typically buy SAP from multiple suppliers who have qualified their products.[6] Large purchasers include Kimberly-Clark Corp. ("KCC"), manufacturer of Huggies brand diapers, and Procter & Gamble ("P&G"),[7] manufacturer of Pampers brand diapers.[8] ***.

U.S. producer *** and importers *** reported changes in the product mix and marketing for SAP. *** reported increased product standardization and more interchangeability among suppliers. It also reported that price pressure from subject imports has led to an increased focus on efficiency and cost savings and reduced technical service. ***. P&G reported that the SAP it requires ***.[9]

Apparent U.S. consumption of SAP increased by *** percent from 2019 to 2021 and was slightly higher (by *** percent) in interim (January-June) 2022 than in interim 2021.

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[6] Petitioner's postconference brief, exhibit 1, p. 8.

[7] ***.

[8] P&G and KCC consume about *** percent of global SAP output. ***.

LG Chem reported that it considers *** U.S. customers to be brand name customers including ***. It reported that these customers accounted for about *** percent of its U.S. sales during the preliminary phase period, that *** percent of its sales during this period went to private label diaper producers, and *** percent went to industrial users. LG Chem's postconference brief, Responses to Staff Questions, p. 1.

[9] P&G began using SAP-8 for its U.S. diaper manufacturing at the end of 2019. Hearing transcript, p. 180 (Gordon).

U.S. purchasers[10]

The Commission received nine usable questionnaire responses from firms that purchased SAP during January 2019-June 2022.[11] [12] [13] Seven purchasers are end users in the hygiene market and one of these firms also purchases SAP for other end uses, and two are distributors. *** large purchasers accounted for *** percent of the total reported purchases during January 2019-June 2022: ***. ***.[14] During the period, ***.[15] [16]

Purchasers had differing trends in the quantities of their purchases during 2019-21. Among the largest purchasers, ***

[10] Purchase quantities in this section include both purchases and imports by purchasers.

[11] The following firms provided purchaser questionnaire responses: ***.

[12] All nine responding purchasers purchased domestic SAP and seven also purchased South Korean SAP. Five firms purchased SAP from nonsubject sources including Belgium, Canada, China, Germany, Japan, and Mexico. No purchasers reported purchasing SAP from unknown sources.

[13] Eight purchasers indicated they had marketing/pricing knowledge of domestic product and seven of South Korean product. Five purchasers indicated they had knowledge of product from nonsubject sources including Belgium, Brazil, Canada, China, Germany, Japan, Taiwan, and Mexico.

[14] ***.

[15] ***.

[16] ***.

***.

Channels of distribution

Most SAP is shipped to end users, particularly hygiene end users, which accounted for *** of U.S. shipments of U.S.-produced and imported SAP in 2021 (table II-1).

Table II-1
SAP: Share of U.S. shipments by source, channel of distribution, and period

Shares in percent

Source	Channel	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
United States	Distributors	***	***	***	***	***
United States	Hygiene end users	***	***	***	***	***
United States	Non-hygiene end users	***	***	***	***	***
South Korea	Distributors	***	***	***	***	***
South Korea	Hygiene end users	***	***	***	***	***
South Korea	Non-hygiene end users	***	***	***	***	***
Nonsubject	Distributors	***	***	***	***	***
Nonsubject	Hygiene end users	***	***	***	***	***
Nonsubject	Non-hygiene end users	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Geographic distribution

U.S. producers reported selling SAP to all regions in the contiguous United States and subject importers reported selling to *** except *** (table II-2). For U.S. producers, *** percent of sales were within 100 miles of their production facility, *** percent were between 101 and 1,000 miles, and *** percent were over 1,000 miles. Subject importers sold *** percent within 100 miles of their U.S. point of shipment, *** percent between 101 and 1,000 miles, and *** percent over 1,000 miles.

Table II-2
SAP: Count of U.S. producers' and U.S. importers' geographic markets

Region	U.S. producers	South Korea
Northeast	3	***
Midwest	3	***
Southeast	3	***
Central Southwest	3	***
Mountains	3	***
Pacific Coast	1	***
Other	0	***
All regions (except Other)	1	***
Reporting firms	3	2

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Other U.S. markets include AK, HI, PR, and VI.

Supply and demand considerations

U.S. supply

Table II-3 provides a summary of the supply factors regarding SAP from U.S. producers and from South Korea. The responding foreign producers, LG Chem and Sumitomo, estimated that in 2021, they accounted for *** percent of production of SAP in South Korea and LG Chem estimated that it accounted for *** percent of total exports from South Korea to the United States.[17] ***. ***. ***.

[17] Sumitomo estimated that it accounted for *** percent of South Korean production ***.

Table II-3
SAP: Supply factors that affect the ability to increase shipments to the U.S. market, by country

Quantity in metric tons dry weight; ratio and share in percent; count is number of "yes" responses

Factor	Measure	United States	South Korea
Capacity 2019	Quantity	***	***
Capacity 2021	Quantity	***	***
Capacity utilization 2019	Ratio	***	***
Capacity utilization 2021	Ratio	***	***
Inventories to total shipments 2019	Ratio	***	***
Inventories to total shipments 2021	Ratio	***	***
Home market shipments 2021	Share	***	***
Non-US export market shipments 2021	Share	***	***
Ability to shift production (firms reporting "yes")	Count	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Responding U.S. producers accounted for all of U.S. production of SAP in 2021. The responding foreign producer/exporters are believed to have accounted for all of U.S. imports of SAP from South Korea during 2021. For additional data on the number of responding firms and their share of U.S. production and of U.S. imports from each subject country, please refer to Part I, "Summary Data and Data Sources."

Domestic production

Based on available information, U.S. producers of SAP have the ability to respond to changes in demand with moderate changes in the quantity of shipments of U.S.-produced SAP to the U.S. market. The main contributing factors to this degree of responsiveness of supply are some available unused capacity, some inventories, and some ability to shift shipments from alternate markets. A factor mitigating responsiveness of supply is the inability to shift production to or from alternate products.

The U.S. industry's capacity was slightly higher in 2021 than in 2019 but was slightly lower between the interim periods.[18] Capacity utilization was nearly the same in 2021 (84.7 percent) as in 2019 (84.9 percent) but was much higher in interim 2022 (93.4 percent) than in interim 2021 (80.7 percent). The quantity and share of exports increased in each year from 2019 to 2021, with exports comprising about 18 percent of U.S. producers' total shipments in 2021, but both export measures were lower in interim 2022 compared to interim 2021.[19] U.S. producers reported that their major export markets were in the Americas including ***

[18] ***.

[19] The increase in export shipments is ***.

***. *** U.S. producers reported being unable to switch production from SAP to other products using the same equipment as SAP.

Five of the nine purchasers reported changes in the availability of domestic product during the period. Firms described tight supply in 2022 because of limited U.S. capacity, raw material shortages, and purchasers trying to source more domestic product because of international producers' long lead times and high freight costs. *** also reported that all three U.S. producers had production issues in 2021 and that Evonik has not been able to fully resume its normal production in Louisiana.

Subject imports from South Korea

Based on available information, South Korean SAP producers have the ability to respond to changes in demand with moderate changes in the quantity of shipments of SAP to the U.S. market. The main contributing factors to this degree of responsiveness of supply is the ability to shift shipments from alternate markets as well as some available capacity early in the period. Factors mitigating responsiveness of supply include a high rate of capacity utilization, limited availability of inventories, and an inability to shift production to or from alternate products.

Overall SAP capacity in South Korea *** from 2019 to 2021 and was *** in interim 2022 than in interim 2021. ***.[20]

Most South Korean SAP shipments go to third-country markets: ***. SAP from South Korea is currently the subject of antidumping proceedings by the Gulf Cooperation Council and in April 2022, the EU imposed antidumping duties on SAP from South Korea (see part VII). *** reported that *** to switch production from SAP to other products using the same equipment.

Three of seven responding purchasers reported changes in the availability of subject imports during the period, reporting less availability and higher costs because of port congestion and increased ocean freight costs.

[20] LG Chem's postconference brief, p. 40.

Imports from nonsubject sources

Nonsubject imports, as reported in questionnaire responses, accounted for *** percent of the quantity of total U.S. imports in 2021. Sources of nonsubject imports include Belgium, China, France, Germany, Japan, Saudi Arabia, Singapore, and the Netherlands (see part IV). The largest responding importer of SAP from nonsubject sources was ***. U.S. producers imported SAP from their affiliates in nonsubject countries, including to augment U.S. production particularly during periods of supply constraints and to supply specialty products that are not produced domestically. Evonik imports SAP to supplement its domestic SAP during production downtimes for maintenance or product switches.[21] Petitioner reported an ***.[22]

Four of eight responding purchasers reported changes in the availability of nonsubject imports during the period, reporting less availability, higher costs because of port congestion and increased ocean freight costs, and longer lead times. ***.

Supply constraints[23]

All three U.S. producers reported that they had experienced supply constraints between January 1, 2019, and November 2, 2021 (the date the petition was filed), particularly constraints related to weather events Winter Storm Uri and Hurricane Ida in 2021. Importers reported no supply constraints for imported product. Two U.S. producers (***) reported no supply constraints since the filing of the petition while one (***) reported such constraints.

NSAI reported that ***

[21] Hearing transcript, pp. 100-101 (Terhart).

[22] Petitioner's postconference brief, exh. 1, p. 31.

[23] Information from U.S. producers' reported constraints in this section is from U.S. producer questionnaire responses, Petitioner's postconference brief, Exhibit 1, pp. 29-30, and hearing transcript, pp. 98-100 (Amin, Clark, Cauble, and Terhart) .

***.

BASF reported ***.[24] ***.

Evonik ***.

With respect to the COVID-19 pandemic, Petitioner reported some additional costs to U.S. producers as they implemented strict hygiene protocols in their production plants, but that U.S. producers continued operations and ***.[25] In questionnaire responses, two U.S. producers reported no impact of the pandemic. One producer, ***. Importer LGCAI reported ***. Importer ***

[24] ***.

[25] Petitioner's postconference brief, exhibit 1, p. 29.

*** because of limited vessel space for product from Japan and increased costs for ocean freight. *** also reported supply chain disruptions related to labor shortages, container shortages, and port congestion, and *** reported that supply chain disruptions resulted in late deliveries and out-of-stock situations.

Five of nine purchasers (***) reported supply constraints before the petition was filed, and four of these purchasers (***) reported supply constraints after it was filed. Four purchasers (***) reported no supply constraints either before or after the filing and one purchaser (***) reported constraints before but not after the filing. Firms reported supply constraints with U.S. producers, including constraints related to the aforementioned weather events. Some purchasers provided more detailed information regarding supply constraints, including ongoing U.S. producer supply issues in 2022.

***.[26] ***.

P&G stated that ***.[27] ***

[26] ***. KCC's postconference brief, p. 4 and attachments. ***. ***. KCC' posthearing brief, p. 4.

[27] P&G's postconference Answers to Staff Questions, Interchangeability section.

***.[28] ***. P&G reported that there was a nearly one-month period in 2021 during which there was a diaper shortage when other U.S. diaper producers "ran out of SAP and P&G was the only major domestic producer."[29]

*** reported that all three U.S. producers declined to supply or limited the volumes available, in 2020, 2021, and 2022. Specifically, it stated that ***.

New suppliers

Eight of the nine responding purchasers indicated that no new suppliers entered the U.S. market since January 1, 2019. One purchaser (***) reported that there were new suppliers in China, but they are not active in supplying the U.S. market.

U.S. demand

Based on available information, the overall demand for SAP is likely to experience small changes in response to changes in price. The main contributing factors are the lack of substitute products and the small-to-moderate cost share of SAP in end-use products.

End uses and cost share

U.S. demand for SAP depends on the demand for U.S.-produced downstream products. The major end use is hygiene products, particularly infant diapers, as well as adult incontinence products and feminine products. Other end uses, which account for a small portion of

[28] ***.

[29] Hearing transcript, p. 184 (Gordon).

consumption of the product, include food-related uses, such as refrigerant or freshness-keeping agents, household products, such as disposable heating packs or environment fragrance, and water retention in agriculture or civil engineering projects.[30] SAP accounts for a small-to-moderate share of the cost of the end-use products in which it is used. Purchasers reported that SAP accounts for 4 to 30 percent of the cost of hygiene products.

Business cycles

All responding U.S. producers and importers and eight of the nine responding purchasers indicated that the SAP market was not subject to business cycles. Purchaser *** reported that there can be a small amount of seasonality based on birth rates during each year but that this does not have a major impact on the industry.

Several firms reported distinctive conditions of competition and/or changes in conditions since January 1, 2019. Among U.S. producers, *** reported that a distinct condition was that contracts and prices are renegotiated annually and *** reported that subject imports are priced below *** marginal costs and have depressed prices in the U.S. market. Importer *** reported the following conditions: custom products designed for particular customers; competition driven by large global purchasers and suppliers; purchase decisions driven by available capacity, ability to meet specifications, and on-time delivery; lengthy qualification periods that occur before price and volume negotiations; switching of sources is rare once the supply for an SAP product is established; customers allocate their contracted SAP purchase volumes on a global basis and decide the quantities of a given SAP product to be shipped to a particular region; and U.S. industry supply constraints. ***.

*** reported that the SAP industry typically has 5 to 10 year-cycles of availability based on acrylic acid availability and capacity investment, with periods of tightening capacity and increased prices and competition followed by increased investments in capacity. It reported that there has been no investment in acrylic acid during the period of investigation and no investment in North American SAP capacity for more than 10 years "as the producers of Japan, Germany and Korea have preferred to invest in manufacturing in other locations." ***

[30] Petition, p. 4.

***. Purchaser *** reported that the major drivers of the SAP market are raw material prices and overall supply and demand for SAP.

Purchasers reported several changes to conditions of competition. *** reported increased SAP prices, and purchaser *** also reported increased prices for SAP, which it attributed to increased costs for oil and transportation. *** reported that several North American SAP suppliers declared force majeure in 2021 due to weather related events. *** reported tight supply globally for SAP since 2021 and expects continued tight supply for the next several years since no new substantial investments have been announced. *** also reported tight supply for SAP since 2019, "more SAP supplier power," and higher SAP prices.

Demand trends

Demand is driven by the demand for disposable infant diapers and adult incontinence products, and to a lesser extent, feminine hygiene and industrial products. Demand for hygiene products is based on population and demographic trends. One source stated that disposable baby diapers account for *** percent of the baby diaper market in the United States and that consumption of disposable diapers per child has tended to decline as more absorbent diapers have entered the market.[31] This source also mentioned the growth of adult incontinence products resulting from growth of the aging population and greater consumer acceptance.

Petitioner estimates that U.S. demand growth for SAP is about 1 to 3 percent per year.[32] Almost all responding firms reported either an increase or no change in U.S. demand for SAP since January 1, 2019 (table II-4). U.S. producer *** reported that a decrease in demand for infant diapers has been offset by an increase in demand for adult incontinence products.

[31] It stated that extra absorbent diapers can have 20 to 25 percent more absorbency than regular diapers. ***.

[32] Petitioner's postconference brief, p. 13. In questionnaire responses, *** estimated annual demand growth at 2 percent while *** estimated it at 1 to 2 percent.

Table II-4
SAP: Count of firms' responses regarding overall domestic and foreign demand

Market	Firm type	Increase	No change	Decrease	Fluctuate
Domestic demand	U.S. producers	2	1	0	0
Domestic demand	Importers	3	0	0	0
Domestic demand	Purchasers	5	2	0	1
Foreign demand	U.S. producers	3	0	0	0
Foreign demand	Importers	3	0	0	0
Foreign demand	Purchasers	5	1	2	0
Demand for end use products	Purchasers	6	0	1	2

Source: Compiled from data submitted in response to Commission questionnaires.

Six of nine purchasers including *** reported increased demand for their end-use products, one reported a decrease, and two including *** reported a fluctuation. Seven purchasers reported that demand for their final products incorporating SAP had not varied since January 1, 2019, based on the grade of SAP used, but two *** purchasers reported that it had. *** reported that it has implemented new SAP grades ***. *** reported strong U.S. demand for its *** diapers, ***.

All responding U.S. producers and importers and most responding purchasers reported that demand for SAP outside of the United States has increased. *** reported increased global demand, particularly in Asia, due to increased demand for adult incontinence products.

Substitute products

Substitutes for SAP are extremely limited. All three U.S. producers, all nine responding purchasers, and all but one responding importer reported that there were no substitutes for SAP. Importer *** reported that clay could be used as a waste solidifier.

Substitutability issues

This section assesses the degree to which U.S.-produced SAP and imports of SAP from subject countries can be substituted for one another by examining the importance of certain purchasing factors and the comparability of SAP from domestic and imported sources based on those factors. Based on available data, staff believes that there is a moderate-to-high degree of

substitutability between domestically produced SAP and SAP imported from subject sources.[33] Factors contributing to this level of substitutability include the qualification of both subject import suppliers and domestic producers to produce to similar individual customer specifications, little preference for particular countries of origin, and similarities between domestically produced SAP and subject imports for qualified sources and when produced to similar specifications. Factors reducing substitutability include customer-specific grades and the associated lengthy qualification processes for those grades, lack of qualification of some domestic or import suppliers with some purchasers, the prevalence of long-term contracts, supply constraints and the importance of availability as a purchase consideration, reported constraints by some but not all customers in switching their end-product production lines between suppliers even when qualified for the same grade, and the importance to purchasers of maintaining multiple suppliers.

Factors affecting purchasing decisions

Purchaser decisions based on source

As shown in table II-5, purchasers' responses ***, were divided regarding how often they make purchasing decisions based on the producer. Four of the nine firms reported that they never make decisions based on the producer while four always or usually do. ***. Two firms, *** and ***, reported "always" but did not provide an explanation. *** reported "usually," citing its long-term relationships with several producers. *** also reported "usually," explaining that ***. Most purchasers reported that they never make purchase decisions based on the country of origin. The only purchaser (***) that provided a reason for its decision based on country of origin answered "sometimes" and explained that import duties, supply chain, and lead times were factors. Nearly all purchasers reported that their customers never make purchasing decisions based on the producer or country of origin.

[33] The degree of substitution between domestic and imported SAP depends upon the extent of product differentiation between the domestic and imported products and reflects how easily purchasers can switch from domestically produced SAP to the SAP imported from South Korea (or vice versa) when prices change. The degree of substitution may include such factors as relative prices (discounts/rebates), quality differences (e.g., grade standards, defect rates, etc.), and differences in sales conditions (e.g., lead times between order and delivery dates, reliability of supply, product services, etc.).

Table II-5
SAP: Count of purchasers' responses regarding frequency of purchasing decisions based on producer and country of origin

Firm making decision	Decision based on	Always	Usually	Sometimes	Never
Purchaser	Producer	2	2	1	4
Customer	Producer	0	0	1	9
Purchaser	Country	2	0	2	5
Customer	Country	0	1	1	7

Source: Compiled from data submitted in response to Commission questionnaires.

Importance of purchasing domestic product

All but one responding purchaser reported no domestic product purchase requirements. One small purchaser (***) reported domestic requirements but did not state the reason.

Most important purchase factors

The most often cited top three factors firms consider in their purchasing decisions for SAP were quality and price (8 firms each) and availability (7 firms), as shown in table II-6. These three factors are categorizations of firms' answers; for example, the price category includes "total value." Quality was the most frequently cited first-most important factor (cited by 6 firms), followed by price (2 firms). Availability was the most frequently cited second-most important factor (cited by 3 firms), followed by quality and price (2 firms each) which were each reported as the second-most important factor (2 firms each). Price was the most frequently reported third-most important factor (4 firms).

Table II-6
SAP: Count of ranking of factors used in purchasing decisions as reported by purchasers, by factor

Factor	First	Second	Third	Total
Quality	6	2	0	8
Price	2	2	4	8
Availability	1	3	3	7
Other	0	2	2	4

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Availability includes supply assurance, suppliers' ability to deliver, supply chain management/reliability. Quality includes type and product developed to purchaser performance standards. Price includes cost and total value. Other includes process runability and terms for second factor and credit and freight for third factor.

***

***.[34] ***.[35] ***

[34] *** provided detailed explanations. ***.

[35] *** provided additional detail. ***.

***. Two other purchasers reported additional factors beyond their top-three listings: *** reported "innovation/product development capability," and *** listed lead times.

Most purchasers (7 of 9) reported that they always (2) or usually (5) purchase the lowest-priced product, although *** large purchasers (***) answered differently. Among the largest purchasers, ***.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 15 factors in their purchasing decisions (table II-7). All nine responding purchasers rated availability and reliability of supply as very important factors. The other factors rated as very important by more than half of responding purchasers were price, product consistency, and quality meets your firm's specifications and standards (8 firms each); delivery time, quality meets industry standards, and technical support/service (6 firms each); and delivery terms (5 firms).

Table II-7
SAP: Count of purchasers' responses regarding importance of purchase factors, by factor

Factor	Very important	Somewhat important	Not important
Availability	9	0	0
Delivery terms	5	4	0
Delivery time	6	3	0
Discounts offered	3	6	0
Minimum quantity requirements	3	4	2
Packaging	2	5	2
Payment terms	3	3	3
Price	8	1	0
Product consistency	8	0	1
Product range	1	6	2
Quality meets industry standards	6	1	2
Quality meets your firm's specifications and standards	8	0	1
Reliability of supply	9	0	0
Technical support/service	6	3	0
U.S. transportation costs	4	5	0

Source: Compiled from data submitted in response to Commission questionnaires.

Lead times

SAP is primarily sold from inventory. ***. The average reported lead time from inventory was *** days and the average reported lead time for produced-to-order product was

*** days. Importer *** reported that *** percent of its U.S. commercial shipments were from U.S. inventories, with lead times averaging *** days, and *** percent was from foreign inventories, with lead times averaging *** days.[36]

Supplier certification

Eight of the nine responding purchasers require their suppliers to become certified or qualified to sell SAP to their firm. Purchasers reported that the average time to qualify a new supplier ranged from less than a month to two years. ***. Factors considered in qualification include trial runs; tests for product safety; supplier audits; product development; supplier ability to produce large amounts of consistent quality; consumer test; and patent clearance. KCC reported that its does not have a general qualification process but rather that it qualifies each individual SAP specification that it uses for each product and for each manufacturing line.[37]

*** three of the nine responding purchasers (***) reported that a domestic or foreign supplier had failed in its attempt to qualify SAP or had lost its approved status since 2019; and the other six purchasers responded "no" to the question. *** reported LG Chem did not meet its performance requirements. *** reported that *** are now able to produce the SAP it needs but there was a time when they could not. *** reported that *** is unable to produce the high-performance reliable quality SAP needed for ***.

Minimum quality specifications

Five purchasers reported that U.S.-produced SAP always met minimum quality specifications and the other four reported it usually did (table II-8). Almost all responding firms also reported that South Korean and nonsubject sources always or usually met minimum quality specifications.

[36] ***.

[37] KCC's prehearing brief, p. 2.

Table II-8
SAP: Count of purchasers' responses regarding suppliers' ability to meet minimum quality specifications, by source

Source of purchases	Always	Usually	Sometimes	Rarely or never	Don't Know
United States	5	4	0	0	0
South Korea	4	2	1	0	2
Nonsubject sources	3	2	0	0	1

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Purchasers were asked how often domestically produced or imported SAP meets minimum quality specifications for their own or their customers' uses.

Purchasers reported factors that determine quality include absorbency (centrifugal retention capacity, absorbance under pressure, absorption speed, permeability capacity, free swell, hydroxyl value, iodine value); particle size distribution (minimum and maximum, dust level); appearance (color, color stability); impurities (residual monomer, moisture content, foreign material); pH; and odor. ***.

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns (table II-9). Among the largest purchasers, ***. Among smaller purchasers, *** reported decreased domestic purchases because they were "too expensive," and *** reported increased domestic purchases because of competitive pricing and fluctuating subject import purchases because of lack of domestic product availability. *** reported increased purchases from domestic, subject, and nonsubject sources, citing supply chain issues, increased customer demand, and *** grade purchases, respectively, as the reasons for increased purchases from each source.

Table II-9
SAP: Count of purchasers' responses regarding changes in purchase patterns from U.S., subject, and nonsubject countries

Source of purchases	Decreased	Increased	Constant	Fluctuated	Did not purchase
United States	1	3	4	1	0
South Korea	1	1	2	3	1
Nonsubject sources	0	3	1	1	3
Sources unknown	0	0	1	0	3

Source: Compiled from data submitted in response to Commission questionnaires.

SAP grades

Purchasers were asked questions regarding the availability and interchangeability of different SAP grades and substitutability between the same grade from different suppliers.

Four of nine purchasers including *** responded "yes" when asked whether certain grades/types/sizes of SAP were only available from certain country sources and the other four, including ***, responded "no." *** reported that each supplier "produces a unique type of SAP that has different performance characteristics depending on the grade." ***. ***.

Most purchasers described limitations to substituting different grades of SAP in their downstream production processes. *** and *** reported that they could not substitute but did not explain. *** reported that substituting grades involves a trade-off on performance parameters and a "tweak" to the recipe used for the downstream product. *** reported that each grade must be formally qualified for use in the specific downstream product. It reported ***. ***. *** reported it could substitute grades by running down the old product and adding the new product, if it has used the product previously and knows it will work, but that a new grade of SAP or SAP

from a new supplier would have to go through a trial process. *** reported some ability to switch between different SAP grades from the same supplier, but that it defines the specification depending on the final product, and that switching would require running validations that take from *** months. On the other hand, ***, a distributor of SAP, simply responded, "yes."

Purchasers were also asked whether they can substitute between the same grade of SAP produced by different suppliers in the production of downstream products. Two firms *** and *** simply responded "no" but distributor *** responded "yes." *** also responded "yes" but noted the same caveats as it gave in its response to the question regarding substituting of grades. *** responded that different suppliers typically do not offer the same exact SAP grade. *** reported that "there is a high chance" of substitution if specifications are comparable but that there is a validation period of *** months. ***.

***.[38] ***. P&G

[38] P&G's Virtual Plant Tour Staff Memo, September 26, 2022, p. 13.

stated that all of its production lines globally use SAP-8 and that it uses a "double digit greater" quantity of SAP when using SAP-7 instead of SAP-8.[39]

Purchase factor comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing SAP produced in the United States, South Korea, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 15 factors (tables II-10) for which they were asked to rate the importance.

Most purchasers reported that U.S. and subject SAP were comparable on 12 of the 15 factors including five factors rated as very important factors (delivery terms, product consistency, quality meets industry standards, quality meets your firm's specifications and standards, and technical support/service). There were three factors, availability, delivery time, and price, for which a majority did not rate the products as comparable; all three factors were rated as very important by most responding purchasers. For one of these factors, delivery time, all eight responding purchasers reported that the U.S. product was superior to the South Korean product. For the other two factors, availability and price, firms' responses were mixed. With respect to availability, four firms rated the U.S. product as superior, while three rated the U.S. product as inferior, and one reported the sources to be comparable. With respect to price, three firms rated the U.S. product as superior (i.e., U.S. product priced lower than South Korean product), three rated the U.S. and South Korean product as comparable, and two rated the domestic product as inferior (i.e., U.S. product priced higher than South Korean product).

[39] Hearing transcript, p. 207 (Gordon).

Table II-10
SAP: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. vs South Korea	4	1	3
Delivery terms	U.S. vs South Korea	3	5	0
Delivery time	U.S. vs South Korea	8	0	0
Discounts offered	U.S. vs South Korea	0	6	2
Minimum quantity requirements	U.S. vs South Korea	0	7	1
Packaging	U.S. vs South Korea	0	8	0
Payment terms	U.S. vs South Korea	0	7	1
Price	U.S. vs South Korea	3	3	2
Product consistency	U.S. vs South Korea	0	6	2
Product range	U.S. vs South Korea	0	7	1
Quality meets industry standards	U.S. vs South Korea	0	8	0
Quality meets your firm's specifications and standards	U.S. vs South Korea	0	7	1
Reliability of supply	U.S. vs South Korea	2	4	2
Technical support/service	U.S. vs South Korea	1	7	0
U.S. transportation costs	U.S. vs South Korea	3	4	0

Table continued.

Table II-10 Continued
SAP: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. vs Nonsubject	2	1	3
Delivery terms	U.S. vs Nonsubject	1	5	0
Delivery time	U.S. vs Nonsubject	4	1	1
Discounts offered	U.S. vs Nonsubject	0	5	1
Minimum quantity requirements	U.S. vs Nonsubject	0	5	1
Packaging	U.S. vs Nonsubject	0	6	0
Payment terms	U.S. vs Nonsubject	0	5	1
Price	U.S. vs Nonsubject	1	3	2
Product consistency	U.S. vs Nonsubject	0	4	2
Product range	U.S. vs Nonsubject	0	5	1
Quality meets industry standards	U.S. vs Nonsubject	0	6	0
Quality meets your firm's specifications and standards	U.S. vs Nonsubject	0	5	1
Reliability of supply	U.S. vs Nonsubject	0	3	3
Technical support/service	U.S. vs Nonsubject	1	5	0
U.S. transportation costs	U.S. vs Nonsubject	1	4	1

Source: Compiled from data submitted in response to Commission questionnaires.

Note: A rating of superior means that price/U.S. transportation cost is generally lower. For example, if a firm reported "U.S. superior," it meant that the U.S. product was generally priced lower than the imported product.

In comparing domestic and nonsubject sources of SAP, a majority of purchasers rated the sources as comparable for 12 of the 15 factors. Responses were mixed for availability, most firms rated domestic sources as superior on delivery time, and responses for reliability of supply were equally divided between U.S. product being comparable or inferior to nonsubject product.

Comparison of U.S.-produced and imported SAP

In order to determine whether U.S.-produced SAP can generally be used in the same applications as imports from South Korea, U.S. producers, importers, and purchasers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in table II-11, two U.S. producers reported that domestic product was frequently interchangeable with imported product from South Korea and nonsubject countries. One importer (***) reported that products from all country pairs were never interchangeable and one importer (***) reported they were frequently interchangeable. A plurality of purchasers (3 of 7) reported that domestic and subject SAP were frequently interchangeable but large purchasers reported the sources were sometimes (***) or never (***) interchangeable.

Table II-11
SAP: Count of firms reporting the interchangeability between product produced in the United States and in other countries, by country pair

Firm Type	Country pair	Always	Frequently	Sometimes	Never
U.S. producers	United States vs. South Korea	1	2	0	0
U.S. producers	United States vs. Other	1	2	0	0
U.S. producers	South Korea vs. Other	0	2	0	0
Importers	United States vs. South Korea	0	1	0	1
Importers	United States vs. Other	0	1	0	1
Importers	South Korea vs. Other	0	1	0	1
Purchasers	United States vs. South Korea	1	3	2	1
Purchasers	United States vs. Other	0	2	1	1
Purchasers	South Korea vs. Other	0	2	1	1

Source: Compiled from data submitted in response to Commission questionnaires.

Importer *** reported, "SAP products are custom-made for specific applications and are sourced from a handful of global suppliers. Interchangeability does not turn on the country of origin, but instead whether a given global producer is capable of meeting a purchaser's required specifications during the lengthy development process with its customers."

Purchaser ***.[40] Purchaser *** reported SAP products are usually not interchangeable from supplier to supplier regardless of country pair. Purchaser ***

[40] ***.

***.[41]

In addition, U.S. producers, importers, and purchasers were asked to assess how often differences other than price were significant in sales or purchases of SAP from the United States, South Korea, and nonsubject countries. As seen in table II-12, U.S. producers reported that differences other than price between country sources were sometimes or never factors in their SAP sales. One importer (***) reported that such differences were always significant in their sales and one (***) reported that they were sometimes significant. Most responding purchasers reported differences other than price between country pairs were always or frequently significant in their purchases.

Table II-12
SAP: Count of firms reporting the significance of differences other than price between product produced in the United States and in other countries, by country pair

Firm Type	Country pair	Always	Frequently	Sometimes	Never
U.S. producers	United States vs. South Korea	0	0	2	1
U.S. producers	United States vs. Other	0	0	2	1
U.S. producers	South Korea vs. Other	0	0	1	1
Importers	United States vs. South Korea	1	0	1	0
Importers	United States vs. Other	1	0	1	0
Importers	South Korea vs. Other	1	0	1	0
Purchasers	United States vs. South Korea	2	3	1	1
Purchasers	United States vs. Other	1	2	1	0
Purchasers	South Korea vs. Other	1	2	1	0

Source: Compiled from data submitted in response to Commission questionnaires.

Importer *** stated that major factors other than price included quality, meeting specifications, on-time delivery, and the qualification of new SAP products, which is a difficult and time-consuming process. Importer *** stated that its main target market is low-tier and price sensitive, and that supplier relationships can be important. Purchaser *** cited the importance of availability, which it said is typically a “restriction,” and it stated that imports are needed to fulfill U.S. market needs at competitive pricing and that if imports were not available it would need to produce the finished product outside of the United States. ***

[41] ***.

***. ***.

Elasticity estimates

This section discusses elasticity estimates. Parties did not comment on these estimates in their prehearing or posthearing briefs.

U.S. supply elasticity

The domestic supply elasticity for SAP measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of SAP. The elasticity of domestic supply depends on several factors including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced SAP. Analysis of these factors above indicates that the U.S. industry has the moderate ability to increase or decrease shipments to the U.S. market; an estimate in the range of 3 to 6 is suggested.

U.S. demand elasticity

The U.S. demand elasticity for SAP measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of SAP. This estimate depends on factors discussed above such as the existence, availability, and commercial viability of substitute products, as well as the component share of the SAP in the production of any downstream products. Based on the available information, the aggregate demand for SAP is likely to be inelastic; a range of -0.25 to -0.5 is suggested.

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[42] Product differentiation, in turn, depends upon such factors as quality (e.g., chemistry, appearance, etc.) and conditions of sale (e.g., availability, sales terms/discounts/promotions, etc.). Based on available information, the

[42] The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and the domestic like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject products (or vice versa) when prices change.

elasticity of substitution between U.S.-produced SAP and imported SAP is likely to be in the range of 3 to 5. As discussed previously, factors contributing to this level of substitutability include the qualification of both subject import suppliers and domestic producers to produce to similar individual customer specifications, little preference for particular countries of origin, and similarities between domestically produced SAP and subject imports for qualified sources and when produced to similar specifications. Factors reducing substitutability include customer-specific grades and the associated lengthy qualification processes for those grades, lack of qualification of some domestic or import suppliers with some purchasers, the prevalence of long-term contracts, supply constraints and the importance of availability as a purchase consideration, reported constraints by some but not all customers in switching their end-product production lines between suppliers even when qualified for the same grade, and the importance to purchasers of maintaining multiple suppliers.

Part III: U.S. producers' production, shipments, and employment

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the dumping margins was presented in Part I of this report and information on the volume and pricing of imports of the subject merchandise is presented in Part IV and Part V. Information on the other factors specified is presented in this section and/or Part VI and (except as noted) is based on the questionnaire responses of three firms that accounted for all of U.S. production of SAP during 2021.

U.S. producers

The Commission issued a U.S. producer questionnaire to three firms based on information contained in the petition, and all three firms provided usable data on their operations.[1] Staff believes that these responses represent all U.S. production of SAP.

Table III-1 lists U.S. producers of SAP, their positions on the petition, production locations, and shares of total reported production.

Table III-1
SAP: U.S. producers, their positions on the petition, production locations, and shares of reported production, 2021

Shares in percent

Firm	Position on petition	Production location(s)	Share of production
BASF	Petitioner	Freeport, TX	***
Evonik	Petitioner	Greensboro, NC Garyville, LA	***
NSAI	Petitioner	Pasadena, TX	***
All firms	Various	Various	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-2 presents information on U.S. producers' ownership, related and/or affiliated firms.

[1] In the petition, petitioner did not identify any other known U.S. producer of SAP.

Table III-2
SAP: U.S. producers' ownership, related and/or affiliated firms

Reporting firm	Relationship type and related firm	Details of relationship
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

As indicated in table III-2, all three U.S. producers are related to nonsubject foreign producers of SAP. In addition, as discussed in more detail in Part IV, all three U.S. producers directly import SAP from nonsubject sources.

Table III-3 presents U.S. producers' reported changes in operations since January 1, 2019, while table III-4 shows publicly reported events. In addition to the items listed below, U.S. producers were asked to report on the impact of the COVID-19 pandemic since January 1, 2020, on supply chain, production, employment, and shipments of SAP. Evonik reported that ***.[2] *** reported issues related to COVID-19.

[2] *** U.S. producer questionnaire, II-2b.

Table III-3
SAP: U.S. producers' reported changes in operations, since January 1, 2019

Item	Firm name and narrative response on changes in operations
Plant closings	***
Plant closings	*** ***
Prolonged shutdowns or curtailments	***
Prolonged shutdowns or curtailments	***
Weather related events	***
Weather related events	***
Weather related events	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-4
SAP: U.S. industry developments since January 1, 2019

Item	Event
Plant closings	BASF's hygiene products unit at its plant in Charlotte, North Carolina was to cease operations resulting in the loss of 27 jobs that would be in effect for 2019.
Weather related events	The chemical industry in general was affected by winter storm Uri in February 2021. This included propylene, a chemical used to manufacture acrylic acid, the main raw material used in production of SAP. Winter storm Uri took about 60 percent of U.S. ethylene and propylene production offline.
Establishment of companies	Evonik established standalone companies for superabsorbent materials, Evonik Superabsorber GmbH in Germany, and Evonik Superabsorber LLC in the United States. These businesses went into effect on July 1, 2021. The new companies contribute to around 950 employees working at the production sites in Krefeld, Rheinfelden and Marl in Germany; and Greensboro and Garyville in the USA.
Potential company sale	Evonik announced in September 2020 that it may sell its SAP business.

Source: WBTV, "Chemical Company to Lay Off Dozens in Charlotte," November 12, 2018, https://www.wbtv.com/2018/11/12/chemical-company-lay-off-dozens-charlotte/; IHS Markit, "What were the Effects of Winter Storm Uri on the Chemical Industry?" accessed September 13, 2022, https://ihsmarkit.com/topic/impact-of-winter-storm-uri-on-chemical-markets.html; Pafford, "Chemical Resin Plants May Be Hurricane Ready, But Markets Are Not," ICIS, June 29, 2021, https://www.icis.com/chemical-connections/2021/06/chemical-resin-plants-may-be-hurricane-ready-but-markets-are-not/; Sutton, "Ongoing Supply Chain Challenges," ASI, January 10, 2022, https://www.adhesivesmag.com/articles/99094-ongoing-supply-chain-challenges-impacting-the-adhesive-and-sealant-industry; Bailey, "Evonik Establishes Standalone Company for Superabsorbent Materials," Chemical Engineering, August 19, 2021, https://www.chemengonline.com/evonik-establishes-standalone-company-for-superabsorbent-materials/?printmode=1; Tullo, "Evonik May Sell Superabsorbent Polymers Business," Chemical and Engineering News, October 1, 2020, https://cen.acs.org/business/finance/Evonik-sell-superabsorbent-polymers-business/98/i38; Larionova, "Evonik to Complete Superabsorbents Carve-out by Summer," MRC, March 5, 2021, https://www.mrchub.com/news/384615-evonik-to-complete-superabsorbents-carve-out-by-summer; Inverardi, "Evonik Says Preparing Diaper Materials Business for Potential Sale," Reuters, September 22, 2020, https://www.reuters.com/article/uk-evoniksuperabsorbers-m-a/evonik-says-preparing-diaper-materials-business-for-potential-sale-idUKKCN26D2D7.

Note: ***. *** U.S. producer questionnaire, II-2a.

Note: ***. Email from ***, September 8, 2022.

U.S. production, capacity, and capacity utilization

Table III-5 and figure III-1 present U.S. producers' production, capacity, and capacity utilization. During 2019-21, aggregate capacity increased by 1.4 percent or by 6,600 metric tons, and was lower in interim 2022 by 3.4 percent or 8,100 metric tons, compared to interim 2021.[3] Overall, production increased irregularly during 2019-21 by 1.1 percent. Production was higher by 11.8 percent or 22,555 metric tons in interim 2022 than in interim 2021. *** held the largest share of production during all periods. *** accounted for at least *** percent of all SAP production during any year or interim period. *** SAP production decreased by *** percent during 2019-21, but it was up from 2019 to 2020 by *** percent before it decreased in 2021. *** SAP production increased by *** percent, respectively, during 2019-21, but *** production was lower in interim 2022 than in interim 2021 by *** percent. Capacity utilization remained above 80.0 percent in all periods and decreased by 0.2 percentage points during 2019-21 and was higher during interim 2022 than in interim 2021 by 12.7 percentage points. *** capacity utilization decreased by *** percentage points and *** percentage points, respectively, during 2019-21, contributing to the overall decrease in U.S. producers' capacity utilization. *** capacity utilization increased by *** percentage points during 2019-21, and was higher by *** percentage points in interim 2022 than in interim 2021, reaching *** percent in interim 2022.

[3] ***. *** U.S. producer questionnaire, II-2a. ***. Email from ***, August 18, 2022.

Table III-5
SAP: Firm-by-firm capacity, by period

Capacity

Capacity in metric tons

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	469,400	476,200	476,000	237,250	229,150

Table continued.

Table III-5 Continued
SAP: Firm-by-firm production, by period

Production

Production in metric tons

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	398,533	412,918	402,973	191,465	214,020

Table continued.

Table III-5 Continued
SAP: Firm-by-firm capacity utilization, by period

Capacity utilization

Ratio in percent

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	84.9	86.7	84.7	80.7	93.4

Table continued.

Note: Capacity utilization ratio represents the ratio of the U.S. producer's production to its production capacity.

Table III-5 Continued
SAP: Firm-by-firm share of production, by period

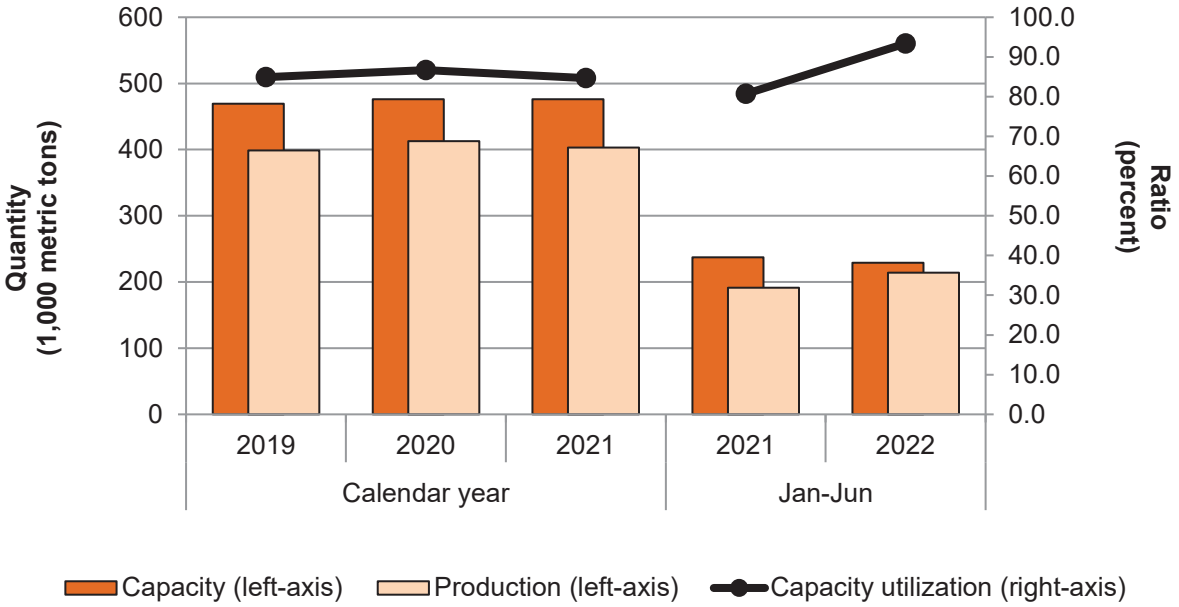
Share of production

Share in percent

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Figure III-1
SAP: U.S. producers' production, capacity, and capacity utilization, by period



Source: Compiled from data submitted in response to Commission questionnaires.

Tables III-6 and III-7 present U.S. producers' production by product grade and period and U.S. producers' count of production method by grade.[4] The vast majority of U.S. production in 2021 was of ***, while *** accounted for *** percent of production, and *** comprised approximately *** percent of production.[5]

As presented in table III-7, *** U.S. producers (*** and ***) reported using the belt polymerization production method for ***. *** U.S. producer, ***, reported using belt polymerization for ***. *** U.S. producer,

[4] See Part I for more information on SAP grades. *** reported difficulties in classifying products according to the grade definitions provided by the Commission, due to potential product overlap; therefore, it allocated production and sales. *** stated that while there are some common functions and properties among SAP products, its reporting was based on materials destined to particular customers, so there is no double counting. *** U.S. producer questionnaire, II-15.

[5] *** reported producing *** metric tons of SAP-8 in 2021 and *** metric tons in interim 2022, and that all its SAP-8 shipments during the period of investigation *** metric tons in 2021 and *** metric tons in interim 2022 were to ***. *** U.S. producer questionnaire, II-7 and II-9, and email from ***, October 31, 2022.

***, reported using kneading polymerization for ***, and *** U.S. producer reported utilizing other production methods.[6] [7]

In addition, U.S. producers reported on whether they were able to produce and actually produced the different grades of SAP (SAP-7, SAP-8, LK-1, LK-2, and "all other grades"), as well as whether they were qualified to produce such grades. *** reported being able to produce, actually producing, and being qualified to produce all product grades.[8] *** reported being able to produce, actually producing, and being qualified to produce ***.[9]

Table III-6
SAP: U.S. producers' production, by product grade and period

Quantity in metric tons; share in percent

Product grade	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
SAP-7	Quantity	***	***	***	***	***
SAP-8	Quantity	***	***	***	***	***
SAP-7 and SAP-8	Quantity	***	***	***	***	***
LK-1	Quantity	***	***	***	***	***
LK-2	Quantity	***	***	***	***	***
All other grades	Quantity	***	***	***	***	***
LK-1, LK-2, and all other grades	Quantity	***	***	***	***	***
All grades	Quantity	398,533	412,918	402,973	191,465	214,020
SAP-7	Share	***	***	***	***	***
SAP-8	Share	***	***	***	***	***
SAP-7 and SAP-8	Share	***	***	***	***	***
LK-1	Share	***	***	***	***	***
LK-2	Share	***	***	***	***	***
All other grades	Share	***	***	***	***	***
LK-1, LK-2, and all other grades	Share	***	***	***	***	***
All grades	Share	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

[6] Responses to U.S. producers' questionnaire, II-3g.

[7] ***. P&G's Virtual Plant Tour Staff Memo, September 26, 2022, and Memo Addendum, October 11, 2022, pp. 6, 7, and 11.

[8] *** U.S. questionnaire response contradicts *** statement on *** qualification to produce SAP-8. See P&G's Virtual Plant Tour Staff Memo, September 26, 2022, pp. 6-7, and 11.

[9] Responses to U.S. producers' questionnaire, II-3f and II-3g.

Table III-7
SAP: U.S. producers' count of production method, by product grade

Count in number of firms reporting

Product grade	Belt	Kneading	Other
SAP-7	***	***	***
SAP-8	***	***	***
LK-1	***	***	***
LK-2	***	***	***
All other grades	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Alternative products

U.S. producers reported producing *** on the same equipment.

U.S. producers' U.S. shipments and exports

Table III-8 presents U.S. producers' U.S. shipments, export shipments, and total shipments. During 2019-21, U.S. shipments decreased by 4.6 percent, based on quantity, but increased by 3.8 percent, based on value. U.S. shipments were higher during interim 2022 than in interim 2021 by 6.3 percent, based on quantity, and by 31.0 percent by value during the same period. Unit values of U.S. shipments of SAP increased by 8.8 percent during 2019-21, and were higher by 23.2 percent during interim 2022 than in interim 2021. U.S. shipments held the largest share of total shipments by quantity and value, accounting for over *** percent in all periods. During 2019-21, export shipments increased in quantity, by *** percent, and by *** percent based on value.[10] [11] In contrast, the quantity of export shipments was lower (*** percent), but higher by value (*** percent) in interim 2022 than in interim 2021.

[10] During 2019-21, *** export shipments accounted for *** percent of all export shipments by the U.S. producers. *** export shipments increased by *** percent from 2019 to 2021, and it identified its principal export markets as ***. ***. *** U.S. producer questionnaire, II-7.

[11] ***. *** U.S. producer questionnaire, II-7.

Table III-8
SAP: U.S. producers' total shipments, by destination and period

Quantity in metric tons; value in 1,000 dollars; unit value in dollars per metric ton; share in percent

Item	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
U.S. shipments	Quantity	354,793	342,400	338,361	165,530	176,041
Export shipments	Quantity	***	***	***	***	***
Total shipments	Quantity	***	***	***	***	***
U.S. shipments	Value	558,648	455,804	579,743	261,448	342,536
Export shipments	Value	***	***	***	***	***
Total shipments	Value	***	***	***	***	***
U.S. shipments	Unit value	1,575	1,331	1,713	1,579	1,946
Export shipments	Unit value	***	***	***	***	***
Total shipments	Unit value	***	***	***	***	***
U.S. shipments	Share of quantity	***	***	***	***	***
Export shipments	Share of quantity	***	***	***	***	***
Total shipments	Share of quantity	***	***	***	***	***
U.S. shipments	Share of value	***	***	***	***	***
Export shipments	Share of value	***	***	***	***	***
Total shipments	Share of value	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-9 presents U.S. producers' U.S. shipments by type. During 2019-21, commercial U.S. shipments accounted for at least *** percent of U.S. shipments by quantity and value for all periods. Transfers to related firms accounted for less than *** percent by quantity and value in all periods, and no firm reported *** SAP. Commercial U.S. shipments' unit values increased by *** percent during 2019-21, but they declined by *** percent from 2019 to 2020. Commercial U.S. shipments' unit values were higher in interim 2022 than in interim 2021 by *** percent.

Table III-9
SAP: U.S. producers' U.S. shipments, by type and period

Quantity in metric tons; value in 1,000 dollars; unit value in dollars per metric ton; share in percent

Item	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
Commercial U.S. shipments	Quantity	***	***	***	***	***
Transfers to related firms	Quantity	***	***	***	***	***
U.S. shipments	Quantity	354,793	342,400	338,361	165,530	176,041
Commercial U.S. shipments	Value	***	***	***	***	***
Transfers to related firms	Value	***	***	***	***	***
U.S. shipments	Value	558,648	455,804	579,743	261,448	342,536
Commercial U.S. shipments	Unit value	***	***	***	***	***
Transfers to related firms	Unit value	***	***	***	***	***
U.S. shipments	Unit value	1,575	1,331	1,713	1,579	1,946
Commercial U.S. shipments	Share of quantity	***	***	***	***	***
Transfers to related firms	Share of quantity	***	***	***	***	***
U.S. shipments	Share of quantity	***	***	***	***	***
Commercial U.S. shipments	Share of value	***	***	***	***	***
Transfers to related firms	Share of value	***	***	***	***	***
U.S. shipments	Share of value	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-10 presents U.S. producers' U.S. shipments by product grade and period. U.S. producers' U.S. shipments of *** combined accounted for the vast majority of U.S. shipments of all grades of SAP in all periods. U.S producers' U.S. shipments of SAP-7 declined over time, accounting for *** percent in 2019 and *** percent in 2021, and *** in interim 2022. In contrast, U.S. producers' U.S. shipments of SAP-8 increased yearly, accounting for *** percent of shipments in 2020 and *** percent in 2021. SAP-8 shipments were lower in interim 2022 than in interim 2021. Unit values for U.S. shipments of all grades, individually and combined, increased irregularly between 2019 and 2021 (except for SAP-8) and were higher in interim 2022 than in interim 2021.

Table III-10
SAP: U.S. producers' U.S. shipments, by product grade and period

Quantity in metric tons; value in 1,000 dollars; unit value in dollars per metric ton

Product grade	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
SAP-7	Quantity	***	***	***	***	***
SAP-8	Quantity	***	***	***	***	***
SAP-7 and SAP-8	Quantity	***	***	***	***	***
LK-1	Quantity	***	***	***	***	***
LK-2	Quantity	***	***	***	***	***
All other grades	Quantity	***	***	***	***	***
LK-1, LK-2, and all other grades	Quantity	***	***	***	***	***
All grades	Quantity	354,793	342,400	338,361	165,530	176,041
SAP-7	Value	***	***	***	***	***
SAP-8	Value	***	***	***	***	***
SAP-7 and SAP-8	Value	***	***	***	***	***
LK-1	Value	***	***	***	***	***
LK-2	Value	***	***	***	***	***
All other grades	Value	***	***	***	***	***
LK-1, LK-2, and all other grades	Value	***	***	***	***	***
All grades	Value	558,648	455,803	579,743	261,448	342,536
SAP-7	Unit value	***	***	***	***	***
SAP-8	Unit value	***	***	***	***	***
SAP-7 and SAP-8	Unit value	***	***	***	***	***
LK-1	Unit value	***	***	***	***	***
LK-2	Unit value	***	***	***	***	***
All other grades	Unit value	***	***	***	***	***
LK-1, LK-2, and all other grades	Unit value	***	***	***	***	***
All grades	Unit value	1,575	1,331	1,713	1,579	1,946

Table continued.

Table III-10 Continued
SAP: U.S. producers' U.S. shipments, by product grade and period

Share in percent

Product grade	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
SAP-7	Share of quantity	***	***	***	***	***
SAP-8	Share of quantity	***	***	***	***	***
SAP-7 and SAP-8	Share of quantity	***	***	***	***	***
LK-1	Share of quantity	***	***	***	***	***
LK-2	Share of quantity	***	***	***	***	***
All other grades	Share of quantity	***	***	***	***	***
LK-1, LK-2, and all other grades	Share of quantity	***	***	***	***	***
All grades	Share of quantity	***	***	***	***	***
SAP-7	Share of value	***	***	***	***	***
SAP-8	Share of value	***	***	***	***	***
SAP-7 and SAP-8	Share of value	***	***	***	***	***
LK-1	Share of value	***	***	***	***	***
LK-2	Share of value	***	***	***	***	***
All other grades	Share of value	***	***	***	***	***
LK-1, LK-2, and all other grades	Share of value	***	***	***	***	***
All grades	Share of value	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

U.S. producers' inventories

Table III-11 presents U.S. producers' end-of-period inventories and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments. During 2019-21, end-of-period inventories fluctuated, but decreased by *** percent, and were higher by *** percent in interim 2022 than in interim 2021.[12] During 2019-21, inventory ratios declined *** percentage points to U.S. production, *** percentage points to U.S. shipments, and *** percentage points to total shipments.

[12] During 2019-21, *** accounted for more than half of all end-of-period inventories in most periods. During interim 2021 and 2022, *** accounted for nearly two-thirds of all end-of-period inventories. Notably, *** inventories did not reconcile due to reworks materials leading to a variance and timing. *** U.S. producer questionnaire, II-7.

Table III-11
SAP: U.S. producers' inventories and their ratio to select items, by period

Quantity in metric tons; inventory ratio in percent

Item	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
End-of-period inventory quantity	***	***	***	***	***
Inventory ratio to U.S. production	***	***	***	***	***
Inventory ratio to U.S. shipments	***	***	***	***	***
Inventory ratio to total shipments	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. employment, wages, and productivity

Table III-12 shows U.S. producers' employment-related data. In aggregate, total hours worked and hours worked per PRW declined during 2019-21. ***.[13] [14]

The number of production and related workers (PRWs), wages paid, hourly wages, productivity, and unit labor costs increased during 2019-21. However, the number of PRWs, total hours worked, hours worked per PRW, wages paid, and unit labor costs decreased in 2020, before increasing in 2021. Except for unit labor costs, all other labor trends were higher in interim 2022 compared to interim 2021.[15]

[13] *** U.S. producer questionnaire, II-2a and II-11. ***. Ibid and II-10.

[14] Evonik indicated that it had employed approximately 190 people in the production and sale of SAP in the United States. Conference transcript, p. 22 (Terhart).

[15] ***. *** U.S. producer questionnaire, II-11.

Table III-12
SAP: U.S. producers' employment related information, by period

Item	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
Production and related workers (PRWs) (number)	***	***	***	***	***
Total hours worked (1,000 hours)	***	***	***	***	***
Hours worked per PRW (hours)	***	***	***	***	***
Wages paid ($1,000)	***	***	***	***	***
Hourly wages (dollars per hour)	***	***	***	***	***
Productivity (metric tons per 1,000 hours)	***	***	***	***	***
Unit labor costs (dollars per metric ton)	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Part IV: U.S. imports, apparent U.S. consumption, and market shares

U.S. importers

The Commission issued importer questionnaires to 20 firms believed to be importers of subject SAP, as well as to all U.S. producers of SAP.[1] Usable questionnaire responses were received from nine companies, representing *** of U.S. imports from South Korea in 2021 under HTS subheading 3906.90.50, a "basket" category.[2] [3] Table IV-1 lists all responding U.S. importers of SAP from South Korea and other sources, their locations, and their shares of U.S. imports, in 2021.

[1] The Commission issued questionnaires to those firms identified in the petition, along with firms that, based on a review of data from third-party sources, may have accounted for more than one percent of total imports under HTS subheading 3906.90.50 in 2021.

[2] One firm completed the U.S. importers' questionnaire, but was not included in the dataset. *** submitted a completed U.S. importer questionnaire but later clarified that *** acts as the importer of record for its transactions. Email from ***, August 24, 2022. *** has imported SAP into the United States since January 1, 2019. Email from ***, August 5, 2022. In addition, the following firms also certified they have not imported SAP during the period of data collection, ***.

[3] Staff believes these nine useable questionnaire responses accounted for *** percent of subject imports from South Korea in 2021. These questionnaires reported imports of *** metric tons of SAP from South Korea, and official import statistics reported 71,543 metric tons of merchandise were imported into the United States under HTS statistical reporting number 3906.90.5000 (a basket category that includes out-of-scope merchandise, such as acrylic polymers). The nine U.S. importers' questionnaire responses accounted for approximately *** percent of all imports that entered the United States under HTS statistical reporting number 3906.90.5000 during 2021.

Table IV-1
SAP: U.S. importers, their headquarters, and share of imports within each source, 2021

Share in percent

Firm	Headquarters	South Korea	Nonsubject sources	All import sources
BASF	Florham Park, NJ	***	***	***
Eco-Mirae	Gainesville, FL	***	***	***
Evonik	Greensboro, NC	***	***	***
LGCAI	Atlanta, GA	***	***	***
NSAI	Pasadena, TX	***	***	***
Ontex	Buggenhout, Belgium	***	***	***
P&G	Cincinnati, OH	***	***	***
Sanyo	New York, NY	***	***	***
Zaimella	Medley, FL	***	***	***
All firms	Various	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “---“.

U.S. imports

Table IV-2 and figure IV-1 present data for U.S. imports of SAP from South Korea and all other sources. Subject imports from South Korea accounted for *** percent of total imports of SAP by quantity and *** percent by value in 2021. The quantity of subject imports increased by *** percent or by *** metric tons during 2019-21 and was lower by *** percent or by *** metric tons in interim 2022 than in interim 2021. The vast majority of the increase in U.S. imports from South Korea was accounted for by ***.[4] The value of subject imports also increased by *** percent during 2019-21 and was higher by *** percent in interim 2022 than in interim 2021. The average unit value of subject imports increased by *** percent during 2019-21, and was higher during interim 2022 than in interim 2021.The ratio of subject imports to U.S. production increased from *** percent in 2019 to *** percent in 2021.

Nonsubject imports of SAP to the United States increased during 2019-21 by *** percent or by *** metric tons, but were lower in interim 2022 by *** percent than in interim 2021. During 2019-21, the value of nonsubject imports increased by *** percent and was higher by *** percent in interim 2022 than in interim 2021. *** accounted for the majority of nonsubject imports in all periods.[5] The average unit value for imports from nonsubject sources increased by *** percent from 2019-21, and was higher by *** percent in interim 2022 than in interim 2021. The ratio of nonsubject imports to U.S. production increased from *** percent in 2019 to *** percent in 2021.

[4] ***. *** U.S. importer questionnaire, III-21.

[5] ***.

Table IV-2
SAP: U.S. imports by source and period

Quantity in metric tons; value in 1,000 dollars; unit value in dollars per metric ton; share and ratio in percent

Source	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
South Korea	Quantity	***	***	***	***	***
Nonsubject sources	Quantity	***	***	***	***	***
All import sources	Quantity	***	***	***	***	***
South Korea	Value	***	***	***	***	***
Nonsubject sources	Value	***	***	***	***	***
All import sources	Value	***	***	***	***	***
South Korea	Unit value	***	***	***	***	***
Nonsubject sources	Unit value	***	***	***	***	***
All import sources	Unit value	***	***	***	***	***
South Korea	Share of quantity	***	***	***	***	***
Nonsubject sources	Share of quantity	***	***	***	***	***
All import sources	Share of quantity	***	***	***	***	***
South Korea	Share of value	***	***	***	***	***
Nonsubject sources	Share of value	***	***	***	***	***
All import sources	Share of value	***	***	***	***	***
South Korea	Ratio	***	***	***	***	***
Nonsubject sources	Ratio	***	***	***	***	***
All import sources	Ratio	***	***	***	***	***

Table continued.

Table IV-2 Continued
SAP: U.S. imports by source and period
Change in percent

Source	Measure	2019-21	2019-20	2020-21	Jan-Jun 2021-22
South Korea	Δ% Quantity	▲***	▲***	▲***	▼***
Nonsubject sources	Δ% Quantity	▲***	▲***	▲***	▼***
All import sources	Δ% Quantity	▲***	▲***	▲***	▼***
South Korea	Δ% Value	▲***	▲***	▲***	▲***
Nonsubject sources	Δ% Value	▲***	▲***	▲***	▲***
All import sources	Δ% Value	▲***	▲***	▲***	▲***
South Korea	Δ% Unit value	▲***	▼***	▲***	▲***
Nonsubject sources	Δ% Unit value	▲***	▼***	▲***	▲***
All import sources	Δ% Unit value	▲***	▼***	▲***	▲***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Share of quantity is the share of U.S. imports by quantity; share of value is the share of U.S. imports by value; ratios represent the ratio of U.S. imports to U.S. production.

Figure IV-1
SAP: U.S. import quantities and average unit values, by source and period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Table IV-3 presents data on U.S. producers' U.S. imports of SAP. U.S. producers *** during the period of data collection. U.S. producers' U.S. imports from nonsubject sources increased by *** percent during 2019-21 and were lower in interim 2022 than in interim 2021. U.S. producers' U.S. imports accounted for *** percent of nonsubject U.S. imports in 2021. Of the three U.S. producers, *** had the largest share of nonsubject imports in all periods, except in interim 2022, when *** accounted for the majority of U.S. producers' nonsubject imports.

Table IV-3
SAP: Nonsubject U.S. imports controlled by U.S. producers and/or affiliated firms, by firm and period

Quantity in metric tons; ratio in percent

Firm	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	Quantity	***	***	***	***	***
Evonik	Quantity	***	***	***	***	***
NSAI	Quantity	***	***	***	***	***
All U.S. producers	Quantity	***	***	***	***	***
BASF	Ratio1	***	***	***	***	***
Evonik	Ratio1	***	***	***	***	***
NSAI	Ratio1	***	***	***	***	***
All U.S. producers	Ratio1	***	***	***	***	***
BASF	Ratio2	***	***	***	***	***
Evonik	Ratio2	***	***	***	***	***
NSAI	Ratio2	***	***	***	***	***
All U.S. producers	Ratio2	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Ratio1 is the ratio to overall U.S. imports from nonsubject sources. Ratio2 is the ratio to overall U.S. imports from all import sources. Ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “---“. The ratios represent the portion of overall imports within the specified source that was imported by U.S. producers and/or their affiliates. These ratios are calculated off of data shown in this table (numerators) and in table IV-2 (denominators).

Negligibility

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[6] Negligible imports are generally defined in the Act, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then imports from such countries are deemed not to be negligible.[7] Imports from South Korea accounted for *** percent of total imports of SAP by quantity in the 12-month period (November 1, 2020 through October 31, 2021) preceding the filing of the petition.

Table IV-4
SAP: U.S. imports in the twelve-month period preceding the filing of the petition, November 1, 2020 through October 31, 2021

Source of imports	Quantity	Share of quantity
South Korea	***	***
Nonsubject sources	***	***
All import sources	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

[6] Sections 703(a)(1), 705(b)(1), 733(a)(1), and 735(b)(1) of the Act (19 U.S.C. §§ 1671b(a)(1), 1671d(b)(1), 1673b(a)(1), and 1673d(b)(1)).

[7] Section 771 (24) of the Act (19 U.S.C § 1677(24)).

Table IV-5 presents data on U.S. importers' U.S. shipments of imports from South Korea, by product grade. During 2019-21 and interim periods, U.S. importers' U.S. shipments of SAP from South Korea concentrated on ***[8] by quantity and value. There were no U.S. shipments of imports from South Korea of *** in 2019. While U.S. importers' U.S. shipments of imports from South Korea of *** declined by *** percent or by *** metric tons between 2019 and 2021, shipments of *** increased by *** percent or by *** metric tons during the same period, and shipments of *** nearly ***. Except for ***, unit values decreased for all product grades in 2020, before increasing in 2021. Unit values for all grades were higher in interim 2022 compared to interim 2021.

[8] ***. *** U.S. importer questionnaire, II-6c.

Table IV-5
SAP: U.S. importers' U.S. shipments of imports from South Korea, by product grade and period

Quantity in metric tons; value in 1,000 dollars; unit value in dollars per metric ton

Product grade	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
SAP-7	Quantity	***	***	***	***	***
SAP-8	Quantity	***	***	***	***	***
SAP-7 and SAP-8	Quantity	***	***	***	***	***
LK-1	Quantity	***	***	***	***	***
LK-2	Quantity	***	***	***	***	***
All other grades	Quantity	***	***	***	***	***
LK-1, LK-2, and all other grades	Quantity	***	***	***	***	***
All grades	Quantity	***	***	***	***	***
SAP-7	Value	***	***	***	***	***
SAP-8	Value	***	***	***	***	***
SAP-7 and SAP-8	Value	***	***	***	***	***
LK-1	Value	***	***	***	***	***
LK-2	Value	***	***	***	***	***
All other grades	Value	***	***	***	***	***
LK-1, LK-2, and all other grades	Value	***	***	***	***	***
All grades	Value	***	***	***	***	***
SAP-7	Unit value	***	***	***	***	***
SAP-8	Unit value	***	***	***	***	***
SAP-7 and SAP-8	Unit value	***	***	***	***	***
LK-1	Unit value	***	***	***	***	***
LK-2	Unit value	***	***	***	***	***
All other grades	Unit value	***	***	***	***	***
LK-1, LK-2, and all other grades	Unit value	***	***	***	***	***
All grades	Unit value	***	***	***	***	***

Table continued.

Table IV-5 Continued
SAP: U.S. importers' U.S. shipments of imports from South Korea, by product grade and period

Share in percent

Product grade	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
SAP-7	Share of quantity	***	***	***	***	***
SAP-8	Share of quantity	***	***	***	***	***
SAP-7 and SAP-8	Share of quantity	***	***	***	***	***
LK-1	Share of quantity	***	***	***	***	***
LK-2	Share of quantity	***	***	***	***	***
All other grades	Share of quantity	***	***	***	***	***
LK-1, LK-2, and all other grades	Share of quantity	***	***	***	***	***
All grades	Share of quantity	***	***	***	***	***
SAP-7	Share of value	***	***	***	***	***
SAP-8	Share of value	***	***	***	***	***
SAP-7 and SAP-8	Share of value	***	***	***	***	***
LK-1	Share of value	***	***	***	***	***
LK-2	Share of value	***	***	***	***	***
All other grades	Share of value	***	***	***	***	***
LK-1, LK-2, and all other grades	Share of value	***	***	***	***	***
All grades	Share of value	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “---“.

Table IV-6 presents data on U.S. importers' U.S. shipments of imports from nonsubject sources, by product grade and period. During 2019-20, U.S. shipments of imports from nonsubject sources mostly concentrated on ***. The largest responding nonsubject importer, ***, reported that all of its shipments were of ***. From 2021 through interim 2022, the majority of U.S. shipments of imports from nonsubject sources consisted of ***.[9] There were no U.S. shipments of imports from nonsubject sources of *** for the entire period. Unit values decreased for U.S. shipments of imports from nonsubject sources of *** in 2020, before increasing in 2021. Unit values for *** were higher in interim 2022 compared to interim 2021.

Table IV-6
SAP: U.S. importers' U.S. shipments of imports from nonsubject sources, by product grade and period

Quantity in metric tons; value in 1,000 dollars; unit value in dollars per metric ton

Product grade	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
SAP-7	Quantity	***	***	***	***	***
SAP-8	Quantity	***	***	***	***	***
SAP-7 and SAP-8	Quantity	***	***	***	***	***
LK-1	Quantity	***	***	***	***	***
LK-2	Quantity	***	***	***	***	***
All other grades	Quantity	***	***	***	***	***
LK-1, LK-2, and all other grades	Quantity	***	***	***	***	***
All grades	Quantity	***	***	***	***	***
SAP-7	Value	***	***	***	***	***
SAP-8	Value	***	***	***	***	***
SAP-7 and SAP-8	Value	***	***	***	***	***
LK-1	Value	***	***	***	***	***
LK-2	Value	***	***	***	***	***
All other grades	Value	***	***	***	***	***
LK-1, LK-2, and all other grades	Value	***	***	***	***	***
All grades	Value	***	***	***	***	***
SAP-7	Unit value	***	***	***	***	***
SAP-8	Unit value	***	***	***	***	***
SAP-7 and SAP-8	Unit value	***	***	***	***	***
LK-1	Unit value	***	***	***	***	***
LK-2	Unit value	***	***	***	***	***
All other grades	Unit value	***	***	***	***	***
LK-1, LK-2, and all other grades	Unit value	***	***	***	***	***
All grades	Unit value	***	***	***	***	***

Table continued.

[9] ***.

Table IV-6 Continued
SAP: U.S. importers' U.S. shipments of imports from nonsubject sources, by product grade and period

Share in percent

Product grade	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
SAP-7	Share of quantity	***	***	***	***	***
SAP-8	Share of quantity	***	***	***	***	***
SAP-7 and SAP-8	Share of quantity	***	***	***	***	***
LK-1	Share of quantity	***	***	***	***	***
LK-2	Share of quantity	***	***	***	***	***
All other grades	Share of quantity	***	***	***	***	***
LK-1, LK-2, and all other grades	Share of quantity	***	***	***	***	***
All grades	Share of quantity	***	***	***	***	***
SAP-7	Share of value	***	***	***	***	***
SAP-8	Share of value	***	***	***	***	***
SAP-7 and SAP-8	Share of value	***	***	***	***	***
LK-1	Share of value	***	***	***	***	***
LK-2	Share of value	***	***	***	***	***
All other grades	Share of value	***	***	***	***	***
LK-1, LK-2, and all other grades	Share of value	***	***	***	***	***
All grades	Share of value	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “---“.

Table IV-7 presents data on U.S. shipments of imports from all import sources, by product grade and period. During 2019-21, the majority of U.S. shipments of imports of SAP from all import sources consisted mostly of ***. While shipments of *** experienced sharp declines, especially between 2020 and 2021, shipments of *** from all import sources increased during the same period, and mostly from 2019 to 2020. While there were small, but growing U.S. importers' U.S. shipments of *** in interim 2022 compared to interim 2021, U.S. importers' U.S. shipments of *** were slightly lower during the same period. U.S. shipments of imports of *** were higher in interim 2022 than in interim 2021. Except for U.S. shipments of imports of ***, unit values decreased in 2020 and then increased in 2021. Unit values of all grades were higher in interim 2022 than in interim 2021.

Table IV-7
SAP: U.S. importers' U.S. shipments of imports from all import sources, by product grade and period

Quantity in metric tons; value in 1,000 dollars; unit value in dollars per metric ton

Product grade	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
SAP-7	Quantity	***	***	***	***	***
SAP-8	Quantity	***	***	***	***	***
SAP-7 and SAP-8	Quantity	***	***	***	***	***
LK-1	Quantity	***	***	***	***	***
LK-2	Quantity	***	***	***	***	***
All other grades	Quantity	***	***	***	***	***
LK-1, LK-2, and all other grades	Quantity	***	***	***	***	***
All grades	Quantity	***	***	***	***	***
SAP-7	Value	***	***	***	***	***
SAP-8	Value	***	***	***	***	***
SAP-7 and SAP-8	Value	***	***	***	***	***
LK-1	Value	***	***	***	***	***
LK-2	Value	***	***	***	***	***
All other grades	Value	***	***	***	***	***
LK-1, LK-2, and all other grades	Value	***	***	***	***	***
All grades	Value	***	***	***	***	***
SAP-7	Unit value	***	***	***	***	***
SAP-8	Unit value	***	***	***	***	***
SAP-7 and SAP-8	Unit value	***	***	***	***	***
LK-1	Unit value	***	***	***	***	***
LK-2	Unit value	***	***	***	***	***
All other grades	Unit value	***	***	***	***	***
LK-1, LK-2, and all other grades	Unit value	***	***	***	***	***
All grades	Unit value	***	***	***	***	***

Table continued.

Table IV-7 Continued
SAP: U.S. importers' U.S. shipments of imports from all import sources, by product grade and period

Share in percent

Product grade	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
SAP-7	Share of quantity	***	***	***	***	***
SAP-8	Share of quantity	***	***	***	***	***
SAP-7 and SAP-8	Share of quantity	***	***	***	***	***
LK-1	Share of quantity	***	***	***	***	***
LK-2	Share of quantity	***	***	***	***	***
All other grades	Share of quantity	***	***	***	***	***
LK-1, LK-2, and all other grades	Share of quantity	***	***	***	***	***
All grades	Share of quantity	***	***	***	***	***
SAP-7	Share of value	***	***	***	***	***
SAP-8	Share of value	***	***	***	***	***
SAP-7 and SAP-8	Share of value	***	***	***	***	***
LK-1	Share of value	***	***	***	***	***
LK-2	Share of value	***	***	***	***	***
All other grades	Share of value	***	***	***	***	***
LK-1, LK-2, and all other grades	Share of value	***	***	***	***	***
All grades	Share of value	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “---“.

Apparent U.S. consumption and market shares

Quantity

Table IV-8 presents data on apparent U.S. consumption and U.S. market shares by quantity for SAP. From 2019 to 2021, apparent U.S. consumption based on quantity increased by *** percent and was higher during interim 2022 than in interim 2021 by *** percent. During 2019-21, U.S. producers' U.S. shipments decreased by 4.6 percent based on quantity, but were higher during interim 2022 than in interim 2021 by 6.3 percent. From 2019 to 2021, U.S. importers' U.S. shipments from South Korea increased by *** percent based on quantity, but were lower during interim 2022 than in interim 2021 by *** percent.

By quantity, U.S. producers' market shares of SAP decreased between 2019 and 2021 by *** percentage points, from *** percent in 2019 to *** percent in 2021, but were higher by *** percentage points in interim 2022 compared to interim 2021. In contrast, subject imports' market share by quantity of SAP increased by *** percentage points, from *** percent in 2019 to *** percent in 2021, but was lower by *** percentage points in interim 2022 than in interim 2021. The share of quantity of nonsubject sources increased from *** percent in 2019 to *** percent in 2021, an increase of *** percentage points, but was lower by *** percentage points in interim 2022 than in interim 2021.

Table IV-8
SAP: Apparent U.S. consumption and market shares based on quantity, by source and period

Quantity in metric tons; share in percent

Source	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
U.S. producers	Quantity	354,793	342,400	338,361	165,530	176,041
South Korea	Quantity	***	***	***	***	***
Nonsubject sources	Quantity	***	***	***	***	***
All import sources	Quantity	***	***	***	***	***
All sources	Quantity	***	***	***	***	***
U.S. producers	Share	***	***	***	***	***
South Korea	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Figure IV-2
SAP: Apparent U.S. consumption based on quantity, by source and period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Value

Table IV-9 presents data on apparent U.S. consumption and U.S. market shares by value for SAP. From 2019 to 2021, apparent U.S. consumption based on value increased by *** percent and was higher during interim 2022 than in interim 2021 by *** percent. During 2019-21, U.S. producers' U.S. shipments increased by 3.8 percent based on value, and were higher during interim 2022 than in interim 2021 by 31.0 percent. However, during 2019-20, U.S. producers' U.S. shipments decreased by 18.4 percent. From 2019 to 2021, U.S. shipments of imports from South Korea increased by *** percent based on value and were higher in interim 2022 than in interim 2021 by *** percent.

By value, U.S. producers' market shares of SAP decreased between 2019 and 2021 by *** percentage points, from *** percent in 2019 to *** percent in 2021, but were higher by *** percentage points in interim 2022 compared to interim 2021. In contrast, U.S. importers' market shares of SAP from subject sources increased by value by *** percentage points, from *** percent in 2019 to *** percent in 2021, and remained virtually unchanged in interim 2022 compared to interim 2021. The share of value of nonsubject sources increased by *** percentage points, from *** percent in 2019 to *** percent in 2021 and was lower by *** percentage points in interim 2022 than in interim 2021.

Table IV-9
SAP: Apparent U.S. consumption and market shares based on value, by source and period

Value in 1,000 dollars; share in percent

Source	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
U.S. producers	Value	558,648	455,804	579,743	261,448	342,536
South Korea	Value	***	***	***	***	***
Nonsubject sources	Value	***	***	***	***	***
All import sources	Value	***	***	***	***	***
All sources	Value	***	***	***	***	***
U.S. producers	Share	***	***	***	***	***
South Korea	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Figure IV-3
SAP: Apparent U.S. consumption based on value, by source and period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Tables IV-10 through IV-13 present data on the market for SAP-7 and SAP-8, individually and combined, and LK-1, LK-2, and all other grades combined, by source and period. U.S. producers' held the highest, yet declining share of the *** market, except in interim 2022. Subject and nonsubject sources' ratios of *** to apparent consumption were less than *** percent in all periods, and declined to *** percent in 2021.

U.S. producers and subject sources accounted for the vast majority of the market for ***. Subject sources accounted for *** of the market for SAP-8 in 2019, but declined to *** percent in 2020 and *** percent in 2021. U.S. producers accounted for an increasing share of the *** market, from *** percent in 2020 to *** percent in 2021. U.S. producers nearly doubled their ratios to apparent consumption, during 2020-21, from *** to *** percent. U.S. producers also accounted for the largest, but declining shares of the market for ***, from *** percent in 2019 to *** percent 2021, while subject sources' shares increased from *** percent in 2019 to *** percent in 2021. From 2019 to 2021, U.S. producers' ratio to overall apparent consumption declined from *** to *** percent, while the ratio of subject sources increased from *** percent to *** percent during the same period.

The market for *** was almost entirely comprised by U.S. producers' U.S. shipments, with subject sources accounting for only *** percent with a ratio of *** percent to overall apparent consumption in 2021. The market for *** also consisted mostly of U.S. producers' U.S. shipments, and while subject and nonsubject sources participated in the market for all other grades, U.S. producers' U.S. shipments of *** also held the largest share, accounting for *** percent of apparent consumption in 2021. From 2019 to 2021, U.S. producers accounted for the vast majority of the market for ***, from *** to *** percent, while subject sources accounted for an increasing share during the same period *** to *** percent. U.S. producers' share of the market for *** was higher in interim 2022, the share of subject sources were lower in interim 2022, compared to interim 2021. The ratio to overall apparent consumption was *** percent in 2021 for U.S. producers and *** percent for subject sources.

Table IV-10
SAP: Market for SAP-7, by source and period

Quantity in metric tons; share in percent; ratio to overall apparent consumption in percent

Source	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
U.S. producers	Quantity	***	***	***	***	***
South Korea	Quantity	***	***	***	***	***
Nonsubject sources	Quantity	***	***	***	***	***
All import sources	Quantity	***	***	***	***	***
All sources	Quantity	***	***	***	***	***
U.S. producers	Share	***	***	***	***	***
South Korea	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	***	***	***	***	***
U.S. producers	Ratio	***	***	***	***	***
South Korea	Ratio	***	***	***	***	***
Nonsubject sources	Ratio	***	***	***	***	***
All import sources	Ratio	***	***	***	***	***
All sources	Ratio	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “---“.

Table IV-11
SAP: Market for SAP-8, by source and period

Quantity in metric tons; share in percent; ratio to overall apparent consumption in percent

Source	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
U.S. producers	Quantity	***	***	***	***	***
South Korea	Quantity	***	***	***	***	***
Nonsubject sources	Quantity	***	***	***	***	***
All import sources	Quantity	***	***	***	***	***
All sources	Quantity	***	***	***	***	***
U.S. producers	Share	***	***	***	***	***
South Korea	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	***	***	***	***	***
U.S. producers	Ratio	***	***	***	***	***
South Korea	Ratio	***	***	***	***	***
Nonsubject sources	Ratio	***	***	***	***	***
All import sources	Ratio	***	***	***	***	***
All sources	Ratio	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “---“.

Table IV-12
SAP: Market for SAP-7 and SAP-8 combined, by source and period

Quantity in metric tons; share in percent; ratio to overall apparent consumption in percent

Source	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
U.S. producers	Quantity	***	***	***	***	***
South Korea	Quantity	***	***	***	***	***
Nonsubject sources	Quantity	***	***	***	***	***
All import sources	Quantity	***	***	***	***	***
All sources	Quantity	***	***	***	***	***
U.S. producers	Share	***	***	***	***	***
South Korea	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	***	***	***	***	***
U.S. producers	Ratio	***	***	***	***	***
South Korea	Ratio	***	***	***	***	***
Nonsubject sources	Ratio	***	***	***	***	***
All import sources	Ratio	***	***	***	***	***
All sources	Ratio	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table IV-13
SAP: Market for LK-1, LK-2, and all other grades combined, by source and period

Quantity in metric tons; share in percent; ratio to overall apparent consumption in percent

Source	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
U.S. producers	Quantity	***	***	***	***	***
South Korea	Quantity	***	***	***	***	***
Nonsubject sources	Quantity	***	***	***	***	***
All import sources	Quantity	***	***	***	***	***
All sources	Quantity	***	***	***	***	***
U.S. producers	Share	***	***	***	***	***
South Korea	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	***	***	***	***	***
U.S. producers	Ratio	***	***	***	***	***
South Korea	Ratio	***	***	***	***	***
Nonsubject sources	Ratio	***	***	***	***	***
All import sources	Ratio	***	***	***	***	***
All sources	Ratio	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Part V: Pricing data[1]

Factors affecting prices

Raw material costs

The major raw materials used to produce SAP are acrylic acid, which is produced from propylene, and caustic soda. U.S. producers' average unit raw material costs decreased from 2019 to 2020 but increased *** from 2020 to 2021 and was higher in the first of half of 2022 than in interim 2021. Raw materials' share of COGS decreased from *** percent in 2019 to *** percent in 2021 and then increased to *** percent in 2021 and was *** percent in the first half of 2022 (see part VI). Petitioner estimates that acrylic acid and caustic soda account for *** percent of the raw material costs for SAP.[2] U.S. producers' questionnaire responses indicate that, in 2021, acrylic acid made up the largest share of raw material costs (*** percent), caustic soda comprised *** percent, and other raw materials comprised *** percent. U.S. producers purchase their raw materials under long-term contracts.[3]

[1] The three U.S. producers submitted responses to both the U.S. producer's and importer's questionnaires. Their responses to questions that appear in both questionnaires are not included in the importer counts in part V.

[2] Petitioner stated that since SAP represents a small portion of total demand for propylene and caustic soda, demand for SAP does not influence prices for these raw materials. Petitioner's postconference brief, exhibit 1, pp. 2, 11.

***. P&G's postconference Answers to Staff Questions, price section.

[3] Petitioner's postconference brief, exhibit 1, p. 9.

SAP prices are typically based on a formula, with quarterly adjustments based on published prices for propylene and caustic soda.[4] ***.[5] The raw material prices used in the formula may reflect raw material prices from a month or two prior to incorporation into the SAP formula price.[6] Prices of propylene and caustic soda are shown in figure V-1 and table V-1.

Figure V-1
Raw materials: Price indices of propylene and caustic soda

* * * * * * *

Source: ***.

Note: ***.

[4] These adjustments are often quarterly but can be more frequent in some contracts. ***.

[5] Petitioner's postconference brief, exhibit 1, p. 26. LG Chem stated that an early 2021 Texas winter storm severely disrupted acrylic acid delivery and production ***. LG Chem's prices are indexed to the prices of propylene and caustic soda in Northeast Asia whereas U.S. producers' prices are indexed to North American prices. LG Chem's postconference brief, Responses to Staff Questions, pp. 12 and 16. LG Chem's prehearing brief, exhibit 3, presents prices for acrylic acid and for raw materials in Northeast Asia and the United States.

[6] Petitioner's postconference brief, exhibit 1, p. 10. In questionnaire responses, ***.

Table V-1
Raw materials: Price indices of propylene and caustic soda

Month	Propylene	Caustic soda
January 2019	***	***
February 2019	***	***
March 2019	***	***
April 2019	***	***
May 2019	***	***
June 2019	***	***
July 2019	***	***
August 2019	***	***
September 2019	***	***
October 2019	***	***
November 2019	***	***
December 2019	***	***
January 2020	***	***
February 2020	***	***
March 2020	***	***
April 2020	***	***
May 2020	***	***
June 2020	***	***
July 2020	***	***
August 2020	***	***
September 2020	***	***
October 2020	***	***
November 2020	***	***
December 2020	***	***
January 2021	***	***
February 2021	***	***
March 2021	***	***
April 2021	***	***
May 2021	***	***
June 2021	***	***
July 2021	***	***
August 2021	***	***
September 2021	***	***
October 2021	***	***
November 2021	***	***
December 2021	***	***

Table continued.

Table V-1 Continued
Raw materials: Price indices of propylene and caustic soda

Month	Propylene	Caustic soda
January 2022	***	***
February 2022	***	***
March 2022	***	***
April 2022	***	***
May 2022	***	***
June 2022	***	***
July 2022	***	***

Source: ***.

Note: ***.

Propylene prices generally declined in 2019 and the first half of 2020. They then increased, with a particularly steep increase from November 2020 to February 2021, and then fluctuated at prices well above those in 2019 until June 2022 when the price fell below 2021 prices. Caustic soda prices showed less variation and generally declined in 2019, fluctuated in 2020, and then increased steadily from January 2021 to July 2022 to well above 2019 prices.

Two U.S. producers and two importers reported that raw materials prices had increased since January 1, 2019, and one U.S. producer and one importer reported that they fluctuated.

Five of the nine responding purchasers reported they were familiar with SAP raw material costs. *** reported that SAP prices follow raw material price trends. *** reported that it bears the risk of raw material price fluctuations and that changes in such prices did not directly affect its price negotiations with SAP suppliers. *** reported that its contract prices are indexed to published raw material prices, but it does not know the actual prices its suppliers pay for SAP inputs. It added that raw materials prices vary significantly by region, and that propylene in Asia has been priced lower than in the United States for the last decade.

Transportation costs to the U.S. market

Transportation costs for SAP shipped from South Korea to the United States averaged 23 percent during 2021. These estimates were derived from official import data and represent the transportation and other charges on imports.[7]

U.S. inland transportation costs

U.S. producers reported both arranging transport to their customers and that their customers arrange transport. Importers reported that they typically arrange transportation to their customers. U.S. producer *** reported that its U.S. inland transportation costs were *** percent of the total cost of SAP and *** reported *** percent.[8] Importer ***.

Pricing practices

Pricing methods

SAP is typically sold via contracts lasting a year or longer that specify a base price with adjustments for raw materials (and sometimes other elements) and specify expected volumes. Petitioner stated that although contracts may legally fix prices and quantities, U.S. producers have at times been willing to negotiate pricing because of the importance of large customers to their sales.[9] Petitioner stated that large customers negotiate contracts on a global basis but ***.[10] LG Chem stated its prices are negotiated for global supply, that pricing does not differ based on the product's

[7] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2021 and then dividing by the customs value based on the HTS statistical reporting number 3906.90.50.

[8] ***.

[9] ***. Petitioner's postconference brief, exhibit 1, p. 11.

[10] Petitioner's postconference brief, p. 16, and exhibit 1, p. 9.

destination market, and that LG Chem does not determine where the SAP is sent.[11] Petitioner stated that prices do not differ by product characteristics, but rather vary by customer, reflecting different formula prices. U.S. producers and importers reported setting prices using transaction-by-transaction negotiations and contracts (table V-2).

Table V-2
SAP: U.S. producers' and importers' reported price setting methods, count

Method	U.S. producers	U.S. importers
Transaction-by-transaction	3	5
Contract	3	4
Set price list	0	0
Other	0	0
Responding firms	3	5

Source: Compiled from data submitted in response to Commission questionnaires.

Note: The sum of responses down may not add up to the total number of responding firms as each firm was instructed to check all applicable price setting methods employed.

Three purchasers purchase product daily, and one each purchase weekly, monthly, quarterly, and annually. ***. All but one purchaser reported no changes to their purchasing frequency since 2019. Most purchasers contact 1 to 5 suppliers before making a purchase. Among the largest purchasers, ***.

Almost all U.S. shipments are via long-term or annual contracts (table V-3). U.S. producers reported *** percent of their 2021 sales were pursuant to long-term contracts and *** percent annual contracts, and a small share were sold through short-term contracts and on a spot basis. Spot sales include incremental volumes above the contracted amount to customers with whom the supplier has an existing contractual relationship and sales to other customers who operate on a spot basis.[12] *** of subject import shipments were on a long-term contract basis in 2021, and ***.

[11] LG Chem's postconference brief, p. 7. ***. LG Chem's postconference brief, p. 30.
[12] Hearing transcript, pp. 74-75 (Cauble and Wick).

Table V-3
SAP: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2021

Share in percent

Item	U.S. producers	Subject U.S. importers
Long-term contracts	***	***
Annual contract	***	***
Short-term contracts	***	***
Spot sales	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Contracts

*** U.S. producers reported selling SAP mostly under long-term contracts (***), and *** reported selling mostly under annual contracts (***).[13] ***. *** U.S. producers reported that their annual and long-term contracts fix both price and quantity and *** reported that its annual contracts fix quantity. All three U.S. producers reported that their SAP contract prices are indexed to published prices of propylene and caustic soda, and ***.[14]

Importer *** reported that *** long-term contracts average *** in duration, ***. ***

[13] ***.

[14] ***.

***.[15]

Among the largest purchasers, ***. Two other purchasers (***) reported having annual or longer-term contracts with suppliers, with quarterly price adjustments for propylene and caustic soda.

***.[16]

***.

Petitioners reported that their contracts are typically negotiated in the third and fourth quarter of the year.[17] LG Chem also has negotiations in the third or fourth quarter, but the timing depends on the needs of the customer. It added that discussions do not occur until the SAP products are qualified with the customer.[18] P&G's negotiations start a year in advance of the end of the contract and can occur any time of the year since its supply contracts can be on a calendar-year or fiscal-year basis.[19] ***.[20]

[15] LG Chem's postconference brief, Responses to Staff Questions, p. 6.
[16] ***.
[17] Hearing transcript, p. 70 (Cauble) and p. 73 (Clark, Davis).
[18] Hearing transcript, p. 250 (Jo).
[19] P&G's fiscal year begins in July. Hearing transcript, pp. 248-250 (Gordon).
[20] KCC's posthearing brief, exhibit 1.

Price formulas and raw materials indexing

Contracts contain an agreed-upon fixed component (which may be referred to as the base price, the fixum, or the adder) and a variable component. The variable component includes prices of propylene and caustic soda and a multiplier for each material. The multipliers differ between contracts, and the price for these materials included in the formulas also differ based on the region where the SAP is produced (i.e., North America, Europe, or Asia). In addition, some formulas contain other adjustments such as ***. Because of these differences in the formulas, comparing base prices between contracts would not provide an apples-to-apples comparison.

Contract details

The three U.S. producers, importer ***, and four purchasers (***) provided details regarding each of their SAP contracts including the firms involved, dates, grades, and price formulas. A summary is reported below.

***. ***. ***. Importer ***.

Among purchasers, ***. ***. ***

***. ***.

Price changes during the contract period

All three U.S. producers reported that prices had changed during their contracts, aside from raw material indexed formula price changes, and importer ***. ***.

Three purchasers reported that there were price changes during their contracts, although one of these firms (***) described changes after the contract expired and one firm (***) stated only "transport costs." ***. Purchaser (***) reported several price changes during its contracts. ***

***.[21] ***.

Contract negotiations

Firms were asked to describe any contract negotiations with purchasers since January 1, 2019. ***.[22] ***.

***

[21] ***.

[22] ***.

***.

Importer *** reported that ***.

Purchaser ***.

***.

Purchaser negotiations with suppliers

Purchasers were asked to explain the factors they generally negotiate with their suppliers and whether they quote competing prices during negotiations. Firms reported negotiating on pricing, volumes, quality/product performance, lead times, and payment terms. ***.

Sales terms and discounts

*** U.S. producers typically use f.o.b. pricing and *** also uses delivered pricing. Importers *** typically quote prices on a *** basis. ***. Importers ***.

Price leadership

Five of the nine purchasers reported that one or more of the U.S. producers (and their foreign affiliates) were price leaders in the U.S. market, and the other four firms did not list any price leaders. No firms listed LGCAI or any other suppliers of imports other than the U.S. producers' affiliates as price leaders. Four firms listed BASF as a price leader, three listed Nippon Shokubai, and three listed Evonik. Purchasers indicating the presence of price leaders indicated that these firms were the largest suppliers in the U.S. market and in other regions, and that Nippon Shokubai announces price changes. Of the largest purchasers, *** did not list any price leaders and ***.

Price data

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following SAP products shipped to unrelated U.S. customers during January 2019 to June 2022.[23]

Product 1.-- Permeable and fast SAP for thin or ultra-thin hygiene products, including the following parameters:
- vortex speed of 45 seconds or less;
- gel bed permeability ("GBP") of 30 or greater; and
- centrifuge retention capacity ("CRC") within a range of 27 to 33 g/g.

[23] The three pricing product definitions are the same as the three pricing products in the preliminary phase, except for a slight change in the product 3 definition to change the AAP minimum from 20 to 19 as suggested by the Petitioner. The only other suggestion from parties on the pricing products was from the Petitioner to drop pricing product 2 since no imports were reported for that product.

Product 2.-- Balanced absorption under pressure ("AAP") SAP for balanced to thin hygiene products, including the following parameters:
- AAP 0.7 psi within a range of 18 to 24 g/g;
- GBP of less than 10; and
- CRC within a range of 34 to 42 g/g.

Product 3.-- Permeable and Pressure-resistant SAP for thin or ultra-thin hygiene products, including the following parameters:
- AAP under 0.7 psi ("AAP") within a range of 19 to 30 g/g; and
- CRC within a range of 26 to 33 g/g.

All three U.S. producers and one importer (***) provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products.[24] [25] Pricing data reported by these firms accounted for approximately *** percent of U.S. producers' U.S. shipments of SAP and *** percent of reported U.S. shipments of subject imports in 2021.[26]

***. Firms reporting pricing data were asked to provide a list of customers and grades for each pricing product (table V-4).[27] As can be seen in the table, ***. Price data for products 1-3 are presented in tables V-5 to V-7 and figures V-2 to V-4.

[24] Per-unit pricing data are calculated from total quantity and total value data provided by U.S. producers and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

[25] On October 25, 2022, LGCAI provided revised the values for its pricing data to report f.o.b. rather than delivered values. ***.

[26] Pricing coverage is based on U.S. shipments reported in questionnaires.

[27] Petitioner reported that each pricing product can include several grades produced by each manufacturer. Petitioner's postconference brief, exhibit 1, p. 26.

Table V-4
SAP: Summary of customers for each pricing product, by supplier

Reporting firm	Product 1	Product 2	Product 3
***	***	***	***
***	***	***	***
***	***.	***.	***
***	***	***.	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: ***.

Table V-5
SAP: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by source and quarter

Price in dollars per metric tons, quantity in metric tons, margin in percent.

Period	US price	US quantity	South Korea price	South Korea Quantity	South Korea margin
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 1: Permeable and fast SAP for thin or ultra-thin hygiene products, including the following parameters:

- vortex speed of 45 seconds or less;
- gel bed permeability (“GBP”) of 30 or greater; and
- centrifuge retention capacity (“CRC”) within a range of 27 to 33 g/g.

Table V-6
SAP: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by source and quarter

Price in dollars per metric tons, quantity in metric tons, margin in percent.

Period	US price	US quantity	South Korea Price	South Korea Quantity	South Korea margin
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 2: Balanced absorption under pressure ("AAP") SAP for balanced to thin hygiene products, including the following parameters:

- AAP 0.7 psi within a range of 18 to 24 g/g;
- GBP of less than 10; and
- CRC within a range of 34 to 42 g/g.

Table V-7
SAP: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by source and quarter

Price in dollars per metric tons, quantity in metric tons, margin in percent.

Period	US price	US quantity	South Korea Price	South Korea Quantity	South Korea margin
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 3: Permeable and Pressure-resistant SAP for thin or ultra-thin hygiene products, including the following parameters:

- AAP under 0.7 psi (“AAP”) within a range of 19 to 30 g/g; and
- CRC within a range of 26 to 33 g/g.

Figure V-2
SAP: Weighted-average f.o.b. prices and quantities of domestic and imported product 1, by source and quarter

Price of product 1

* * * * * * *

Volume of product 1

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 1: Permeable and fast SAP for thin or ultra-thin hygiene products, including the following parameters:

- vortex speed of 45 seconds or less;
- gel bed permeability (“GBP”) of 30 or greater; and
- centrifuge retention capacity (“CRC”) within a range of 27 to 33 g/g.

Figure V-3
SAP: Weighted-average f.o.b. prices and quantities of domestic and imported product 2, by source and quarter

Price of product 2

* * * * * * *

Volume of product 2

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 2: Balanced absorption under pressure ("AAP") SAP for balanced to thin hygiene products, including the following parameters:

- AAP 0.7 psi within a range of 18 to 24 g/g;
- GBP of less than 10; and
- CRC within a range of 34 to 42 g/g.

Figure V-4
SAP: Weighted-average f.o.b. prices and quantities of domestic and imported product 3, by source and quarter

Price of product 3

* * * * * * *

Volume of product 3

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 3: Permeable and Pressure-resistant SAP for thin or ultra-thin hygiene products, including the following parameters:

- AAP under 0.7 psi ("AAP") within a range of 19 to 30 g/g; and
- CRC within a range of 26 to 33 g/g.

Price trends

U.S. producers' prices for products 2 and 3 increased while product 1 prices decreased during January 2019 to June 2022. Prices of all three products followed similar trends overall, with decreases in 2019 into the second or third quarter of 2020, increases in 2021, and then decreases in the first or second quarter of 2022. Subject import prices increased during January 2019 to June 2022 and followed a similar trend to domestic prices except that import prices increased in 2022. Table V-8 summarizes the price trends, by country and by product. As shown in the table, domestic price increases for two of the products ranged from *** to *** percent over the period while product 1 prices decreased by *** percent. Subject import prices increased by *** to *** percent. Figure V-5 and table V-9 shows indexed U.S. producer and importer prices for products 1-3, where available, along with indexed prices for raw materials.[28] As discussed earlier, there is typically a lag of a least one quarter between raw material prices and SAP contract prices.

Table V-8
SAP: Summary of price data, by product and source, January 2019-June 2022

Quantity in metric tons, price in dollars per metric ton

Product	Source	Number of quarters	Quantity of shipments	Low price	High price	First quarter price	Last quarter price	Percent change in price over period
Product 1	United States	14	***	***	***	***	***	***
Product 1	South Korea	14	***	***	***	***	***	***
Product 2	United States	14	***	***	***	***	***	***
Product 2	South Korea	---	---	---	---	---	---	---
Product 3	United States	14	***	***	***	***	***	***
Product 3	South Korea	14	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Percent change column is percentage change from the first quarter in 2019 to the second quarter in 2022.

[28] Correlation coefficients between U.S. producer prices and propylene prices, with a lag of one quarter were 0.91 for product 1 and 0.95 for product 3 (and were 0.59 and 0.67, respectively without the one-quarter lag). Correlation coefficients between U.S. producer prices and caustic soda prices, with a lag of one quarter were 0.77 for product 1 and 0.76 for product 3 (and were 0.77 and 0.85, respectively without the one-quarter lag). Correlation coefficients between U.S. producer prices and importer prices were 0.70 for product 1 and 0.89 for product 3.

Figure V-5
SAP and raw materials: Indexed U.S. producer and importer SAP prices and raw material prices, by quarter

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires and raw materials data presented in table V-1.

Table V-9
SAP and raw materials: Indexed U.S. producer and importer SAP prices and raw material prices, by quarter

Period	Product 1 (U.S. producers)	Product 2 (U.S. producers)	Product 3 (U.S. producers)	Product 1 (U.S. importers)	Product 3 (U.S. importers)	Propylene	Caustic soda
2019 Q1	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***	***
2022 Q1	***	***	***	***	***	***	***
2022 Q2	***	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and raw materials data presented in table V-1.

The three U.S. producers, importer LGCAI, and purchasers KCC and P&G provided information on base/adder prices in their posthearing briefs.[29] BASF reported ***.[30] Evonik reported ***.[31] ***.[32]

***. ***.

Price comparisons

As shown in table V-10, prices for product imported from South Korea were below those for U.S.-produced product in *** of *** instances (*** MT); margins of underselling ranged from *** to *** percent. In the remaining *** instances (*** MT), prices for product from South Korea were between *** and *** percent above prices for the domestic product. Subject import prices for product 1 were lower than domestic prices in the first quarter of 2019 and in all four quarters of 2021 and they were higher than domestic prices in all other quarters. Subject import prices for product 3 were lower than domestic prices in all but

[29] Petitioner's posthearing brief, exhibit 7; LG Chem's posthearing brief, exhibit 8; KCC's posthearing brief, exhibit 1; and P&G's posthearing brief, Annex 2. P&G also reported quarterly prices from each of its suppliers for SAP-7 and SAP-8 in exhibit 7 of its posthearing brief.

[30] ***.

[31] ***.

[32] ***.

two quarters from first quarter 2019 until third quarter 2021 and were higher than domestic prices from in the fourth quarter of 2021 and the first half of 2022.[33]

Table V-10
SAP: Instances of underselling and overselling and the range and average of margins, by product

Quantity in in metric tons; margin in percent

Product	Type	Number of quarters	Quantity	Average margin	Min margin	Max margin
Product 1	Underselling	***	***	***	***	***
Product 2	Underselling	***	***	***	***	***
Product 3	Underselling	***	***	***	***	***
Total, all products	Underselling	***	***	***	***	***
Product 1	Overselling	***	***	***	***	***
Product 2	Overselling	***	***	***	***	***
Product 3	Overselling	***	***	***	***	***
Total, all products	Overselling	***	***	***	***	***

Source**:** Compiled from data submitted in response to Commission questionnaires.

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

Within each pricing product category, U.S. producers' prices per MT differed among the reporting firms in each quarter by ***.[34] ***.

[33] ***.

[34] ***.

Lost sales and lost revenue

In the preliminary phase of the investigation, the Commission requested that U.S. producers of SAP report purchasers with which they experienced instances of lost sales or revenue due to competition from imports of SAP from South Korea during January 2018 to September 2021. All three U.S. producers reported that they had to reduce prices and that they had lost sales. U.S. producers identified four firms with which they lost sales or revenue. ***.[35] ***.[36] ***

[35] ***.
***.
***.
[36] ***.

***.[37] In the final phase of the investigation, all three responding U.S. producers reported that they had to reduce prices and one (***) reported rolling back previously announced price increases, and all three firms reported that they had lost sales.

Nine purchasers provided questionnaire responses, including *** identified as lost sales or lost revenues in the petition. Responding purchasers reported purchasing or importing 1.2 million metric tons of SAP during January 2019-June 2022 (table V-11). *** purchasers (***) accounted for *** percent of the total reported purchases during the period.

Table V-11
SAP: Purchasers' reported purchases and imports, by firm and source, January 2019-June 2022

Quantity in metric tons, share in percent

Purchaser	Domestic quantity	Subject quantity	All other quantity	Change in domestic share	Change in subject country share
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
All firms	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Change is the percentage point change in the share of the firm's total purchases of domestic and/or subject country imports between first and last full years.

[37] ***.

Of the nine responding purchasers, four *** reported that, since 2019, they had purchased imported SAP from South Korea instead of U.S.-produced product and five firms reported that they had not (table V-12).[38] All four purchasers that responded "yes" reported that subject import prices were lower than U.S.-produced product. Purchasers identified the time period when subject import prices were lower as 2021-22 (***), 2021 (***), and the entire investigation period (***). Two purchasers *** reported that price was a primary reason for the decision to purchase imported product rather than U.S.-produced product. Two purchasers estimated the quantity of SAP from South Korea purchased instead of domestic product; quantities ranged from *** to *** metric tons. Two purchasers identified availability as the non-price reason for purchasing imported rather than U.S.-produced product.

Five of the nine responding purchasers reported that U.S. producers had not reduced prices in order to compete with lower-priced imports from South Korea and four reported that they did not know (table V-13). No purchasers reported that the U.S. producers had reduced prices to compete with lower-priced subject imports.

[38] ***. KCC's prehearing brief, p. 5. ***. KCC's posthearing brief, p. 1.
*** reported that they did not purchase SAP from South Korea instead of U.S.-produced product. ***.

Table V-12
SAP: Purchasers' responses to purchasing subject imports instead of domestic product, by firm

Quantity in metric tons

Purchaser	Purchased subject imports instead of domestic	Imports priced lower	Choice based on price	Quantity	Explanation
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
All firms	Yes--4; No--5	Yes--4; No--0	Yes--2; No--2	***	NA

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-13
SAP: Purchasers' responses to U.S. producer price reductions, by firm

Purchaser	Reported producers lowered prices	Estimated percent of U.S. price reduction	Explanation
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
All firms	Yes--0; No—5; Don't Know—4	***	NA

Source: Compiled from data submitted in response to Commission questionnaires.

Part VI: Financial experience of U.S. producers

Background[1]

Three U.S. producers, BASF,[2] Evonik, and NSAI, provided usable financial results on their SAP product operations. Each of the three U.S. producers reported financial data on a calendar-year basis,[3] and each of the responding U.S. producers provided their financial data on the basis of GAAP.[4] BASF, Evonik, and NSAI reported commercial sales and exports; Evonik also reported transfers to related firms.[5] The trade and financial data reconciled.

Evonik Superabsorber LLC was created on July 1, 2021 from its parent, Evonik Corporation. Changes that resulted from the restructuring included a ***.[6] Evonik announced its intention to divest the unit producing superabsorbent polymers in 2023.[7]

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[1] The following abbreviations may be used in the tables and/or text of this section: generally accepted accounting principles ("GAAP"), fiscal year ("FY"), net sales ("NS"), cost of goods sold ("COGS"), selling, general, and administrative expenses ("SG&A expenses"), average unit values ("AUVs"), research and development expenses ("R&D expenses"), and return on assets ("ROA"), and units of quantity are in metric tons (MT).

[2] Commission staff verified the questionnaire response of BASF. ***.

[3] ***.

[4] ***.

[5] Evonik's ***. Emails from ***, November 19 and 24, 2021.

[6] Evonik Superabsorber ***. Email from ***, November 17, 2021.

[7] Evonik press release, "Next Generation Evonik: Next phase of the strategic transformation," May 11, 2022.

BASF revised its ***. Also, BASF ***, as discussed in more detail later.[8]

Figure VI-1 presents each responding firm's share of the total reported net sales quantity in 2021.

Figure VI-1
SAP: Share of net sales quantity in 2021, by firm

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: The data used to calculate the firms' shares of total net sales quantity are located in table VI-3.

[8] Financial and shipment information for *** differs from that reported in the preliminary phase of this investigation and are from ***. Email from ***, August 16, 2022.

Operations on SAP

Table VI-1 presents aggregated data on U.S. producers' operations in relation to SAP, while table VI-2 presents corresponding changes in AUVs. Table VI-3 presents selected company-specific financial data.

Table VI-1
SAP: Results of operations of U.S. producers, by item and period

Quantity in MT; value in 1,000 dollars; ratios in percent

Item	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
Total net sales	Quantity	***	***	***	***	***
Total net sales	Value	***	***	***	***	***
COGS: Raw materials	Value	***	***	***	***	***
COGS: Direct labor	Value	***	***	***	***	***
COGS: Other factory	Value	***	***	***	***	***
COGS: Total	Value	***	***	***	***	***
Gross profit or (loss)	Value	***	***	***	***	***
SG&A expenses	Value	***	***	***	***	***
Operating income or (loss)	Value	***	***	***	***	***
Interest expense	Value	***	***	***	***	***
All other expenses	Value	***	***	***	***	***
All other income	Value	***	***	***	***	***
Net income or (loss)	Value	***	***	***	***	***
Depreciation/amortization	Value	***	***	***	***	***
Cash flow	Value	***	***	***	***	***
COGS: Raw materials	Ratio to NS	***	***	***	***	***
COGS: Direct labor	Ratio to NS	***	***	***	***	***
COGS: Other factory	Ratio to NS	***	***	***	***	***
COGS: Total	Ratio to NS	***	***	***	***	***
Gross profit	Ratio to NS	***	***	***	***	***
SG&A expense	Ratio to NS	***	***	***	***	***
Operating income or (loss)	Ratio to NS	***	***	***	***	***
Net income or (loss)	Ratio to NS	***	***	***	***	***

Table continued.

Table VI-1 Continued
SAP: Results of operations of U.S. producers, by item and period

Shares in percent; unit values in dollars per MT; count in number of firms reporting

Item	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
COGS: Raw materials	Share	***	***	***	***	***
COGS: Direct labor	Share	***	***	***	***	***
COGS: Other factory	Share	***	***	***	***	***
COGS: Total	Share	***	***	***	***	***
Total net sales	Unit value	***	***	***	***	***
COGS: Raw materials	Unit value	***	***	***	***	***
COGS: Direct labor	Unit value	***	***	***	***	***
COGS: Other factory	Unit value	***	***	***	***	***
COGS: Total	Unit value	***	***	***	***	***
Gross profit or (loss)	Unit value	***	***	***	***	***
SG&A expenses	Unit value	***	***	***	***	***
Operating income or (loss)	Unit value	***	***	***	***	***
Net income or (loss)	Unit value	***	***	***	***	***
Operating losses	Count	***	***	***	***	***
Net losses	Count	***	***	***	***	***
Data	Count	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares represent the share of COGS.

Table VI-2
SAP: Changes in AUVs between comparison periods

Changes in percent

Item	2019-21	2019-20	2020-21	Jan-Jun 2021-22
Total net sales	▲***	▼***	▲***	▲***
COGS: Raw materials	▲***	▼***	▲***	▲***
COGS: Direct labor	▲***	▼***	▲***	▲***
COGS: Other factory	▲***	▲***	▲***	▲***
COGS: Total	▲***	▼***	▲***	▲***

Table continued.

Table VI-2 Continued
SAP: Changes in AUVs between comparison periods

Changes in dollars per MT

Item	2019-21	2019-20	2020-21	Jan-Jun 2021-22
Total net sales	▲***	▼***	▲***	▲***
COGS: Raw materials	▲***	▼***	▲***	▲***
COGS: Direct labor	▲***	▼***	▲***	▲***
COGS: Other factory	▲***	▲***	▲***	▲***
COGS: Total	▲***	▼***	▲***	▲***
Gross profit or (loss)	▼***	▼***	▼***	▲***
SG&A expense	▼***	▼***	▼***	▲***
Operating income or (loss)	▼***	▼***	▼***	▲***
Net income or (loss)	▼***	▼***	▼***	▲***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Period changes preceded by a "▲" represent an increase, while period changes preceded by a "▼" represent a decrease.

Table VI-3
SAP: Firm-by-firm total net sales quantity, by period

Net sales quantity

Quantity in MT

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm total net sales value, by period

Net sales value

Value in 1,000 dollars

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm cost of goods sold ("COGS"), by period

COGS

Value in 1,000 dollars

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm gross profit or (loss), by period

Gross profit or (loss)

Value in 1,000 dollars

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm selling, general, and administrative ("SG&A") expenses, by period

SG&A expenses

Value in 1,000 dollars

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm operating income or (loss), by period

Operating income or (loss)

Value in 1,000 dollars

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm net income or (loss), by period

Net income or (loss)

Value in 1,000 dollars

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm ratio of COGS to net sales value, by period

COGS to net sales ratio

Ratios in percent

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm ratio of gross profit or (loss) to net sales value, by period

Gross profit or (loss) to net sales ratio

Ratios in percent

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm ratio of SG&A expenses to net sales value, by period

SG&A expenses to net sales ratio

Ratios in percent

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm ratio of operating income or (loss) to net sales value, by period

Operating income or (loss) to net sales ratio

Ratios in percent

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm ratio of net income or (loss) to net sales value, by period

Net income or (loss) to net sales ratio

Ratios in percent

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm unit net sales value, by period

Unit net sales value

Unit values in dollars per MT

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm unit raw material cost, by period

Unit raw material costs

Unit values in dollars per MT

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm unit direct labor cost, by period

Unit direct labor costs

Unit values in dollars per MT

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm unit other factory costs, by period

Unit other factory costs

Unit values in dollars per MT

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm unit COGS, by period

Unit COGS

Unit values in dollars per MT

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm unit gross profit or (loss), by period

Unit gross profit or (loss)

Unit values in dollars per MT

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm unit SG&A expenses, by period

Unit SG&A expenses

Unit values in dollars per MT

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm unit operating income or (loss), by period

Unit operating income or (loss)

Unit values in dollars per MT

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table VI-3 Continued
SAP: Firm-by-firm unit net income or (loss), by period

Unit net income or (loss)

Unit values in dollars per MT

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Net sales

As shown in tables VI-1 and VI-3, total net sales, by quantity, increased slightly and irregularly from 2019 to 2021 (***), and were higher in January-June 2022 ("interim 2022") than in January-June 2021 ("interim 2021") by *** percent. Data reported by *** accounted for the increased sales between the full year periods; ***). Total net sales, by value, irregularly increased between 2019 and 2021, up by $*** or *** percent and were higher in interim 2022 compared with in interim 2021 by $*** or *** percent. Sales value of each firm changed in the same direction: a ***. As shown in table VI-2, the average unit values of sales for the three firms together fell by $*** per MT (*** percent) between 2019 and 2020 although unit sales values recovered and were higher in 2021 than in 2020 (by $*** per MT and higher in interim 2022 than in interim 2021, by $*** per MT or *** percent.

Differences in unit values between firms may be attributable to the different types of SAP that each firm produces,[9] changes in product mix, and differences in how contract prices are set by formula between firms and customers. Each of the three U.S. producers stated in their questionnaire responses that

[9] Petitioner stated that "in the United States, BASF produces *** SAP products, Evonik produces *** SAP products, and NSAI produces *** SAP products." Petitioner's postconference brief, Answers to Staff Questions, #17 and #52. For a list of grades or products shipped see U.S. producers' questionnaire (final), section II-9; also, compare unit values of shipments by grade, U.S. producers' questionnaire (final), section II-9.

***.[10] For example, ***.[11] *** stated that its prices are periodically adjusted to raw material indexes and the price increase in 2021 was due to increases in the indexed price of propylene and caustic soda.[12]

Industry witnesses testified to a short-lived spike in demand for SAP in reaction to COVID-19 news that lasted from March 2020 through the end of May of that year. In February 2021, winter storm Uri caused interruption of the electricity grid and pipelines carrying natural

[10] U.S. producers' questionnaire (final), section III-9d. According to petitioner, a base price ***. Petitioner's postconference brief, exh. 1, Answers to Staff Questions, #23. According to P&G, base prices ***. P&G, Postconference brief, Responses to Staff Questions, Elements of Price. See Part V for information on pricing.

[11] Email from ***, November 19, 2021.

[12] Increased sales values and raw material costs were attributed mainly to higher indexed prices of propylene and caustic soda. Emails from ***, August 11, 2022 and September 2, 2022. The firm also stated that ***. *** stated that increased unit values in 2020 to 2021 stemmed from raw material price increases for propylene and caustic soda and added that recent global supply chain disruptions and overall inflationary pressure likely contributed to the trend. Email from ***, August 12, 2022. *** stated that ***. Email from ***, August 16, 2022.

gas and petrochemicals throughout the U.S. Gulf and southeast United States.[13] BASF,[14] Evonik,[15] and NSAI[16] each shut down because of raw material supply interruptions and other problems. Each firm acknowledged that weather events negatively impact sales volume and increased operating costs in 2021 but stated that customers were supplied from inventory. Each firm resumed production after an interruption of several weeks. Evonik was also affected by Hurricane Ida, a category 4 hurricane. Evonik stopped its production at Garyville, Louisiana for 14 days and declared force majeure from September 3, 2021 to December 2, 2021.[17]

Cost of goods sold and gross profit or loss

Raw material costs, direct labor, and other factory costs accounted for *** percent of total COGS, respectively, in 2021 (table VI-1). Fluctuations in raw material costs were due to changes in input prices of propylene, acrylic acid, and caustic soda (sodium hydroxide).[18] Raw material costs also changed with fluctuations in the costs of oil, derivatives of

[13] News reports indicated that all or nearly all chemical plants shut down in response to severe cold weather that affected the Texas Gulf Coast area causing the curtailment of natural gas supplies, electricity, fuel gas, steam and other process utilities. Mrcplast.com/news-news_open 383989.html, February 19, 2021.

[14] Conference transcript, p. 70 (Nebel) and p. 72 (Amin). BASF ***. Petitioner's postconference brief, exh. 1, Answers to Staff Questions, #56 and exh. 12. BASF ***. Also, see U.S. producers' questionnaire (final), section III-9f.

[15] Evonik's plants at Garyville, LA, and Greensboro, NC, were ***. Email from ***, November 24, 2021. Also, conference transcript, p. 70 (Terhart). Also, see U.S. producers' questionnaire (final), section III-9f.

[16] NSAI reported it had the same experience as BASF. Conference transcript, p. 70 (Gu). NSAI ***. Petitioner's postconference brief, exh. 1, Answers to Staff Questions, #56. Also, see U.S. producers' questionnaire (final), section III-9f.

[17] Email from ***, November 19, 2021. A witness for Evonik stated that the firm declared force majeure on shipments from Garyville, LA, on September 3, 2021 and the plant sustained property damage and lost one-week's production. Evonik's supplier of raw materials declared force majeure. Conference transcript, p. 71 (Terhart). Also, see U.S. producers' questionnaire (final), section III-9f.

[18] The two primary components of SAP, comprising over *** percent of the product, are acrylic acid and caustic soda, with propylene as a precursor to making acrylic acid and then glacial acrylic acid ("GAA"). GAA is converted to polyacrylic acid ***. The acid is partially neutralized with caustic soda (sodium hydroxide), which maintains the polymer in a dissolved state, to produce SAP as a viscous and rubbery gel, ***. ***. See also description of manufacturing process in Part I of this report.

oil and natural gas, and energy products. They were particularly affected by weather-related events and rose in 2021 because of shortages of feedstock and oil-price increases.

Raw material costs increased by *** percent, from $*** to $*** during 2019-21 as sales volume increased as well as reflecting increased costs of propylene and related petrochemicals, supply and transportation difficulties, the weather events, and other factors described earlier. On an average per unit basis (per MT), raw material costs irregularly increased from $*** in 2019 to $*** in 2021. As a ratio to net sales, raw material costs irregularly increased, from *** percent in 2019 to *** percent in 2021 primarily reflecting the greater increase in costs compared to revenue over the same period. Raw material costs as a ratio to net sales were lower at *** percent in interim 2022 than in the period one year earlier at *** percent. Each firm's raw material costs were directionally the same. Because of their size, *** accounted for most of the changes.[19]

In an accounting sense, BASF ***.

[19] Unit values of raw materials of the three firms (table VI-3), ***.

Table VI-4 presents raw materials, by type.

Table VI-4
SAP: Raw material costs in 2021

Value in 1,000 dollars; unit values in dollars per MT; share of value in percent

Item	Value	Unit value	Share of value
Acrylic acid	***	***	***
Sodium hydroxide (caustic soda)	***	***	***
Various additive agents	***	***	***
Other material inputs	***	***	***
All raw materials	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Reportedly, BASF and NSAI ***.[20] BASF ***. NSAI ***.[21] Evonik ***.

Direct labor costs, accounting for the smallest share of total COGS, irregularly increased by *** percent from 2019 to 2021 and were higher in interim 2022 than in interim 2021 by *** percent. On an average per unit basis, direct labor costs irregularly increased from $*** in 2019 to $*** in 2021 and were higher in interim 2022 at $*** than in interim 2021 when they were $***. As a ratio to net sales, direct labor costs declined from *** percent in 2019 to *** percent in 2021, and the ratio was lower in interim 2022 (*** percent) than in interim 2021 (*** percent). ***. Directionally, ***.

Other factory costs, accounting for the second largest share of total COGS, increased by *** percent from $*** in 2019 to $*** in 2021 and were greater in interim 2022 at $*** than in interim 2021 when they were $***, a difference of *** percent. On an average per unit basis, other factory costs increased from $*** in 2019 to $*** in 2021 and were higher in interim 2022 at $*** than they were in

[20] Petitioner's postconference brief, Answers to Staff Questions, #4 (common inputs).
[21] U.S. producers' questionnaire, section III-7.

interim 2021 at $***. The increase in costs between 2019 and 2021 was from the data ***.[22] The higher costs in interim 2022 reflected the data of ***.[23] This appears to reflect increasing energy and electricity costs. Costs were higher and increased to a greater extent than did sales quantities in interim 2022 compared with interim 2021. As a ratio to net sales, other factory costs irregularly increased between 2019 and 2021 but the ratio was lower in interim 2022 than in interim 2021, reflecting the greater increase in sales value compared with other factory costs.

Overall total COGS irregularly increased by *** percent from 2019 to 2021, from $*** to $***, primarily due to the increase in raw material costs during the same period. Total COGS were *** percent higher in interim 2022 at $*** than in interim 2021, when they were, $***, again, primarily due to raw material cost increases. *** values of total COGS in 2021 than in 2019 and *** reported higher COGS in interim 2022 than in interim 2021. On an average per unit basis, COGS irregularly increased from $*** in 2019 to $*** in 2021 and was $*** in interim 2022 compared with $*** in interim 2021. The COGS to net sales ratio increased from *** percent in 2019 to *** percent in 2021 but was *** percent in interim 2022 compared with *** percent in interim 2021.[24]

As seen in table VI-1, total gross profit fell from 2019 ($***) to 2020 ($***) and was a negative $*** in 2021; gross profit was a positive $*** in

[22] ***.

[23] NSAI explained that ***. Email from ***, September 2, 2022, U.S. producers' questionnaire, sections III-9f and III-10.

[24] Evonik and NSAI described the effects of COVID-19 on their operations as ***. Evonik noted ***. NSAI stated that the effects were ***. U.S. producers' questionnaire response, sections III-18 and II-2b.

interim 2022 compared with a loss of $*** in interim 2021.[25] Reflecting the underlying values and relationship between COGS and quantity of net sales, on an average unit value basis, gross profit fell from $*** in 2019 to $*** in 2020 and was a negative $*** in 2021; it was a positive $*** in interim 2022 compared with a negative $*** in interim 2021.

Reflecting the underlying values and relationship between COGS and the value of net sales, the ratio of gross profit to net sales declined from a positive *** percent in 2019 to a negative *** percent in 2021 and was a positive *** percent in interim 2022 compared with a negative *** percent in interim 2021.

SG&A expenses and operating income or loss

U.S. producers' SG&A expenses declined by *** percent from 2019 ($***) to 2021 ($***) but were higher by *** percent in interim 2022 ($***) than in interim 2021 ($***). The corresponding SG&A expense ratio (total SG&A expenses divided by total sales value) irregularly declined from *** percent in 2019 to *** percent in 2021 and was *** percent in interim 2022 compared with *** percent in interim 2021. The changes in the ratio reflected changes in sales value. The average unit value of SG&A expenses declined from $*** in 2019 to $*** in 2021 but was sharply higher at $*** in interim 2022 compared with $*** in interim 2021. Directionally, SG&A expenses of ***. [26]

As presented in table VI-1, U.S. producers' operating income markedly fell from $*** in 2019 to a loss of $*** in 2020, and then to a greater loss of $*** in 2021. In interim 2022, the operating profit of $*** was much greater than the

[25] Between 2019 and 2021, ***.

[26] As shown in table VI-3 ***. Email from ***, November 24, 2021. In the final phase of this investigation, ***.

operating loss in interim 2021 of $***. The operating income ratio (operating income or loss to total net sales) followed the underlying values of each, falling from a positive *** percent in 2019 to a negative *** percent in 2020 and a negative *** percent in 2021. The profit ratio of *** percent in interim 2022 was greater than the loss ratio of *** percent in interim 2021. The trend of unit value of operating income or loss was similar to that of the underlying values of net sales quantity and operating profitability.[27]

All other expenses and net income or loss

Interest expense was reported ***: total interest expense declined from $*** in 2019 to $*** in 2021; it was $*** in interim 2022, lower than the $*** reported in interim 2021. Other expense was reported by each of the three firms. Evonik ***.[28] BASF ***.[29] Two firms reported other income, (***). The latter's other income mainly consisted of the ***.[30]

[27] As shown in table VI-3, ***. The magnitude of the change was ***. Directionally, profitability improved for ***.

[28] ***. U.S. producers' questionnaire (final), section III-10.

[29] ***. U.S. producers' questionnaire (final), section III-10 and email from ***, November 22, 2021.

[30] ***. U.S. producers' questionnaire (final), sections III-9a and III-10. ***, from SG&A expenses to other income. NSAI explained ***.

Interest expense and all other expenses together increased from $*** in 2019 to $*** in 2020 but fell to $*** in 2021. Interest charges and other expenses were greater than other income in 2019 and 2020 resulting in a net expense in those two years. In 2021 and both interim periods, other income was much greater and resulted in an increase in net income of $*** in both 2021 and interim 2021 and $*** in interim 2022.

Based on the changes in operating income/(loss) and net of other expenses/income, net income fell from a positive $*** in 2019 to a net loss of $*** in 2020 and to a larger loss of $*** in 2021. Net income, $*** in interim 2022 was greater than the loss in interim 2021 of $***. As shown in table VI-3, ***. The ratio of net income/(loss) to sales following the trend of the underlying data; it fell from *** percent to a negative *** percent between 2019 and 2020 before declining further to a negative *** percent in 2021. The net income ratio was a negative *** percent in interim 2021 compared with a positive *** percent in interim 2022.[31]

Capital expenditures and research and development expenses

Table VI-5 presents capital expenditures, by firm, and table VI-7 presents R&D expenses, by firm. Tables VI-6 and VI-8 present the firms' narrative explanations of the nature, focus, and significance of their capital expenditures and R&D expenses, respectively. All three firms reported capital expenditures. Total capital expenditures fell by *** percent between 2019 and 2021 and were *** percent lower in interim 2022 than in interim 2021. As shown by the data in table VI-5 and the narratives in table VI-6, data reported by *** accounted for the majority of capital expenditures in 2020 and interim 2021 while those of *** accounted for the majority in 2019; directionally, the capital expenditures of *** increased from 2019 to 2021 but those of *** fell. R&D expenses decreased by *** percent between 2019 ($***) and 2021 ($***); R&D expenses were *** percent higher in interim 2022 ($***) compared with interim 2021 ($***).

[31] A variance analysis is not shown due to the large variety of product mixes and cost structures among the reporting firms. As depicted in tables VI-1 and VI-2, costs rose more than did sales values between 2019 and 2021 as well as between the interim periods.

Table VI-5
SAP: U.S. producers' capital expenditures, by firm and period

Value in 1,000 dollars

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-6
SAP: Narrative descriptions of U.S. producers' capital expenditures, by firm

Firm	Narrative on capital expenditures
BASF	***
Evonik	***
NSAI	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-7
SAP: U.S. producers' R&D expenses, by firm and period

Value in 1,000 dollars

Firm	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
BASF	***	***	***	***	***
Evonik	***	***	***	***	***
NSAI	***	***	***	***	***
All firms	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-8
SAP: Narrative descriptions of U.S. producers' R&D expenses, by firm

Firm	Narrative on R&D expenses
BASF	***
Evonik	***
NSAI	***

Source: Compiled from data submitted in response to Commission questionnaires.

Assets and return on assets

Table VI-9 presents data on the U.S. producers' total assets while table VI-10 presents their operating ROA.[32] Table VI-11 presents U.S. producers' narrative responses explaining their major asset categories and any significant changes in asset levels over time. The U.S. producers' total net assets irregularly increased by *** percent, from $*** in 2019 to $*** in 2021. ***. The calculated ROA declined from *** percent in 2019 to negative *** percent in 2021, mirroring the change in operating income reported by the firms.

Table VI-9
SAP: U.S. producers' total net assets, by firm and period

Value in 1,000 dollars

Firm	2019	2020	2021
BASF	***	***	***
Evonik	***	***	***
NSAI	***	***	***
All firms	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-10
SAP: U.S. producers' ROA, by firm and period

Ratio in percent

Firm	2019	2020	2021
BASF	***	***	***
Evonik	***	***	***
NSAI	***	***	***
All firms	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

[32] The operating ROA is calculated as operating income divided by total assets. With respect to a firm's overall operations, the total asset value reflects an aggregation of a number of assets which are generally not product specific. Thus, high-level allocations are generally required in order to report a total asset value on a product-specific basis.

Table VI-11
SAP: Narrative descriptions of U.S. producers' total net assets, by firm

Firm	Narrative on assets
BASF	***
Evonik	***
NSAI	***

Source: Compiled from data submitted in response to Commission questionnaires.

Capital and investment

The Commission requested U.S. producers of SAP to describe any actual or potential negative effects of imports of SAP from South Korea on their firms' growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments. Table VI-12 presents the number of firms reporting an impact in each category and table VI-13 provides the U.S. producers' narrative responses.

Table VI-12
SAP: Count of firms indicating actual and anticipated negative effects of imports from subject sources on investment, growth, and development since January 1, 2019, by effect

Number of firms reporting

Effect	Category	Count
Cancellation, postponement, or rejection of expansion projects	Investment	2
Denial or rejection of investment proposal	Investment	0
Reduction in the size of capital investments	Investment	1
Return on specific investments negatively impacted	Investment	2
Other investment effects	Investment	2
Any negative effects on investment	Investment	3
Rejection of bank loans	Growth	1
Lowering of credit rating	Growth	0
Problem related to the issue of stocks or bonds	Growth	0
Ability to service debt	Growth	1
Other growth and development effects	Growth	3
Any negative effects on growth and development	Growth	3
Anticipated negative effects of imports	Future	3

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-13
SAP: Narratives relating to actual and anticipated negative effects of imports on investment, growth, and development, since January 1, 2019

Item	Firm name and narrative on impact of imports
Cancellation, postponement, or rejection of expansion projects	***
Cancellation, postponement, or rejection of expansion projects	***
Reduction in the size of capital investments	***
Return on specific investments negatively impacted	***
Return on specific investments negatively impacted	***
Other negative effects on investments	***
Other negative effects on investments	***
Rejection of bank loans	***
Ability to service debt	***

Other effects on growth and development	***
Other effects on growth and development	***
Other effects on growth and development	***
Anticipated effects of imports	***
Anticipated effects of imports	***
Anticipated effects of imports	***

Source: Compiled from data submitted in response to Commission questionnaires.

Part VII: Threat considerations and information on nonsubject countries

Section 771(7)(F)(i) of the Act (19 U.S.C. § 1677(7)(F)(i)) provides that—

> *In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors*[1]*--*
>
> *(I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
>
> *(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
>
> *(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
>
> *(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
>
> *(V) inventories of the subject merchandise,*

[1] Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition."

(VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,

(VII) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),

(VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

Information on the volume and pricing of imports of the subject merchandise is presented in Parts IV and V; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in Part VI. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets, follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

[2] Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other WTO member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

The industry in South Korea

The Commission issued foreign producers' or exporters' questionnaires to two firms believed to produce and/or export SAP from South Korea.[3] Usable responses to the Commission's questionnaire were received from two firms: LG Chem, Ltd. ("LG Chem") and Sumitomo Seika Polymers Korea Co., Ltd. ("Sumitomo"). These firms' exports to the United States accounted for *** of the reported U.S. imports of SAP from South Korea in 2021. According to estimates requested of the responding producers in South Korea, the production of SAP in South Korea reported in questionnaires accounts for approximately *** percent of overall production of SAP in South Korea. Table VII-1 presents information on the SAP operations of the responding producers and exporters in South Korea.

Table VII-1
SAP: Summary data for producers in South Korea, 2021

Firm	Production (metric tons)	Share of reported production (percent)	Exports to the United States (metric tons)	Share of reported exports to the United States (percent)	Total shipments (metric tons)	Share of firm's total shipments exported to the United States (percent)
LG Chem	***	***	***	***	***	***
Sumitomo	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Changes in operations

As presented in table VII-2 one producer in South Korea reported operational and organizational changes since January 1, 2019.

[3] These firms were identified through a review of information submitted in the petition and presented in third-party sources.

Table VII-2
SAP: Reported changes in operations in South Korea since January 1, 2019, by firm

Item	Firm name and accompanying narrative response
Expansions	***

Source: Compiled from data submitted in response to Commission questionnaires.

Operations on SAP

Table VII-3 presents information on the SAP operations of the responding producers and exporters in South Korea.[4] During 2019-21, capacity remained unchanged, and was higher in interim 2022 than in interim 2021 by *** percent.[5] During 2019-21, production increased by *** percent overall,[6] and was higher by *** percent in interim 2022 than in interim 2021. Capacity for 2022 and 2023 is projected to remain the same as in 2021, while production is projected to be higher by *** metric tons in 2022 and by *** metric tons in 2023, compared to 2021 levels.

During the period of data collection, capacity utilization ranged between *** and *** percent and is projected to remain above *** percent during 2022-23. Capacity utilization increased by *** percentage points during 2019-21, and was lower by *** percentage points in interim 2022 than in interim 2021. During 2019-21, end-of-period inventories increased by *** percent, but were lower during interim 2022 than in interim 2021 by *** percent.

[4] As seen in table VII-1, LG Chem represents approximately *** percent of total production in South Korea, compared to about *** percent accounted by ***. Therefore, *** will drive most of the trends experienced in this reporting period.

[5] ***.

[6] While there was an overall increase in production during 2019-21, *** reported a decline in production in 2020 by *** percent. *** reported lower production in interim 2022, compared to interim 2021, by *** percent.

Home market shipments increased by *** percent during 2019-21, and were higher in interim 2022 than in interim 2021. Home market shipments are projected to decline slightly in 2022 and also in 2023. During 2019-21, exports to the United States increased by *** percent, but were lower in interim 2022 than in interim 2021 by *** percent.[7] Exports to the United States are projected to decrease in 2022 and also in 2023. *** did not report projected exports to the United States in 2023. Exports to all other markets (shown in more detail for *** in table VII-7) increased by *** percent during 2019-21, and were higher in interim 2022 than in interim 2021 by *** percent. Total shipments increased by *** percent during 2019-21, and were higher in interim 2022 than in interim 2021 by *** percent but were projected to decline in 2023.

The vast majority of shipments consisted of exports in each period. Total exports accounted for approximately *** percent of total shipments during each period. Home market shipments accounted for *** of total shipments during each period. Exports to the United States, as a share of total shipments, ranged between *** percent during 2019-21, increasing year-on-year, and were lower at *** percent in interim 2022 compared to *** percent in interim 2021. Exports to the United States, as a share of total shipments, are expected to remain slightly above *** percent during 2022-23. The share of exports to all other markets accounted for *** each period.

---

[7] ***.

***. *** foreign producer questionnaire, II-2b.

LG Chem further stated that the volume increase during the period of data collection was the result of the fullfilment of LG Chem's long-term supply contract with *** to transition all of its U.S. diaper manufacturing to incorportate SAP-8. To a lesser extent, the increase also resulted from the reallocation of LG Chem's SAP products to U.S. customers impacted by pandemic-induced demands, and weather-related production disruptions at U.S. SAP production facilities in 2021. LG Chem's prehearing brief, p. 95.

***. Email from ***, November 19, 2021 and LGCAI's U.S. importer questionnaire response, III-21.

Table VII-3
SAP: Data on industry in South Korea, by period

Quantity in metric tons; ratio and share in percent

Item	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022	Projection 2022	Projection 2023
Capacity	***	***	***	***	***	***	***
Production	***	***	***	***	***	***	***
End-of-period inventories	***	***	***	***	***	***	***
Internal consumption	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***
Home market shipments	***	***	***	***	***	***	***
Exports to the United States	***	***	***	***	***	***	***
Exports to all other markets	***	***	***	***	***	***	***
Export shipments	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***

Table continued.

Table VII-3 Continued
SAP: Data on industry in South Korea, by period

Share and ratio in percent

Item	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022	Projection 2022	Projection 2023
Capacity utilization ratio	***	***	***	***	***	***	***
Inventory ratio to production	***	***	***	***	***	***	***
Inventory ratio to total shipments	***	***	***	***	***	***	***
Internal consumption share	***	***	***	***	***	***	***
Commercial home market shipments share	***	***	***	***	***	***	***
Home market shipments share	***	***	***	***	***	***	***
Exports to the United States share	***	***	***	***	***	***	***
Exports to all other markets share	***	***	***	***	***	***	***
Export shipments share	***	***	***	***	***	***	***
Total shipments share	***	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table VII-4 presents information on SAP production in South Korea by grade and period. SAP production in South Korea is largely dominated by all other grades, which account for between *** percent in 2021 and *** percent in 2019 and more than *** percent in interim 2021 and 2022. SAP-8 accounted for the largest share of the four specified grades (SAP-7, SAP-8, LK-1, and LK-2), in all periods, except in 2019.

Table VII-4
SAP: South Korean producers' production, by grade and by period

Quantity in metric tons; share in percent

Product grade	Measure	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022	Projection 2022	Projection 2023
SAP-7	Quantity	***	***	***	***	***	***	***
SAP-8	Quantity	***	***	***	***	***	***	***
LK-1	Quantity	***	***	***	***	***	***	***
LK-2	Quantity	***	***	***	***	***	***	***
All other grades	Quantity	***	***	***	***	***	***	***
All grades	Quantity	***	***	***	***	***	***	***
SAP-7	Share	***	***	***	***	***	***	***
SAP-8	Share	***	***	***	***	***	***	***
LK-1	Share	***	***	***	***	***	***	***
LK-2	Share	***	***	***	***	***	***	***
All other grades	Share	***	***	***	***	***	***	***
All grades	Share	***	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Tables VII-5 and VII-6 present information on the SAP production methods by grade of the responding producers and exporters in South Korea. While *** utilizes *** and also *** for all other grades of SAP, *** uses *** process for all other grades of SAP, (***).

Table VII-5
SAP: Korean producer *'s production method, by grade, 2021**

Product grade	Belt	Kneading	Other
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***

Source: Compiled from data submitted in response to supplementary data request from the Commission, September 7, 2022.

Note: ***.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Table VII-6
SAP: Korean producer *'s production method, by grade, 2021**

Product grade	Belt	Kneading	Other
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***

Source: Compiled from data submitted in response to supplementary data request from the Commission, September 5, 2022.

Note: Respondent said "other method" is ***.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Alternative products

Responding firms in South Korea reported producing *** on the same equipment and machinery used to produce SAP.

Exports

Table VII-7 presents LG Chem's exports to markets other than the United States. In addition to its exports to the United States, ***.[8] During 2021, ***.[9] During 2019-21, ***. Exports to these three countries comprised between *** and *** percent of total exports to other markets each year during 2019-21. Overall, exports to markets other than the United States declined by *** percent between 2019 and 2021, but experienced a rebound of *** percent in interim 2022, compared to interim 2021.

[8] The Commission requested the additional information from ***.
[9] ***. Email from ***, September 7, 2022.

Table VII-7
SAP: Producer *'s global exports to all markets other than the United States, by period**

Quantity in metric tons, dry weight; share in percent

Market	Measure	2019	2020	2021	Jan-Sep 2021	Jan-Sep 2022
China	Quantity	***	***	***	***	***
Germany	Quantity	***	***	***	***	***
Turkey	Quantity	***	***	***	***	***
Brazil	Quantity	***	***	***	***	***
Russia	Quantity	***	***	***	***	***
Colombia	Quantity	***	***	***	***	***
Mexico	Quantity	***	***	***	***	***
Sweden	Quantity	***	***	***	***	***
Malaysia	Quantity	***	***	***	***	***
Poland	Quantity	***	***	***	***	***
Other	Quantity	***	***	***	***	***
Exports to other markets	Quantity	***	***	***	***	***
China	Share of quantity	***	***	***	***	***
Germany	Share of quantity	***	***	***	***	***
Turkey	Share of quantity	***	***	***	***	***
Brazil	Share of quantity	***	***	***	***	***
Russia	Share of quantity	***	***	***	***	***
Colombia	Share of quantity	***	***	***	***	***
Mexico	Share of quantity	***	***	***	***	***
Sweden	Share of quantity	***	***	***	***	***
Malaysia	Share of quantity	***	***	***	***	***
Poland	Share of quantity	***	***	***	***	***
Other	Share of quantity	***	***	***	***	***
Exports to other markets	Share of quantity	***	***	***	***	***

Source: Email from ***, September 7, 2022.

According to GTA, the leading export markets for acrylic polymers, in primary forms from South Korea are China, the United States, Turkey, and Germany (table VII-8). At the global level, SAP falls under the category of acrylic polymers in primary forms.

During 2021, the United States was the second largest export market for acrylic polymers, in primary forms from South Korea, accounting for 8.8 percent, preceded by China, accounting for 30.9 percent.

Table VII-8
Acrylic Polymers Nesoi, in Primary Forms: Exports from South Korea, by destination market and by period

Quantity in metric tons; value in 1,000 dollars

Destination market	Measure	2019	2020	2021
United States	Quantity	44,313	75,065	84,227
China	Quantity	220,675	285,387	294,942
Turkey	Quantity	62,757	67,390	45,693
Germany	Quantity	83,400	49,987	44,463
Vietnam	Quantity	28,263	28,888	39,290
Brazil	Quantity	34,234	31,203	37,900
India	Quantity	23,030	19,718	26,917
Russia	Quantity	30,188	26,524	25,605
Japan	Quantity	23,491	22,497	22,882
All other destination markets	Quantity	325,825	329,230	331,693
All destination markets	Quantity	876,178	935,887	953,611
United States	Value	70,160	95,824	140,034
China	Value	393,649	485,799	617,849
Turkey	Value	79,005	75,286	76,858
Germany	Value	108,419	59,535	62,464
Vietnam	Value	56,331	52,925	76,424
Brazil	Value	47,572	38,001	53,516
India	Value	49,377	34,680	58,526
Russia	Value	41,193	34,099	38,867
Japan	Value	66,586	53,297	58,850
All other destination markets	Value	464,353	437,142	544,574
All destination markets	Value	1,376,645	1,366,588	1,727,962

Table continued.

Table VII-8 Continued
Acrylic Polymers Nesoi, in Primary Forms: Exports from South Korea, by destination market and by period

Unit values in dollars per metric ton; share in percent

Destination market	Measure	2019	2020	2021
United States	Unit value	1,583	1,277	1,663
China	Unit value	1,784	1,702	2,095
Turkey	Unit value	1,259	1,117	1,682
Germany	Unit value	1,300	1,191	1,405
Vietnam	Unit value	1,993	1,832	1,945
Brazil	Unit value	1,390	1,218	1,412
India	Unit value	2,144	1,759	2,174
Russia	Unit value	1,365	1,286	1,518
Japan	Unit value	2,835	2,369	2,572
All other destination markets	Unit value	1,425	1,328	1,642
All destination markets	Unit value	1,571	1,460	1,812
United States	Share of quantity	5.1	8.0	8.8
China	Share of quantity	25.2	30.5	30.9
Turkey	Share of quantity	7.2	7.2	4.8
Germany	Share of quantity	9.5	5.3	4.7
Vietnam	Share of quantity	3.2	3.1	4.1
Brazil	Share of quantity	3.9	3.3	4.0
India	Share of quantity	2.6	2.1	2.8
Russia	Share of quantity	3.4	2.8	2.7
Japan	Share of quantity	2.7	2.4	2.4
All other destination markets	Share of quantity	37.2	35.2	34.8
All destination markets	Share of quantity	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 3906.90 as reported by Korea Trade Statistics Promotion Institute (KTSPI) in the Global Trade Atlas database, accessed July 28, 2022.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---". United States is shown at the top, all remaining top export destinations shown in descending order of 2021 data.

U.S. inventories of imported merchandise

Table VII-9 presents data on U.S. importers' reported inventories of SAP. The quantity of U.S. importers' inventories of SAP from South Korea increased from 2019 to 2020 by *** metric tons before decreasing in 2021 by *** metric tons. Overall, during 2019-21 the quantity of U.S. importers' inventories from South Korea decreased by *** percent, but were higher by *** percent in interim 2022, compared to interim 2021.

The quantity of U.S. importers' inventories of SAP from nonsubject sources increased from 2019 to 2020 by *** percent or by *** metric tons, before decreasing in 2021 by *** percent or by *** metric tons. Overall, during 2019-21 the quantity of U.S. importers' inventories from nonsubject sources increased by *** percent and were higher by *** percent in interim 2022 compared to interim 2021.

For all periods, *** accounted for almost all of subject merchandise inventories. At the same time, *** accounted for the vast majority of inventories of SAP from nonsubject sources, and it represented approximately *** percent of nonsubject inventory quantities in 2021. In 2021, the ratio of U.S. importers' inventories of SAP from South Korea to total shipments of imports was *** percent, while the ratio of inventories of SAP from nonsubject sources to total shipments of imports was *** percent.

Table VII-9
SAP: U.S. importers' inventories and their ratio to select items, by source and period

Quantity in metric tons; ratio in percent

Measure	Source	2019	2020	2021	Jan-Jun 2021	Jan-Jun 2022
Inventories quantity	South Korea	***	***	***	***	***
Ratio to imports	South Korea	***	***	***	***	***
Ratio to U.S. shipments of imports	South Korea	***	***	***	***	***
Ratio to total shipments of imports	South Korea	***	***	***	***	***
Inventories quantity	Nonsubject	***	***	***	***	***
Ratio to imports	Nonsubject	***	***	***	***	***
Ratio to U.S. shipments of imports	Nonsubject	***	***	***	***	***
Ratio to total shipments of imports	Nonsubject	***	***	***	***	***
Inventories quantity	All	***	***	***	***	***
Ratio to imports	All	***	***	***	***	***
Ratio to U.S. shipments of imports	All	***	***	***	***	***
Ratio to total shipments of imports	All	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. importers' outstanding orders

The Commission requested importers to indicate whether they imported or arranged for the importation of SAP from South Korea after June 30, 2022. Their reported data is presented in table VII-10. *** accounted for all of the arranged imports of SAP from South Korea from July 1, 2022 through September 30, 2022. *** accounted for the vast majority of nonsubject arranged imports from July 1, 2022 through June 30, 2023. Nonsubject imports accounted for *** percent of all arranged imports of SAP from July 1, 2022 through June 30, 2023.

Table VII-10
SAP: U.S. importers' arranged imports, by source and period

Quantity in metric tons

Source	Jul-Sept 2022	Oct-Dec 2022	Jan-Mar 2023	Apr-Jun 2023	Total
South Korea	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Third-country trade actions

SAP from South Korea is subject to antidumping duties in countries other than the United States. On February 18, 2021, the European Commission (EC) initiated an antidumping investigation regarding imports of SAP from South Korea. Effective April 2022, the EC issued its imposed antidumping duties on imports of SAP from South Korea, scheduled to be in effect until April 7, 2027.[10]

[10] The rate of duty on imports from South Korea was 13.4% for LG Chem and 18.8% for all other companies. EC, "Commission Implementing Regulation (EU) 2022/547 of April 5, 2022 Imposing a Definitive Anti-dumping Duty on Imports of Superabsorbent Polymers Originating in the Republic of Korea," https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R0547&from=EN; EC, Trade Defence Investigations, "Superabsorbent Polymers," History of Proceedings, accessed September 10, 2022, https://tron.trade.ec.europa.eu/investigations/case-history?caseId=2516.

On November 4, 2021, at the request of Saudi Arabia, the Committee for Combating Harmful Practices in International Trade for the Arab Gulf Cooperation Council States (GCC)[11] opened an antidumping investigation on SAP from China, Japan, Belgium, Singapore, South Korea and France.[12] As of March 14, 2022, the latest publication issued by the World Trade Organization indicates the investigation is in progress, and no decisions had been issued.[13] Previously, in 2019, the GCC investigated SAP from Chinese Taipei and Japan; however, the antidumping investigation terminated without the imposition of definitive duties.[14] There are no other known current antidumping or countervailing duty orders on SAP in third-country markets.[15]

Information on nonsubject countries

Nonsubject imports held a smaller share of the market than subject imports throughout the period of investigation. Based on the Commission's questionnaire data, the market share of

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[11] The GCC member states are the Kingdom of Bahrain, the State of Kuwait, the Sultanate of Oman, the State of Qatar, the Kingdom of Saudi Arabia, and the United Arab Emirates. GCC, "Member States," accessed September 10, 2022, https://www.gcc-sg.org/en-us/AboutGCC/MemberStates/pages/Home.aspx.

[12] Argaam, "Anti-dumping probe starts on Saudi super-absorbent polymer imports," November 4, 2021, https://www.argaam.com/en/article/articledetail/id/1509037; Arab News, "GCC Investigates Dumping Claims for Polymers from Five Countries into Saudi Market," November 4, 2021, https://www.arabnews.com/node/1961681/business-economy.

[13] Global Trade Alert, "GCC: Initiation of Antidumping Investigation on Imports of Super Absorbent Polymers from Belgium, China, France, Japan, the Republic of Korea and Singapore," November 4, 2021, https://www.globaltradealert.org/state-act/62695/gcc-initiation-of-antidumping-investigation-on-imports-of-super-absorbent-polymer-from-belgium-china-france-japan-the-republic-of-korea-and-singapore; The World Trade Organization, "Committee on Anti-Dumping Practices – Semi-annual report under Article 16.4 of the Agreement – Cooperation Council for the Arab States of the Gulf 'GCC,'' March 14, 2022, https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S006.aspx?Query=@Symbol=%20g/adp/n/*%20and%20%20@Symbol=%20sau&Language=ENGLISH&Context=FomerScriptedSearch&languageUIChanged=true#.

[14] The GCC's investigation was initiated on February 14, 2019 and was terminated on November 28, 2019. Global Trade Alert, "GCC: Initiation and Subsequent Termination of Antidumping Investigation on Imports of Superabsorbent Polymer from Chinese Taipei and Japan," accessed September 10, 2022, https://www.globaltradealert.org/intervention/70709/anti-dumping/gcc-initiation-and-subsequent-termination-of-antidumping-investigation-on-imports-of-superabsorbent-polymer-from-chinese-taipei-and-japan; See World Trade Organization, Trade Policy Review Body, "Overview of Developments in the International Trading Environment," Annual Report by the Director-General, November 30, 2020, p. 174, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/TPR/OV23.pdf&Open=True.

[15] Conference transcript, pp. 127-128 (Greer), p. 173 (Fischer).

nonsubject imports ranged between *** and *** percent for full years during the period of investigation and ranged between *** and *** percent during the interim periods.[16]

Sources of nonsubject imports include Belgium, China, France, Germany, Japan, Saudi Arabia, Singapore, and the Netherlands (see part IV). Petitioner stated the largest nonsubject supplier is Japan, which accounted for less than half the volume of imports from South Korea.[17] Respondent LG Chem states that the three largest sources of imports by nonsubject country are ***, ***, and ***, with an average annual import volume of ***.[18]

The global capacity for SAP in 2020 was *** metric tons. In that same year, China (*** metric tons), Western Europe (*** metric tons), Japan (*** metric tons), and South Korea (*** metric tons) had the largest capacity, as shown in table VII-11. Total global consumption in 2020 was *** metric tons, and the highest consuming regions, by quantity, were Western Europe, China, and the United States, as shown in table VII-12. The global average annual growth rate is projected at *** percent for 2020—2025, as shown in table VII-13.

Global consumption by end-use in 2020 was the largest in the baby diapers and training pants segment (*** percent total share), followed by adult incontinence (*** percent total share), feminine hygiene (*** percent total share), and technical and industrial use (*** percent total share), as shown in table VII-14. The largest global producers by annual capacity in 2020 were ***, ***, ***, and ***, as shown in table VII-15.

At the global exporter level, SAP falls under the category of acrylic polymers in primary forms. In 2021, the three largest global exporters in this larger category of products were Germany (1.05 million metric tons, 12.8 percent of total share of quantity), South Korea (0.95 million metric tons, 11.6 percent of total share of quantity), and China (0.78 million pounds, 9.6 percent of total share of quantity), as shown in table VII-16.

[16] See table C-1 of this final phase report (nonsubject consumption quantity).

[17] Petitioner's postconference brief, Exhibit I, Answers to Staff Questions, p. 23.

[18] Average based on full year data only and therefore does not include 2021 year-to-date data. LG Chem's postconference brief, Answers to Staff Questions, pp. 13-15.

Table VII-11
SAP: Global capacity, 2017 and 2020, global production and net imports, 2020

Quantity in 1,000 metric tons

Region	Measure	Capacity 2017	Capacity 2020	Production 2020	Net imports 2020
United States	Quantity	***	***	***	***
Canada	Quantity	***	***	***	***
Mexico	Quantity	***	***	***	***
Central and South America	Quantity	***	***	***	***
Total Americas	Quantity	***	***	***	***
Western Europe	Quantity	***	***	***	***
Central and Eastern Europe	Quantity	***	***	***	***
Middle East	Quantity	***	***	***	***
Africa	Quantity	***	***	***	***
Total Europe, Middle East, and Africa	Quantity	***	***	***	***
Japan	Quantity	***	***	***	***
China	Quantity	***	***	***	***
South Korea	Quantity	***	***	***	***
Taiwan	Quantity	***	***	***	***
India	Quantity	***	***	***	***
Southeast Asia and Oceania	Quantity	***	***	***	***
Total Asia	Quantity	***	***	***	***
Total	Quantity	***	***	***	***

Source: IHS Markit, *Chemical Economics Handbook, Superabsorbent Polymers*, November 2020, p. 6.

Table VII-12
SAP: Global consumption, 2017 and 2020, projected, 2025

Quantity in 1,000 metric tons

Region	Measure	Consumption, 2017	Consumption, 2020	Projected consumption, 2025
United States	Quantity	***	***	***
Canada	Quantity	***	***	***
Mexico	Quantity	***	***	***
Central and South America	Quantity	***	***	***
Total Americas	Quantity	***	***	***
Western Europe	Quantity	***	***	***
Central and Eastern Europe	Quantity	***	***	***
Middle East	Quantity	***	***	***
Africa	Quantity	***	***	***
Total Europe, Middle East, and Africa	Quantity	***	***	***
Japan	Quantity	***	***	***
China	Quantity	***	***	***
South Korea	Quantity	***	***	***
Taiwan	Quantity	***	***	***
India	Quantity	***	***	***
Southeast Asia and Oceania	Quantity	***	***	***
Total Asia	Quantity	***	***	***
Total	Quantity	***	***	***

Source: IHS Markit, *Chemical Economics Handbook, Superabsorbent Polymers*, November 2020, p. 6.

Table VII-13
SAP: Global projected average annual growth rate, 2020—2025

Growth rate in percent

Region	Projected average annual growth rate, 2020—2025
United States	***
Canada	***
Mexico	***
Central and South America	***
Total Americas	***
Western Europe	***
Central and Eastern Europe	***
Middle East	***
Africa	***
Total Europe, Middle East, and Africa	***
Japan	***
Mainland China	***
South Korea	***
Taiwan	***
India	***
Southeast Asia and Oceania	***
Total Asia	***
Total	***

Source: IHS Markit, *Chemical Economics Handbook, Superabsorbent Polymers*, November 2020, p. 6.

Table VII-14
SAP: Global consumption by end use, 2017 and 2020, projected 2025

Quantity in 1,000 metric tons

End use	Measure	Consumption, 2017	Consumption, 2020	Projected consumption, 2025
Baby diapers and training pants	Quantity	***	***	***
Adult incontinence	Quantity	***	***	***
Feminine hygiene	Quantity	***	***	***
Technical and industrial	Quantity	***	***	***
Total	Quantity	***	***	***

Table continued.

Table VII-14 Continued
SAP: Global consumption by end use, 2017 and 2020, projected shares, and current and projected average annual growth rates, 2017—2025

Shares and growth rates in percent

End use	Share of total, 2017	Share of total, 2020	Projected share of total, 2025	Average annual growth rate, 2017—2020	Projected average annual growth rate, 2020—2025
Baby diapers and training pants	***	***	***	***	***
Adult incontinence	***	***	***	***	***
Feminine hygiene	***	***	***	***	***
Technical and industrial	***	***	***	***	***
Total	***	***	***	***	***

Source: IHS Markit, *Chemical Economics Handbook, Superabsorbent Polymers*, November 2020, p. 6.

Table VII-15
SAP: Major global producers, by annual capacity, as of October 31, 2020

Quantity in 1,000 metric tons

Producer	Measure	Americas	Europe	Middle East	Japan	Main-land China	South Korea and Taiwan	South-east Asia and Oceania	Total
***	Quantity	***	***	***	***	***	***	***	***
***	Quantity	***	***	***	***	***	***	***	***
***	Quantity	***	***	***	***	***	***	***	***
***	Quantity	***	***	***	***	***	***	***	***
***	Quantity	***	***	***	***	***	***	***	***
***	Quantity	***	***	***	***	***	***	***	***
***	Quantity	***	***	***	***	***	***	***	***
***	Quantity	***	***	***	***	***	***	***	***
***	Quantity	***	***	***	***	***	***	***	***
***	Quantity	***	***	***	***	***	***	***	***
Total	Quantity	***	***	***	***	***	***	***	***

Table continued.

Table VII-15 Continued
SAP: Major global producers, by annual capacity shares, as of October 31, 2020

Shares in percent

Producer	Share of world capacity
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
Total	***

Source: IHS Markit, *Chemical Economics Handbook, Superabsorbent Polymers*, November 2020, p. 8.

Table VII-16
SAP: Acrylic polymers, nesoi, in primary forms, global exports, by reporting country and period

Quantity in metric tons; value in 1,000 dollars

Exporting country	Measure	2019	2020	2021
United States	Quantity	544,682	515,575	567,509
South Korea	Quantity	876,178	935,887	953,611
Germany	Quantity	1,024,617	1,002,450	1,050,226
China	Quantity	628,961	675,416	783,193
France	Quantity	693,817	648,187	697,792
Belgium	Quantity	488,425	558,783	605,146
Japan	Quantity	499,317	503,729	524,396
Netherlands	Quantity	386,629	362,518	416,867
Taiwan	Quantity	275,901	292,889	316,727
Turkey	Quantity	229,616	250,074	305,642
Malaysia	Quantity	185,715	221,710	269,186
United Kingdom	Quantity	214,235	208,235	220,118
All other exporters	Quantity	1,350,757	1,408,391	1,486,239
All reporting exporters	Quantity	7,398,850	7,583,844	8,196,652
United States	Value	1,634,347	1,477,129	1,784,984
South Korea	Value	1,376,645	1,366,588	1,727,962
Germany	Value	2,060,954	1,895,682	2,401,454
China	Value	1,104,978	1,109,665	1,463,384
France	Value	1,335,725	1,243,140	1,506,354
Belgium	Value	1,016,067	1,036,454	1,231,271
Japan	Value	1,193,019	1,109,119	1,296,486
Netherlands	Value	810,768	755,077	1,081,647
Taiwan	Value	485,533	467,399	633,603
Turkey	Value	255,760	250,509	448,382
Malaysia	Value	331,720	372,173	540,609
United Kingdom	Value	508,572	484,675	587,971
All other exporters	Value	2,660,002	2,720,218	3,387,180
All reporting exporters	Value	14,774,090	14,287,828	18,091,287

Table continued.

Table VII-16 Continued
SAP: Acrylic polymers, nesoi, in primary forms, global exports, by reporting country and period

Unit values in dollars per metric ton; share in percent

Exporting country	Measure	2019	2020	2021
United States	Unit value	3,001	2,865	3,145
South Korea	Unit value	1,571	1,460	1,812
Germany	Unit value	2,011	1,891	2,287
China	Unit value	1,757	1,643	1,868
France	Unit value	1,925	1,918	2,159
Belgium	Unit value	2,080	1,855	2,035
Japan	Unit value	2,389	2,202	2,472
Netherlands	Unit value	2,097	2,083	2,595
Taiwan	Unit value	1,760	1,596	2,000
Turkey	Unit value	1,114	1,002	1,467
Malaysia	Unit value	1,786	1,679	2,008
United Kingdom	Unit value	2,374	2,328	2,671
All other exporters	Unit value	1,969	1,931	2,279
All reporting exporters	Unit value	1,997	1,884	2,207
United States	Share of quantity	7.4	6.8	6.9
South Korea	Share of quantity	11.8	12.3	11.6
Germany	Share of quantity	13.8	13.2	12.8
China	Share of quantity	8.5	8.9	9.6
France	Share of quantity	9.4	8.5	8.5
Belgium	Share of quantity	6.6	7.4	7.4
Japan	Share of quantity	6.7	6.6	6.4
Netherlands	Share of quantity	5.2	4.8	5.1
Taiwan	Share of quantity	3.7	3.9	3.9
Turkey	Share of quantity	3.1	3.3	3.7
Malaysia	Share of quantity	2.5	2.9	3.3
United Kingdom	Share of quantity	2.9	2.7	2.7
All other exporters	Share of quantity	18.3	18.6	18.1
All reporting exporters	Share of quantity	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 3906.90 as reported by various national statistical authorities in the Global Trade Atlas database, accessed July 28, 2022.

Note: The United States is shown at the top followed by the country under investigation, with all remaining top exporting countries in descending order of 2021 data.

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations and reviews on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, Federal Register notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
86 FR 62565, November 10, 2021	*Superabsorbent Polymers From South Korea; Institution of Anti-Dumping Duty Investigation and Scheduling of Preliminary Phase Investigation*	https://www.govinfo.gov/content/pkg/FR-2021-11-10/pdf/2021-24535.pdf
86 FR 67915, November 30, 2021	*Certain Superabsorbent Polymers From the Republic of Korea: Initiation of Less-Than-Fair-Value Investigation*	https://www.govinfo.gov/content/pkg/FR-2021-11-30/pdf/2021-26017.pdf
86 FR 72993 December 23, 2021	*Superabsorbent Polymers From South Korea*	https://www.govinfo.gov/content/pkg/FR-2021-12-23/pdf/2021-27801.pdf
87 FR 17270 March 28, 2022	*Superabsorbent Polymers From the Republic of Korea: Postponement of Preliminary Determination in the Less-Than-Fair-Value Investigation*	https://www.govinfo.gov/content/pkg/FR-2022-03-28/pdf/2022-06402.pdf
87 FR 34647 June 7, 2022	*Certain Superabsorbent Polymers From the Republic of Korea: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Postponement of Final Determination, and Extension of Provisional Measures*	https://www.govinfo.gov/content/pkg/FR-2022-06-07/pdf/2022-12192.pdf
87 FR 38422 June 28, 2022	*Superabsorbent Polymers From South Korea; Scheduling of the Final Phase of an Antidumping Duty Investigation*	https://www.govinfo.gov/content/pkg/FR-2022-06-28/pdf/2022-13680.pdf

Citation	Title	Link
87 FR 58134 September 23, 2022	*Superabsorbent Polymers From South Korea; Hearing Update for the Subject Investigation*	https://www.govinfo.gov/content/pkg/FR-2022-09-23/pdf/2022-20612.pdf
87 FR 65035 October 27, 2022	*Certain Superabsorbent Polymers From the Republic of Korea: Final Determination of Sales at Less Than Fair Value*	https://www.govinfo.gov/content/pkg/FR-2022-10-27/pdf/2022-23427.pdf

APPENDIX B

LIST OF HEARING WITNESSES

CALENDAR OF PUBLIC HEARING

Those listed below appeared in the United States International Trade Commission's hearing:

Subject: Superabsorbent Polymers from South Korea

Inv. No.: 731-TA-1574 (Final)

Date and Time: October 18, 2022 - 9:30 a.m.

CONGRESSIONAL APPEARANCE:

The Honorable Blake Moore (remote witness), U.S. Representative, 1st District, Utah

EMBASSY APPEARANCE:

Embassy of the Republic of Korea
Washington, DC

Sungyeol Kim, Minister Counselor, Commercial Attaché

OPENING REMARKS:

In Support of Imposition (**Stephen J. Orava**, King and Spalding LLP)
In Opposition to Imposition (**Jeffrey Grimson**, Mowry & Grimson, PLLC)

In Support of the Imposition of
Antidumping Duty Order:

King and Spalding LLP
Washington, DC
on behalf of

Ad Hoc Coalition of American SAP Producers

Michael Terhart, Vice President and Head of Global Controlling, Evonik Superabsorber, and General Manager, Evonik Superabsorber LLC

Sonja Cauble, Vice President Global Business Management, EvonikSuperabsorber, and General Manager, Evonik Superabsorber LLC

In Support of the Imposition of
<u>Antidumping Duty Order (continued):</u>

Parthiv Amin, Vice President – Business Management Industrial Petrochemicals North America, BASF Corporation

Shawn Wick, Business Director, Hygiene North America, BASF Corporation

Sonia Oliveira Davis, Global Strategy & Market Intelligence SAP, BASF SE

Stephen H. Wagner, Assistant General Counsel – Product & Trade Regulation, BASF Corporation

James Gu, Chief Operating Officer, Nippon Shokubai American Industries, Inc.

Eric Clark, Senior Marketing Manager, Nippon Shokubai America Industries, Inc.

Andrew Szamosszegi, Principal, Capital Trade, Inc.

Stephen J. Orava)
Jamieson L. Greer) – OF COUNSEL
Neal J. Reynolds)

In Opposition to the Imposition of
<u>Antidumping Duty Order:</u>

Mowry & Grimson, PLLC
Washington, DC
<u>on behalf of</u>

The Procter & Gamble Company
The Procter & Gamble Paper Products Company
(collectively, "P&G")

Neil Gordon, Senior Director of Purchasing, Baby and Feminine Care, P&G

Harry McCusker, Director of Research and Development, Baby Care, P&G

Jeffrey S. Grimson)
Kristin H. Mowry) – OF COUNSEL
Jacob M. Reiskin)

In Opposition to the Imposition of
Antidumping Duty Order (continued):

Arnold & Porter Kaye Scholer LLP
Washington, DC
on behalf of

LG Chem, Ltd. ("LGC")

Sang Hun (Jason) Jeon, Marketing Team Leader, LGC

Tae Young (TY) Won, P&G Technical Specialist, LGC

Seungjae Jo, Marketing and Sales Professional, LGC

Jong Won (Michael) Yang, Global Corporate Affairs Associate, LGC

Sung Baek Jin, Trade Advisor, Lee & Ko

Rebecca Tuzel, Economic Consultant II, ION Economics

Jim P. Dougan, Partner, ION Economics

J. David Park)
Lynn M. Fischer Fox)
Daniel R. Wilson) – OF COUNSEL
Gina M. Colarusso)
Christine J. Choi)

REBUTTAL/CLOSING REMARKS:

In Support of Imposition (**Jamieson L. Greer**, King and Spalding LLP)
In Opposition to Imposition (**Lynn M. Fischer Fox**, Arnold & Porter Kaye Scholer LLP)

-END-

APPENDIX C

SUMMARY DATA

Table C-1
SAP: Summary data concerning the U.S. market, by item and period
Quan ity=metric tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per metric ton; Period changes=percent--exceptions noted

Item	Reported data: Calendar year 2019	Calendar year 2020	Calendar year 2021	Jan-Jun 2021	Jan-Jun 2022	Period changes: Comparison years 2019-21	Comparison years 2019-20	Comparison years 2020-21	Jan-Jun 2021-22
U.S. consumption quantity:									
Amount	***	***	***	***	***	▲***	▲***	▲***	▲***
Producers' share (fn1)	***	***	***	***	***	▼***	▼***	▼***	▲***
Importers' share (fn1):									
South Korea	***	***	***	***	***	▲***	▲***	▲***	▼***
Nonsubject sources	***	***	***	***	***	▲***	▲***	▲***	▼***
All import sources	***	***	***	***	***	▲***	▲***	▲***	▼***
U.S. consumption value:									
Amount	***	***	***	***	***	▲***	▼***	▲***	▲***
Producers' share (fn1)	***	***	***	***	***	▼***	▼***	▼***	▲***
Importers' share (fn1):									
South Korea	***	***	***	***	***	▲***	▲***	▲***	▼***
Nonsubject sources	***	***	***	***	***	▲***	▲***	▲***	▼***
All import sources	***	***	***	***	***	▲***	▲***	▲***	▼***
U.S. importers' U.S. shipments of imports from:									
Sou h Korea:									
Quantity	***	***	***	***	***	▲***	▲***	▲***	▼***
Value	***	***	***	***	***	▲***	▲***	▲***	▲***
Unit value	***	***	***	***	***	▲***	▼***	▲***	▲***
Ending inventory quantity	***	***	***	***	***	▼***	▲***	▼***	▲***
Nonsubject sources:									
Quantity	***	***	***	***	***	▲***	▲***	▲***	▼***
Value	***	***	***	***	***	▲***	▲***	▲***	▲***
Unit value	***	***	***	***	***	▲***	▼***	▲***	▲***
Ending inventory quantity	***	***	***	***	***	▲***	▲***	▼***	▲***
All import sources:									
Quantity	***	***	***	***	***	▲***	▲***	▲***	▼***
Value	***	***	***	***	***	▲***	▲***	▲***	▲***
Unit value	***	***	***	***	***	▲***	▼***	▲***	▲***
Ending inventory quantity	***	***	***	***	***	▼***	▲***	▼***	▲***
U.S. producers':									
Average capacity quantity	469,400	476,200	476,000	237,250	229,150	▲1.4	▲1.4	▼(0 0)	▼(3.4)
Produc ion quantity	398,533	412,918	402,973	191,465	214,020	▲1.1	▲3.6	▼(2.4)	▲11.8
Capacity utilization (fn1)	84.9	86.7	84.7	80.7	93.4	▼(0.2)	▲1.8	▼(2.1)	▲12.7
U.S. shipments:									
Quantity	354,793	342,400	338,361	165,530	176,041	▼(4.6)	▼(3.5)	▼(1 2)	▲6.3
Value	558,648	455,804	579,743	261,448	342,536	▲3.8	▼(18.4)	▲27.2	▲31.0
Unit value	$1,575	$1,331	$1,713	$1,579	$1,946	▲8.8	▼(15.5)	▲28.7	▲23.2
Export shipments:									
Quantity	***	***	***	***	***	▲***	▲***	▲***	▼***
Value	***	***	***	***	***	▲***	▼***	▲***	▲***
Unit value	***	***	***	***	***	▼***	▼***	▲***	▲***
Ending inventory quan ity	***	***	***	***	***	▼***	▲***	▼***	▲***
Inventories/total shipments (fn1)	***	***	***	***	***	▼***	▲***	▼***	▲***
Produc ion workers	***	***	***	***	***	▲***	▼***	▲***	▲***
Hours worked (1,000s)	***	***	***	***	***	▼***	▼***	▲***	▲***
Wages paid ($1,000)	***	***	***	***	***	▲***	▼***	▲***	▲***
Hourly wages (dollars per hour)	***	***	***	***	***	▲***	▲***	▲***	▲***
Produc ivity (metric tons per 1,000 hours)	***	***	***	***	***	▲***	▲***	▼***	▲***
Unit labor costs	***	***	***	***	***	▲***	▼***	▲***	▼***

Table con inued.

Table C-1 Continued
SAP: Summary data concerning the U.S. market, by item and period
Quan ity=metric tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per metric ton; Period changes=percent--exceptions noted

Item	Reported data					Period changes			
	Calendar year			Jan-Jun		Comparison years			Jan-Jun
	2019	2020	2021	2021	2022	2019-21	2019-20	2020-21	2021-22
Net sales:									
Quantity	***	***	***	***	***	▲***	▼***	▲***	▲***
Value	***	***	***	***	***	▲***	▼***	▲***	▲***
Unit value	***	***	***	***	***	▲***	▼***	▲***	▲***
Cost of goods sold (COGS)	***	***	***	***	***	▲***	▼***	▲***	▲***
Gross profit or (loss) (fn2)	***	***	***	***	***	▼***	▼***	▼***	▲***
SG&A expenses	***	***	***	***	***	▼***	▼***	▼***	▲***
Operating income or (loss) (fn2)	***	***	***	***	***	▼***	▼***	▼***	▲***
Net income or (loss) (fn2)	***	***	***	***	***	▼***	▼***	▼***	▲***
Unit COGS	***	***	***	***	***	▲***	▼***	▲***	▲***
Unit SG&A expenses	***	***	***	***	***	▼***	▼***	▼***	▲***
Unit operating income or (loss) (fn2)	***	***	***	***	***	▼***	▼***	▼***	▲***
Unit net income or (loss) (fn2)	***	***	***	***	***	▼***	▼***	▼***	▲***
COGS/sales (fn1)	***	***	***	***	***	▲***	▲***	▲***	▼***
Operating income or (loss)/sales (fn1)	***	***	***	***	***	▼***	▼***	▼***	▲***
Net income or (loss)/sales (fn1)	***	***	***	***	***	▼***	▼***	▼***	▲***
Capital expenditures	***	***	***	***	***	▼***	▼***	▼***	▼***
Research and development expenses	***	***	***	***	***	▼***	▲***	▼***	▲***
Net assets	***	***	***	***	***	▲***	▼***	▲***	***

Source: Compiled from data submitted in response to Commission questionnaires. 508-compliant tables containing these data are contained in parts III, IV, VI, and VII of this report.

Note.--Shares and ratios shown as "0.0" percent represent non-zero values less than "0.05" percent (if positive) and greater than "(0.05)" percent (if negative). Zeroes, null values, and undefined calcula ions are suppressed and shown as "---". Period changes preceded by a "▲" represent an increase, while period changes preceded by a "▼" represent a decrease.

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Percent changes only calculated when both comparison values represent profits; The directional change in profitability provided when one or both comparison values represent a loss.