

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND
Northern Division**

G. W. ARU, LLC, et al.,	)	
	)	
Plaintiffs,	)	
	)	
v.	)	Civil Action No. 1:22-cv-2636-JKB
	)	
W. R. GRACE & CO.-CONN.,	)	
	)	
Defendant.	)	
	)	
	)	

JOINT CLAIM CONSTRUCTION STATEMENT

Pursuant to the Court’s Scheduling and Discovery Order (ECF No. 24) and L.R. 805.1.f., Plaintiffs G.W. Aru, LLC and Cochise Technology, LLC (collectively, “GWA”) and Defendant W. R. Grace & Co.-Conn. (“Grace”) respectfully submit this Joint Claim Construction Statement.

I. L.R. 805.1.f.i – Agreed Constructions

In accordance with L.R. 805.1.f.i., below are the constructions of those claim terms on which the parties agree:

Term	Agreed Construction
Preamble (“microsphere sized porous particles, each microsphere sized porous particle having a diameter of less than 1 mm, and independently comprising”)	The parties agree that this portion of the preamble of claim 1 is limiting.

Term	Agreed Construction
“porous”	plain and ordinary meaning, which is “having passages accessible to liquid or air”
“silica”	plain and ordinary meaning
“alumina”	plain and ordinary meaning
“Group VIII noble metal”	“a metal chosen from the group of platinum, palladium, iridium, ruthenium, and/or rhodium”
“concentration”	“mass/volume”
“average (D50) size”	plain and ordinary meaning
“laser diffraction”	plain and ordinary meaning

II. L.R. 805.1.f.ii. – Disputed Constructions

In accordance with L.R. 805.1.f.ii., the attached Appendix A sets forth each party’s proposed construction of each disputed claim term and supporting evidence.

III. L.R. 805.1.f.iii. – Claim Construction Witnesses

In accordance with L.R. 805.1.f.iii., below are the parties’ respective proposals regarding witnesses that may be called at the claim construction hearing.

A. GWA’s Proposed Witnesses

GWA may call the inventor of the Patent-in-Suit Mr. Guido W. Aru and/or Dr. Natalie Herring to present at the Claim Construction Tutorial regarding the background of the Patent-in-Suit and/or to testify at the Claim Construction Hearing regarding the meaning to a person of

ordinary skill in the art of the claim terms “microsphere sized” and “eggshell” and the interview with the examiner that led to the allowance of the Patent-in-Suit. If called at the Claim Construction Hearing, GWA estimates that approximately 30-40 minutes would be required for direct and redirect examination.

B. Grace’s Proposed Witnesses

Grace reserves the right to submit rebuttal testimony of its expert, Dr. James Speight, in response to GWA’s opening brief and/or testimony of Mr. Guido W. Aru and/or Dr. Natalie Herring. Grace further reserves the right to object to and move to strike testimony of Dr. Natalie Herring that goes beyond the scope of the interview(s) with the examiner during the prosecution of the Patent-in-Suit, as summarized in the file history. *See* ’864 File History at April 7, 2021 Summary of Examiner Interview; Nov. 11, 2021 Summary of Examiner Interview.

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APPENDIX A
L.R. 805.1.f.ii. – Disputed Constructions

Term	GWA’s Proposed Construction and Supporting Evidence	Grace’s Proposed Construction and Supporting Evidence
“CO to CO₂ combustion promoter”	GWA contends that the preamble is limiting in its entirety. “composition that promotes combustion of carbon monoxide to carbon dioxide” ’864 patent at: 1:20-23; 1:47-61; 2:25-39; 3:6-14; 11:50-13:37 GRACE_0058471-77; IPR2023-01063 Ex. 1006 (U.S. Patent 6,358,881) Entries for “combustion” in: ASTM Dictionary of Engineering Science & Technology; Britannica Online Encyclopedia; Hawley’s Condensed Chemical Dictionary, 16th Ed.; McGraw-Hill Concise Encyclopedia of Science & Technology; McGraw-Hill Dictionary of Scientific and Technical Terms, 6th Ed. Deposition of Dr. Natalie Herring at 12:2-19	The preamble is limiting—but this term in the preamble is (1) not limiting and/or (2) intended use. Alternatively, “composition that promotes the oxidation of carbon monoxide to carbon dioxide” ’864 pat. at 3:6-14, 3:23-25, 11:48-58, Comparative Examples A-E, Example 6 References identified in Defendant’s Preliminary Invalidity Contentions (GRACE_0058117 - GRACE_0058561); Deposition of Natalie Herring at 12:13-16

Term	GWA's Proposed Construction and Supporting Evidence	Grace's Proposed Construction and Supporting Evidence
“each microsphere/ independently”	plain and ordinary meaning; there is no requirement that “every” particle meet the claim limitations as Grace contends GWA contends that Grace has waived any indefiniteness defenses by failing to disclose any grounds for the same in its Initial Disclosure of Invalidity Contentions under L.R. 804.1.c.iv.	Plain and ordinary meaning, i.e. “each and every microsphere must independently” Alternatively, indefinite ’864 File History at April 7, 2021 Non-Final Rejection; ’864 File History at July 7, 2021 Applicant Arguments/Remarks; ’864 File History at July 7, 2021 Herring Decl. File History of NL2020819 at Dec. 20, 2018 Written Opinion; File History of PCT/US19/24742 Grace identified the following grounds for invalidity of the Asserted Claims based on indefiniteness, written description, and/or enablement in its Invalidity Contentions: “each microsphere sized porous particle having a diameter of less than 1mm, and independently.” Grace Initial Disclosure of Invalidity Contentions at 19.
“microsphere sized”	“particles as small as 1 micron in diameter and as large as 1,000 microns”; this claim term specifies the sizes of particles, not a requirement of a spherical shape of particles ’864 patent at: 1:20-23; 1:53-58; 2:25-41 ’864 patent file history at: Response filed July 7, 2021, pages 6, 8, and Exhibit 1; Declaration of Dr.	“spherical particles as small as 1 micron in diameter and as large as 1,000 microns” ’864 File History at July 7, 2021 Applicant Arguments/Remarks; ’864 File History at July 7, 2021 Herring Decl.; References cited therein: Microspheres Online; U.S. Patents 2,283,172; 2,933,456; and 3,243,262;

Term	GWA's Proposed Construction and Supporting Evidence	Grace's Proposed Construction and Supporting Evidence
	Herring submitted July 7, 2021, page 2; Final Office Action mailed August 13, 2021, page 3	Venuto and Habib "Fluid catalytic cracking with zeolite catalysts"; Marcel Dekker, Inc. New York (1979) Microspheres Online at 6-7 References identified in Defendant's Preliminary Invalidity Contentions (GRACE_0058117 - GRACE_0058561) Hawley's Condensed Chemical Dictionary, 16th ed. (2016)
"eggshell"	"the particle has an outer region with a relatively higher concentration of the one or more Group VIII noble metals than the center of the particle" The patentee acted as its own lexicographer. '864 patent at: 1:62-67; 2:26-50; 3:43-44, 4:25-31; 5:7-8; 5:19-24; 5:30-45; 11:20-27; 15:27-30; FIG. 2; claim 1 '864 patent file history at: Notice of Allowance mailed November 17, 2021; Reasons for Allowance; Examiner Interview Summary Record mailed November 17, 2021; Final Office Action mailed August 13, 2021, page 2; Response filed July 7, 2021,	"a structure with an outer layer or 'shell' surrounding an inner layer that is chemically distinct from the outer layer" '864 pat. at 2:45-50, 2:54-59, 4:25-27, 5:31-45, 5:65-4:2, FIG 2, 11:21-27 '864 File History at July 7, 2021 Applicant Arguments/Remarks; '864 File History at July 7, 2021 Herring Decl. Russo et al., "Intraparticle Modeling of Non-Uniform Active Phase Distribution Catalyst," ChemEngineering 2020, at 1-2, 7; Munnik et al. "Recent Development in the Synthesis of

Term	GWA's Proposed Construction and Supporting Evidence	Grace's Proposed Construction and Supporting Evidence
	page 8, Exhibits 3-5; Declaration of Dr. Herring submitted July 7, 2021, page 2	Supported Catalysts,” Chemical Reviews, at 6689 (2015), 6697, 6699; Papageorgiou et al., “Preparation of Pt/γ-Al₂O₃ Pellets with Internal Step-Distribution of Catalyst: Experiments and Theory”, Journal of Catalysis 158, at 439, Fig. 5j (1996). Deposition of Natalie Herring at 109:15-110:18 Deposition of Guido Aru at 227:9-228:11 References identified in Defendant's Preliminary Invalidity Contentions (GRACE_0058117 - GRACE_0058561)
“outer region”	Not indefinite GWA contends that Grace has waived any indefiniteness defenses by failing to disclose any grounds for the same in its Initial Disclosure of Invalidity Contentions under L.R. 804.1.c.iv.	Indefinite Alternatively, if not indefinite, the parties' agreed construction is: “a region distinguishable from the center of the particle and having a depth from the outer surface towards the interior of the particle of 1-10 microns” Grace identified the following grounds for invalidity of the Asserted Claims based on indefiniteness, written description, and/or enablement in its Invalidity Contentions: “one or more Group VIII

Term	GWA's Proposed Construction and Supporting Evidence	Grace's Proposed Construction and Supporting Evidence
		noble metals distributed in the particle as an eggshell such that a higher concentration of the one or more Group VIII noble metals is present in the outer region of the microsphere sized porous particle as compared to the concentration of the one or more Group VIII noble metals in the centre of the microsphere sized porous particle.” Grace Initial Disclosure of Invalidity Contentions at 19.
“centre”	Not indefinite GWA contends that Grace has waived any indefiniteness defenses by failing to disclose any grounds for the same in its Initial Disclosure of Invalidity Contentions under L.R. 804.1.c.iv.	Indefinite Alternatively, if not indefinite, the parties’ agreed construction is: “a region distinguishable from the outer region of the particle” Grace identified the following grounds for invalidity of the Asserted Claims based on indefiniteness, written description, and/or enablement in its Invalidity Contentions: “one or more Group VIII noble metals distributed in the particle as an eggshell such that a higher concentration of the one or more Group VIII noble metals is present in the outer region of the microsphere sized porous particle as compared to the concentration of the one or more Group VIII noble metals in the centre of the microsphere sized porous particle.” Grace Initial Disclosure of Invalidity Contentions at 19.