

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VIANCE, LLC
Petitioner,
v.

KOPPERS PERFORMANCE CHEMICALS, INC.
Patent Owner.

PGR No. 2026-00023
U.S. Patent No. 12,370,716
Issued: July 29, 2025
Application No. 19/072,608
Filed: March 6, 2025

TITLE: WOOD PRESERVATIVE COMPOSITION COMPRISING 4,5-DICHLORO-2-OCTYLISOTHIAZOL-3(2H)-ONE, A METHOD TREATING A WOOD SUBSTRATE THEREWITH, AND A WOOD PRODUCT PRODUCED THEREFROM

**DECLARATION OF KEVIN ARCHER IN SUPPORT OF PETITION FOR POST
GRANT REVIEW OF U.S. PATENT NO. 12,370,716**

I, the undersigned, Kevin Archer, having been duly sworn, declare as follows:

I. Introduction

1. I am over the age of eighteen (18) and otherwise competent to make this declaration.

2. I have worked for Viance, LLC (“Viance”) since 2007. I currently hold the position of Director of Research and Development. I have held this position since February 2013. This position generally entails me being responsible for Viance’s research technology and quality control, including leading the innovation and success of new Viance products. This position also entails introducing new products into production, developing technical instructions for the manufacture of products, providing technical guidance regarding Viance’s products to Viance’s customers, producing internal technical documentation for new and existing products, and securing product and label approval from the United States Environmental Protection Agency (“EPA”), along with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

3. All of the testimony provided in this declaration is based on my personal knowledge and recollection from having worked for Viance since 2007. I am not being compensated for any of the testimony provided herein, aside from the normal salary that I receive working for Viance. I understand that my declaration will be submitted to the United States Patent Trial and Appeal Board in support of a petition for post grant review of United States Patent No. 12,370,716.

II. Development of the Viance UP-50 and UP-23 Products

4. Viance specializes in advanced wood treatment technologies and services, including a range of wood biocides and wood protection chemicals. As part of my job duties at Viance, I oversee the research and development of wood preservatives containing 4,5-Dichloro-2-n-octyl-3(2H)-Isothiazolone (“DCOI”) as an active ingredient.

5. Viance first brought to market a preservative product containing DCOI as an active ingredient in 2008. This wood preservative product was sold under the name Ecolife® and was primarily intended for residential building applications.

6. Subsequently, Viance began developing an oil-borne preservative system containing DCOI for the treatment of wood. Viance publicly disclosed this preservative system at the American Wood Protection Association (“AWPA”) 114th Annual Meeting at the Seattle Marriott Waterfront in Seattle, Washington held on April 22-24, 2018. I co-authored a paper (Ex1028) with Andrew Zahora titled “DCOI - An Oil-borne Preservative System for Pressure - Treatment of Poles, Posts and Sawn Cross Arms.” The company’s name “Viance, LLC Charlotte, NC” appears below the authors’ names. I submitted Ex1028 for inclusion in the AWPA 114th Annual proceedings and presented the information in Ex1028 to attendees of this conference. Ex1028 was published in a hard copy book made available to AWPA members as of 2018. The book was also offered for sale on AWPA’s website shortly after the Annual Meeting.

7. In 2018, Viance launched an oil-borne preservative containing DCOI as an active ingredient for infrastructure applications, including utility poles, crossarms and railroad ties. This wood product was marketed and sold under the name UP-23. Viance received approval of the UP-23 label by the EPA and registration under FIFRA on or about April 19, 2018.

8. Viance’s ordinary course of launching a new product involves submission of an application for approval of the product label to the EPA and an application for registration under FIFRA, prior to sale to its customers.

9. Subsequently, Viance developed additional wood preservative products containing DCOI for infrastructure applications, including utility poles, crossarms and railroad ties. During this 2018-19 time period, I was in charge of overseeing the development of a Viance wood

preservative product having a formulation comprising DCOI and a wax blend; the product was named “UP-50.” UP-50 is a concentrate that contains 50% DCOI and 50% wax materials. As discussed in more detail below, UP-50 is diluted in a hydrocarbon solvent to form a treatment solution used by wood treaters to treat wood products, such as utility poles, crossarms, and railroad ties. UP-50 has always contained 50% DCOI and 50% wax materials and these proportions have never been changed.

A. Evaluation of the UP-50 Product

10. I am familiar with Viance business records showing research and development of the UP-50 product and how they are generated and kept at Viance, including Exs1076-1077. These records, including Exs1076-1077, were generated at or near the time of the development of the UP-50 product by—or from information transmitted by—someone with knowledge of the information contained therein. Viance relies on these records, including Exs1076-1077, for the development of its products, including UP-50. These records, including Exs1076-1077, were kept in the course of a regularly conducted business activity of Viance and were made by Viance as a regular practice of that activity.

11. Ex1076 is a PowerPoint Presentation prepared by Viance on or about September 28, 2020, which summarizes internal Viance evaluations of UP-50. Slide 1 of Ex1076 reports that treatments of Western red cedar pole stubs with UP-50 were able to achieve AWPA UC4C penetration and retention requirements. (Ex1076, page 1.) Slide 3 of Ex1076 reports that treatments of Douglas fir pole stubs with UP-50 were able to achieve AWPA UC4C penetration and retention requirements. (Ex1076, page 3.) The data in Ex1076 demonstrated that UP-50 worked for its intended purpose.

12. Ex1077 is an Excel Document prepared on or about September 28, 2020 that reports on the same evaluation as Ex1076 and also shows that treatments of Western red cedar and Douglas

fir pole stubs with UP-50 were able to achieve AWPAs penetration and retention requirements. (Ex1076, page 1, at “Treatment Summary.”) In connection with the evaluation described in Exs1076-1077, UP-50 was diluted in an organic solvent to form a diluted composition which was used to treat the Western red cedar and Douglas fir pole stubs.

13. I recall that as early as December 2020, following internal development of UP-50 at Viance, a Viance customer evaluated the UP-50 product in connection with larger scale pilot plant equipment, using treatment cycles more closely replicating its commercial practice (e.g., to assess solution uptake, retention, and solution stability goals). Records of these evaluations, including Exs1070-1074, were generated by a Viance customer and received and kept by Viance in the normal course of business. As the director of Research and Development, I am familiar with such business records, including those received from external laboratories. Exs1070-1074 were received at or near the time of the events reflected therein, by select Viance employees, including myself, as part of our normal job duties. Exs1070-1074 were kept in the course of the regularly conducted business activity at Viance.

14. Ex1070 is a report of an evaluation of UP-50 by Viance’s customer, titled “DCOI Treatment Analysis – UP50 Treatment 1, 2, 3, and 4” prepared on or about December 3, 2020. Ex1070 is a true and correct copy of this document as it was received and kept in the ordinary course of business at Viance.

15. Ex1070 shows that four treatments of UP-50 were evaluated in connection with larger scale pilot plant equipment and that core samples from each of the four treatments of UP-50 were then prepared and analyzed. Ex1070 further shows that UP-50 met the target uptake and retention metrics. Ex1070 reports that “[a]ll the cores met the required retentions of 0.2 pcf and

0.1 pcf for the outer zones and inner zones respectively.” (Ex1070, page 2.) The results of Ex1070 confirmed that the UP-50 product worked for its intended purpose as a wood preservative.

16. I am also familiar with additional documentation in connection with the larger scale pilot plant equipment which also showed that UP-50 worked as a wood preservative. For example, Ex1074 is a report titled “Quick DCOI Summary” created on or about December 23, 2020. Slide 2 of Ex1074 reports that for DCOI UP-50, there were “[n]o issues with gelling, crystals or penetration.” Ex1074 was generated by Viance’s customer and kept at Viance in the ordinary course of business, concerning evaluation of the UP-50 product.

17. I also recall that Viance’s customer conducted further evaluation of the UP-50 product at least as early January 2021 for the purpose of assessing “the optimal treatment parameters for UP-50 to ultimately be used in a [commercial,] full wood treatment facility.” (Ex1071, page 3.) Viance’s customer prepared a report of the results and observations from this evaluation on January 7, 2021. Ex1071 is a true and correct copy of Ex1071 as it was received and kept in Viance’s records for the research and development of UP-50.

18. Ex1071 reports that solid blocks of UP-50 were evaluated and that these blocks were “composed of 50% DCOI, 25% paraffin waxes and hydrocarbon waxes, and 25% microcrystalline wax.” (Ex1071, page 3.) Ex1071 further showed that the UP-50 product worked for its intended purpose, including by meeting target values for retention and solution uptake of the active ingredient, DCOI. Ex1071 states that “DCOI-UP50 would be capable of treating the poles to meet required retentions.” (Ex1071, page 4.) Ex1071 also states that “DCOI-UP50 was capable of treating four Douglas Fir poles without creating a gel, as well as meet the required assay retentions. Based on these observations it appears that DCOI-UP50 would be a suitable wood preservative” (Ex1071, page 39.)

19. Viance's UP-50 product also underwent further evaluation by Viance's customer in conjunction with **REDACTED**, which noted that "Pentachlorophenol ... is in the process of being phased out of service as wood preservative. *** The solid block was DCOI UP-50 which was composed of 50% DCOI, and 50% wax variants." (Ex1072, page 8.) Ex1072 is dated April 15, 2021. Ex1072 is a true and correct copy of this document as it was received and kept in Viance's records.

20. Ex1072 states that the UP-50 product was a solid block with a chemical composition of 50% DCOI, 25% paraffin waxes and hydrocarbon waxes, and 25% microcrystalline wax. (Ex1072, page 8.) Ex1072 reports that, "In addition DCOI UP-50 is an acceptable solid block solution as it successfully met all required retentions and gel did not form due to solution matrix." (Ex1072, page 12.) Based on my experience, these results also show that Viance's UP-50 product was a suitable replacement for PCP and that UP-50 worked for its intended purpose.

21. Ex1073 is a PowerPoint presentation titled "DCOI Treatments Summary" dated May 2, 2021. Ex1073 reports on various evaluations, stating that "NO ISSUES WITH GELLING, CRYSTALS OR PENETRATION. * * * VERY PLEASING APPEARANCE, DOES NEED HEAT TO WORK BUT RAPIDLY GOES TO LIQUID UNDER MODERATE TEMPERATURES." (Ex1073, page 2.) Slide 19 of Ex1073 further states, "NO ISSUES AT ALL."

22. In connection with the use and evaluation described in Exs1070-1074, UP-50 was necessarily diluted in an organic solvent to form a diluted composition which was used to treat wood products, e.g. utility poles, by contacting the wood for a period of time suitable to inhibit fungal decay in the wood substrate. For example, Ex1070 reports that "[a]ll the cores met the required retentions of 0.2 pcf and 0.1 pcf for the outer zones and inner zones respectively."

B. EPA Registration of the UP-50 Product

23. On February 28, 2021, I submitted an application for approval of the UP-50 label to the EPA for registration under FIFRA. Ex1075 is a true copy of the cover letter and proposed label that I submitted to the EPA for approval of UP-50. I was personally involved in the preparation and submission of the application for approval of the UP-50 label and registration to the EPA. I authored the application to the EPA to register UP-50 under FIFRA and submitted all supporting documents, including the safety and efficacy documentation reviewed by the EPA as part of its registration process. The label for the UP-50 product was approved and registered by the EPA on March 18, 2022. Exhibit 1013 is a true and correct copy of the label as approved by the EPA.

24. After receiving the approval and registration for the UP-50 label, Viance began selling the UP-50 product to customers. I am aware of four sales of UP-50 that occurred prior to August 5, 2022. These sales are described in further detail in the Declaration of Barbara Aldinger, Ex1018.

25. My job duties include coordinating the success of new Viance products and addressing technical questions that arise when Viance's customers use a new product for the first time. For this reason, I was present on-site at a Viance customer's preservative warehouse in

REDACTED on June 27-June 30, 2022, to monitor the use of UP-50 and to advise the



Viance customer on the technical aspects of treating wood with UP-50. Shown immediately above is a true and accurate photograph of UP-50 blocks from the first shipment of UP-50 to the Viance customer's facility. The photograph shows UP-50 blocks removed from their shipping containers and loaded onto a tram for delivery to the treating cylinder at the Viance customer's wood treatment facility. During this on-site visit, I oversaw the use of UP-50 by the Viance customer and observed the melting and the dilution of UP-50 with an organic solvent and application of the diluted UP-50 treatment solution to wood for the purpose of creating a treated wood product.

III. Composition of the Viance UP-50 Product

26. I have personal knowledge of the composition of UP-50 based on my personal involvement in the development and launch of the product. I will now describe UP-50 in more detail below.

27. Viance originally sold its UP-50 product to customers in 55-gallon drums. Each drum contained approximately 420 pounds of product. The product is currently shipped in plastic-lined heavy duty shipping bags.

28. I am familiar with Viance business records showing the chemical composition of the UP-50 product. These records include Ex1012 and Ex1014. As the director of Research and Development, I am also familiar with Viance's business records and how they are generated and kept. These records, including Ex1012 and Ex1014, were generated at or near the time of the application for EPA approval of the UP-50 label (before March 4, 2021) by Viance employees, including myself, having personal knowledge of the information contained therein, as part of our normal duties. These records, including Ex1012 and Ex1014, were kept in the course of a regularly conducted activity of Viance and making such records was a regular practice of that activity.

29. I was responsible for documentation of the composition of UP-50 in advance of Viance's application for label approval and registration to the EPA. I submitted Viance's application for label approval and registration of UP-50 to the EPA on March 4, 2021. As part of this application, I submitted reports on the effects of UP-50 on target species and non-target species, including humans, as well as the manufacturing requirements and chemical analyses for UP-50.

30. Ex1013 is a true and accurate copy of the EPA registration approval notice for the UP-50 label, which contains the original approved label for UP-50. The EPA assigned UP-50 the EPA registration number 83997-14. Ex1013 is a document that I became familiar with in the ordinary course of my job as the Director of Research and Development of Viance. I was responsible for corresponding with EPA officials during the approval process, including receiving and reviewing Ex1013. The cover page of Ex1013 lists "Kevin Archer, PhD" as the Registrant, which is my name. The EPA issued this document to Viance on March 18, 2022. I received this document by email at my Viance email address on or about the day it was issued by the EPA. I attest that the product reviewed by the EPA, and the subject of the EPA Approval Letter, is the UP-50 product.

31. Ex1013 is publicly available via the EPA's Pesticide Product and Label System database, located at <<https://www.epa.gov/safepestcontrol/search-registered-pesticide-products>> and <<https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:1>>. Based on my experience applying for product label approvals and registrations with the EPA, it is the routine practice of the EPA to publish a copy of the EPA registration notice and label on its Pesticide Product and Label System database once the registrant is notified of the approval. I was able to access Ex1013 on this database

shortly after receiving a copy of Ex1013 in my email mailbox at the Viance office on or about March 18, 2022.

32. Ex1014 shows the label for UP-50 that is used in commerce by Viance prior to August 5, 2022. Specifically, Ex1014 is a copy of the label that was provided to Viance customers with drums of UP-50 ordered by Viance customers. Ex1014 is the same label as the one approved by the EPA and appearing on pages 3 to 7 of Ex1013 but reformatted as a one-page product label that is easier to present to customers, print, and ship with bags of UP-50. All of the material information present on pages 3 to 7 of Ex1013 is also present in Ex1014.

33. Page 3 of Ex1013 and Ex1014 contain an accurate representation of the percentages of active and inert ingredients that make up UP-50. A snapshot of these percentages from page 3 of Ex1013 is reproduced below:

UP-50	<div>ACCEPTED 03/18/2022 <small>Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 83997-14</small></div>
For the Industrial Pressure Treatment of Wood Intended for Use on Utility Poles, Cross Arms or Transportation (road or rail) Bridge Timbers	
ACTIVE INGREDIENT:	
4,5-Dichloro-2-n-octyl-3(2H)-isothiazolone	50.0%
INERT INGREDIENTS:	50.0%
Total:	100.0%
KEEP OUT OF REACH OF CHILDREN	

The same percentages are found in the leftmost column of Ex1014 and also reproduced below:

ACTIVE INGREDIENT:	
4,5-Dichloro-2-n-octyl-3(2H)-isothiazolone	50.0%
INERT INGREDIENTS:	50.0%
Total:	100.0%

KEEP OUT OF REACH OF CHILDREN

34. As shown on page 3 of Ex1013 and Ex1014, UP 50 is a mixture of 50.0% of 4,5-Dichloro-2-n-octyl-3(2H)-isothiazolone, also known as DCOI, and 50.0% of “INERT INGREDIENTS.”

35. In accordance with Viance’s ordinary course of business, Viance prepares manufacturing reports for each of its products, which are intended to define a product and detail the manufacturing process, as well as health and safety concerns including hazards, training, required personal protective equipment (“PPE”), spill control and disposal requirements at the manufacturing site, and manufacturing workplace air monitoring requirements. My job duties include preparing and approving these manufacturing reports. Absent any unique circumstances, Viance’s ordinary procedure is to prepare a manufacturing report for a product before applying for product label approval and registration to the EPA. I am also familiar with Viance’s policies and procedures for retaining manufacturing reports.

36. For example, Ex1012 is an internal document titled “Manufacture of UP-50” created on or about January 16, 2021 documenting the manufacture of UP-50. In accordance with Viance’s procedures, Ex1012 was created shortly before Viance’s application for the UP-50 label approval and registration was submitted to the EPA on or about March 4, 2021. The “Product Definition” section of Ex1012, which is located on page 1 of this document, states that “[t]he concentration of DCOI is 50% w/w [weight/weight] of the product. The balance of the composition (the inert components) consists of a high melt point ($\approx 80^{\circ}\text{C}$) wax blend.” Ex1012 then describes

that “[t]he wax blend contains 2 different waxes mixed in equal parts each 25% w/w in the finished product.” Ex1012 identifies Wax 1 as a micro-crystalline wax with a melt point of 79°C and Wax 2 as a Fischer-Tropsch synthetic wax with a melt point of 78°C.

37. The composition of 50% DCOI and a 50% wax blend containing a micro-crystalline wax and a Fischer-Tropsch synthetic wax mixed in equal parts each 25% w/w described in Ex1012 is the same composition described on page 3 of Ex1013 and in Ex1014. Specifically, the wax blend detailed in Ex1012 and the paragraph above accurately defines the “INERT INGREDIENTS” described in page 3 of Ex1013 and Ex1014 that make up 50.0% of UP-50. As described in Ex1012, Ex1013, and Ex1014, the remaining 50.0% of UP-50 is DCOI.

38. UP-50 is sold as a concentrate that is diluted, e.g., at the wood treatment facilities, to form a treatment solution when used for preparing treated wood products. Per the instructions set forth in the “DIRECTIONS FOR USE” section of the UP-50 label, “[t]his product is a solid concentrate and must be diluted with a hydrocarbon solvent such as fuel oil, mineral spirits, diesel or petroleum distillates.” (Ex1013, page 5; Ex1014.) These instructions are provided to customers with every shipment of UP-50.

39. On February 2, 2023, the EPA approved an amendment I submitted to the agency to allow for the use of an alternative micro-crystalline wax in UP-50. This amendment did not change the formulation of UP-50, which has always contained a mixture of 50% DCOI and 50% INERT INGREDIENTS, *i.e.* a wax blend containing micro-crystalline and Fischer-Tropsch waxes mixed in equal parts each 25% w/w. The UP-50 manufacturing report was written on January 26, 2021 and the submission of the application for label approval and registration to the EPA occurred shortly thereafter on March 4, 2021. This is the mixture that has been manufactured and sold to

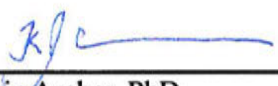
consumers by Viance since receiving this label approval and registration by the EPA on March 18, 2022, including the sales described in the Declaration of Barbara Aldinger, Ex1018.

IV. Closing Remarks

40. By signing this declaration, I consent to the submission of this declaration to the United States Patent and Trademark Office to support the petition for post grant review of U.S. Patent No. 12,370,716. I further understand that I may be subject to cross-examination in this case at a location within the United States. I further declare that any statements herein are based on my personal knowledge developed in the ordinary course of business as the Director of Research and Development of Viance since 2007.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information, and belief.

Date: January 21, 2026



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