

Slip Op. 15-78

UNITED STATES COURT OF INTERNATIONAL TRADE

**SCHLUMBERGER TECHNOLOGY
CORPORATION,**

Plaintiff,

v.

UNITED STATES,

Defendant.

Before: Timothy C. Stanceu, Chief Judge

Court No. 11-00266

PUBLIC VERSION

OPINION

[Determining the tariff classification of certain imported bauxite proppants]

Date: July 22, 2015

Alexander H. Schaefer, Crowell & Moring LLP, of Washington, DC, argued for plaintiff Schlumberger Technology Corp. With him on the brief were *John B. Brew*, *Joseph L. Meadows*, and *David C. Wolff*.

Aimee Lee, Civil Division, U.S. Department of Justice, of New York, NY, argued for defendant United States. With her on the brief were *Amy M. Rubin*, Acting Assistant Director, and *Stuart Delery*, Assistant Attorney General. Of counsel on the brief were *Edward Maurer* and *Michael Heydrich*, Office of Assistant Chief Counsel, International Trade Litigation, U.S. Customs and Border Protection.

Stanceu, Chief Judge: In this action, plaintiff Schlumberger Technology Corp. (“STC” or “Schlumberger”) contests the tariff classification determined by U.S. Customs and Border Protection (“Customs” or “CBP”) for two types of imported bauxite proppants suitable for use in hydraulic fracturing.

Before the court are plaintiff’s and defendant’s motions for summary judgment. Schlumberger Tech. Corp.’s Mot. for Summ. J. (Nov. 22 & 25, 2013), ECF Nos. 64 (conf.), 69 (public) (“Pl.’s Mot.”); Def.’s Mot. for Summ. J. (Nov. 22, 2013), ECF Nos. 66

(conf.), 67 (public) (“Def.’s Mot.”). The court denies defendant’s motion, determining that the government’s proffered classifications are incorrect. The court grants summary judgment in favor of plaintiff.

I. BACKGROUND

Schlumberger was the importer of record for two 2010 entries of bauxite proppants from the People’s Republic of China (“China”) that are the subject of this case (“subject merchandise” or “subject proppants”).¹ Joint Stipulations of Fact No. 8 (Aug. 8, 2013), ECF Nos. 53 (conf.), 54 (public) (“First Set of Stipulations”). Customs liquidated these entries, on December 27, 2010 and February 11, 2011, respectively, in both instances determining classification in subheading 6909.19.50, Harmonized Tariff Schedule of the United States (“HTSUS”) (“ceramic wares for laboratory, chemical or other technical uses . . . : Other, other”), at 4% *ad valorem*.² Stipulation Nos. 2(c) (Dallas entry), 3(c) (Los Angeles/Long Beach entry). Customs determined the same classification in denying Schlumberger’s protests of the liquidations. Protest Records for the Los Angeles/Long Beach Entry 1 (June 27, 2011) (“Los Angeles/Long Beach Entry Protest Record”), Ex. 2 to Mem. of Law & Authorities in Supp. of Schlumberger Tech. Corp.’s Mot. for Summ. J. (Nov. 22 & 25, 2013), ECF Nos. 64 (conf.), 69 (public) (“Pl.’s Br.”); Protest Records for the Dallas Entry 1 (July 11, 2011) (“Dallas Entry Protest Record”), Ex. 3 to Pl.’s Br.

¹ Entry No. 231-0425653-6 was made on February 10, 2010 at the Port of Dallas, Stipulation No. 2, and Entry No. 231-0434806-9 was made on March 29, 2010 at the Port of Los Angeles/Long Beach, Stipulation No. 3.

² Because both entries of the merchandise in question occurred in 2010, all citations herein to the Harmonized Tariff Schedule of the United States (“HTSUS”) are to the 2010 version of the HTSUS.

Schlumberger initiated this action by filing a summons on July 29, 2011 and a complaint on August 2, 2011. Summons, ECF No. 1; Compl., ECF No. 5. Defendant filed an answer on January 6, 2012. Answer, ECF No. 12.

Schlumberger and defendant United States each moved for summary judgment. Pl.'s Mot.; Pl.'s Br.; Def.'s Mot.; Mem. in Supp. of Def.'s Mot. for Summary J. (Nov. 22, 2013), ECF Nos. 66 (conf.), 67 (public) ("Def.'s Br."). Defendant and plaintiff each opposed the other's motion for summary judgment. Mem. of Law & Authorities in Supp. of Schlumberger Tech. Corp.'s Opp'n to Def.'s Mot. for Summ. J. (Dec. 30, 2013), ECF Nos. 71 (conf.), 72 (public) ("Pl.'s Opp'n"); Def.'s Opp'n to Pl.'s Mot. for Summ. J. (Dec. 30, 2013), ECF Nos. 73 (conf.), 74 (public) ("Def.'s Opp'n"). Plaintiff and defendant each filed reply briefs. Mem. of Law & Authorities in Supp. of Schlumberger Tech. Corp.'s Reply to Def.'s Opp'n to Schlumberger's Mot. for Summ. J. (Jan. 21, 2014), ECF Nos. 78 (conf.), 79 (public) ("Pl.'s Reply"); Def.'s Reply Mem. (Jan. 21, 2014), ECF Nos. 80 (conf.), 81 (public) ("Def.'s Reply").

The court held oral argument on May 8, 2014. ECF No. 83. Prior to and following the oral argument, the parties stipulated to a number of facts. First Set of Stipulations (Stipulation Nos. 1-51); Addendum One to Joint Stipulations of Fact (Oct. 18, 2013), ECF Nos. 59 (conf.), 60 (public) ("Second Set of Stipulations") (Stipulation Nos. 52-53); Joint Status Report & Joint Statement of Stipulated Facts (June 9, 2014), ECF Nos. 87 (public), 86 (conf.) ("Third Set of Stipulated Facts") (Stipulation Nos. 54-60).

II. DISCUSSION

A. Jurisdiction and Standard of Review

The court exercises jurisdiction pursuant to 28 U.S.C. § 1581(a) (2006), according to which the court has jurisdiction over an action brought under section 515 of the Tariff Act

of 1930 (“Tariff Act”), *as amended*, 19 U.S.C. § 1515 (2006), to contest a tariff classification by Customs. The court proceeds *de novo* in actions brought to contest CBP’s denial of a protest. *See* Customs Courts Act of 1980 § 301, 28 U.S.C. § 2640(a)(1) (2006) (directing the Court of International Trade to “make its determinations upon the basis of the record made before the court”).

In cases involving a disputed tariff classification, the court, as an initial step, considers whether “the government’s classification is correct, both independently and in comparison with the importer’s alternative.” *Jarvis Clark Co. v. United States*, 733 F.2d 873, 878 (Fed. Cir. 1984) (“*Jarvis Clark*”). Plaintiff has the burden of showing that the government’s determined classification is incorrect.³ *Id.* at 876. If plaintiff meets that burden, the court has an independent duty to arrive at “the *correct* result, by whatever procedure is best suited to the case at hand.” *Id.* at 878 (emphasis in original).

The court’s determining the correct classification involves two steps. *Faus Grp., Inc. v. United States*, 581 F.3d 1369, 1371 (Fed. Cir. 2009) (“*Faus Grp.*”). “The first step addresses the proper meaning of the relevant tariff provisions, which is a question of law.” *Id.* “The second step involves determining whether the merchandise at issue falls within a particular tariff provision as construed, which, when disputed, is a question of fact.” *Id.* at 1371-72.

³ Although a decision of U.S. Customs and Border Protection (“Customs” or “CBP”) is presumed to be correct, *see* 28 U.S.C. § 2639(a)(1)(2006), the statutory presumption of correctness carries no force as to questions of law and, therefore, has no relevance absent a factual dispute, *Goodman Mfg. L.P. v. United States*, 69 F.3d 505, 508 (Fed. Cir. 1995).

Tariff classification is determined according to the General Rules of Interpretation (“GRIs”), and, if applicable, the Additional U.S. Rules of Interpretation (“ARIs”).⁴ GRI 1 directs that tariff classification, in the first instance, “be determined according to the terms of the headings and any relative section or chapter notes.” GRI 1, HTSUS; *Faus Grp.*, 581 F.3d at 1372. Once merchandise is determined to be correctly classified under a particular heading of the HTSUS, a court then looks to the HTSUS subheadings to determine the correct classification of the merchandise in question. GRI 6, HTSUS; *Orlando Food Corp. v. United States*, 140 F.3d 1437, 1440 (Fed. Cir. 1998) (citations omitted).

Unless there is evidence of “contrary legislative intent, HTSUS terms are to be construed according to their common and commercial meanings.” *La Crosse Tech., Ltd. v. United States*, 723 F.3d 1353, 1358 (Fed. Cir. 2013). Although not binding law, the Explanatory Notes (“ENs”) to the Harmonized Commodity Description and Coding System (“Harmonized System” or “HS”), maintained by the World Customs Organization, “may be consulted for guidance and are generally indicative of the proper interpretation of a tariff provision.”⁵ *Degussa Corp. v. United States*, 508 F.3d 1044, 1047 (Fed. Cir. 2007).

Summary judgment is appropriate “if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” USCIT

⁴ “Along with the headings and subheadings, which are enumerated in chapters 1 through 99 of the HTSUS (each of which has its own section and chapter notes), the HTSUS statute also contains the ‘General Notes,’ the ‘General Rules of Interpretation’ (‘GRI’), the ‘Additional United States Rules of Interpretation’ (‘ARIs’), and various appendices for particular categories of goods.” *Dependable Packaging Solutions, Inc. v. United States*, 757 F.3d 1374, 1377 (Fed. Cir. 2014) (citation omitted); *see also Baxter Healthcare Corp. of P.R. v. United States*, 182 F.3d 1333, 1337 (Fed. Cir. 1999) (citing 19 U.S.C. § 3004(a) (1994)).

⁵ All citations to the World Customs Organization Explanatory Notes (“ENs”) contained herein are to the 2007 version.

R. 56(a). Where tariff classification is at issue, “summary judgment is appropriate when there is no genuine dispute as to the underlying factual issue of exactly what the merchandise is.”

Bausch & Lomb, Inc. v. United States, 148 F.3d 1363, 1365 (Fed. Cir. 1998) (“*Bausch & Lomb*”). In ruling on a motion for summary judgment, the court must credit the non-moving party’s evidence and draw all inferences in that party’s favor. *Hunt v. Cromartie*, 526 U.S. 541, 552 (1999) (citing *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986) (“*Anderson*”). A factual dispute is genuine if it might affect the outcome of the suit under the governing law. *Anderson*, 477 U.S. at 248.

B. General Description of the Merchandise

The facts as stated in this Opinion are not in dispute between the parties except where specifically indicated.

The subject proppants are produced from bauxite and are used in hydraulic fracturing, a technique for production from hydrocarbon reservoirs in which a fluid under high pressure is injected into the rock formation to create a fracture. See Int’l Trade Comm’n, *Calcined Bauxite Proppants from Australia: Determination of the Comm’n in Investigation No. 731-TA-411 (Final) Under the Tariff Act of 1930, Together With the Info. Obtained in the Investigation at A-2*, USITC Inv. No. 731-TA-411 (Final), March 1989 (“*ITC Investigation on Calcined Bauxite Proppants*”); Stipulation No. 52. Plaintiff Schlumberger, an oil well-site services provider, incorporates proppants, such as those at issue in this litigation, into packages of oil well services it offers to customers. Stipulation Nos. 1, 8, 36. After importation, the proppants are combined with other materials and liquids to create the fracturing fluid, and, once injected, the proppants prevent the fractures from closing. Stipulation Nos. 36, 52.

The proppants at issue here are intermediate strength proppants that are less than a millimeter in diameter. Stipulation Nos. 2(a), 2(a)(i), 3(a), 3(a)(i), 20(b), 22(a), 23(a). The Los Angeles/Long Beach entry was comprised of “S580-2040 Ceramic Proppants” (“20/40 proppants”), and the Dallas entry was comprised of “S580-4070 Ceramic Proppants” (“40/70 proppants”). Stipulation Nos. 2(a), 3(a). The subject proppants were imported in 3,200 pound sacks and in bulk shipments. Stipulation No. 2(b), 3(b), 39, 41. The numbers “20/40” and “40/70” refer to the sieve distribution of the proppants. Stipulation Nos. 20(a), 20(b). The proppants were produced by two different Chinese producers unaffiliated with Schlumberger: one supplier produced the 40/70 proppants and another produced the 20/40 proppants. Stipulation Nos. 25, 26.

Proppant manufacturing typically involves several basic steps: “milling and mixing of raw materials; granulation; drying and screening; firing; cooling down and screening of the proppant, testing, and packing.” Stipulation No. 13. In the first step, the raw materials are milled into a fine powder with particles smaller than 300 micron (0.3 millimeters). Stipulation Nos. 27, 45. During this step, limited quantities of other naturally-occurring minerals, described as dopants, were added to the bauxite and are present in the final product. Stipulation No. 53. One dopant was added to both types of proppants to assist in phase formation and to lower firing temperature during production. *Id.* Another dopant was added only to the 20/40 proppants to help increase the crush resistance of the final product. *Id.*

Second, during the “granulation” or “agglomeration” phase, the powder and some added water are placed in a pan granulator. Stipulation No. 28(b). Several organic “binders,” including potentially dextrin, starch, polyvinyl alcohol or methylcellulose, are added to assist in the formation of granules, although these binders later are burnt off during the “firing” process

(described below) and are absent from the final product. Stipulation Nos. 14, 28(a), 55. The circular motion in the pan granulator results in granules having a significant degree of roundness and sphericity. Stipulation Nos. 22(a), 23(a), 28(c). Third, following granulation, the granules are sorted to comply with the size specification and dried to remove excess water. Stipulation No. 29(a), (c), (d). Granules that are too large are returned for additional milling and granules that are too small are returned for additional granulation. Stipulation No. 29(b).

Fourth, the pellets that fall within the size specifications are then fired in a kiln. Stipulation No. 30(a), 30(g). Fifth, after firing, the proppants are sieved to ensure that 90% of the proppants fall within the required size range. Stipulation Nos. 31(b), 31(c). The 20/40 proppants were sieved so that 90% of the granules were between 0.850 millimeters and 0.425 millimeters in diameter. Stipulation No. 31(b). The 40/70 proppants were sieved so that 90% of the granules are between 0.425 millimeters and 0.2125 millimeters in diameter. Stipulation No. 31(c).

C. The Tariff Provisions Identified by the Parties

Concluding that the imported merchandise is described by the tariff term “[c]eramic wares for . . . technical uses” as used in the article description for heading 6909, HTSUS, Customs classified both types of the proppants at issue under the HTSUS as follows:

6909.19.50 Ceramic wares for laboratory, chemical or other technical uses; ceramic troughs, tubs and similar receptacles of a kind used in agriculture; ceramic pots, jars and similar articles of a kind used for the conveyance or packing of goods; Other, other.....4% *ad val.*

Plaintiff moves for summary judgment classifying the merchandise in the following HTSUS provision:

2606.00.00 Aluminum ores and concentrates: Bauxite, calcined, Other.....Free

In the alternative, plaintiff advocates classification according to either of the following HTSUS provisions:

- 2818.10.20 Artificial corundum, whether or not chemically defined; aluminum oxide, aluminum hydroxide: Artificial corundum: Other.....Free
- 3824.90.39 Prepared binders for foundry molds or cores; chemical products and preparations of the chemical or allied industries (including those consisting of mixtures of natural products), not elsewhere specified or included: Other: Mixtures of two or more inorganic compounds: Other.....Free

In its motion, defendant seeks summary judgment classifying the proppants in subheading 6909.19.50, the tariff classification Customs determined upon liquidation, but argues in the alternative, with respect to subheading 3824.90, that the proppants are not “[m]ixtures of two or more inorganic compounds” and therefore are classifiable as follows:

- 3824.90.92 Prepared binders for foundry molds or cores; chemical products and preparations of the chemical or allied industries (including those consisting of mixtures of natural products), not elsewhere specified or included: Other: Other.....5% *ad val.*

Defendant also claims that if the court should find that the proppants are not “wares” within the meaning of heading 6909, HTSUS, that the proppants may be classifiable as follows:

- 6914.90.80 Other ceramic articles: Other: Other.....5.6% *ad val.*

D. The Classification under Heading 6909, HTSUS Determined by Customs and Advanced by Defendant in Moving for Summary Judgment, Is Incorrect, as is Defendant’s Alternative Classification under Heading 6914

Under the two-step process set forth in *Jarvis Clark*, the court first considers whether Schlumberger has met its burden of showing that the government’s classification is incorrect. The court concludes that Schlumberger has met this burden. The classification Customs determined upon liquidation, which was subheading 6909.19.50, HTSUS (“Ceramic wares for laboratory, chemical or other technical uses; . . . Other: Other: Other.”), is also the primary

classification for which the government seeks summary judgment.⁶ Def.'s Br. 12. This classification is incorrect because the merchandise, as described in the parties' stipulations, does not fall within the scope of heading 6909, HTSUS.

⁶ In denying Schlumberger's protests and determining classification under subheading 6909.19.50, HTSUS, Customs relied primarily on a May 21, 2007 ruling in which Customs had evaluated a classification request by Schlumberger concerning merchandise Schlumberger identified as "artificial proppants" ("NY Ruling Letter N005440"). *The Tariff Classification of Artificial Proppants from China, Russia & Venezuela* (May 21, 2007), available at rulings.cbp.gov/ny/2007/n005440.doc (last visited July 13, 2015) ("NY Ruling Letter N005440"); Dallas Entry Protest Record ("Correct classification is 6909.19.5095 per ruling N005440."); Attach. to Los Angeles/Long Beach Entry Denial of Protest ("There was no clear proof provided that the merchandise in question, S580-2040 was not the subject of ruling N005440."). In NY Ruling Letter N005440, Customs analyzed samples of certain "artificial proppants" and concluded that those proppants were classifiable in subheading 6909.19.50, HTSUS. *NY Ruling Letter N005440* at 2. In support of this position, Customs stated that:

The submitted samples consist of very fine spherical grains. Laboratory analysis has shown that both samples are composed of aluminum oxide and aluminum silicate with small amounts of other elements. The samples have the characteristics of ceramics and the hardness of each sample is less than 9 on the Mohs scale.

Id. at 1-2. A classification ruling by Customs may be accorded a "respect proportional to its 'power to persuade,'" based on the "thoroughness, logic, and expertness, its fit with prior interpretations, and any other sources of weight." *United States v. Mead*, 533 U.S. 218, 235 (2001) ("*Mead*"). In *Mead*, the Supreme Court held that CBP's ruling letters are not entitled to deference by the courts under the principle of *Chevron U.S.C., Inc. v. Natural Res. Defense Council*, 467 U.S. 837 (1984). *Id.* The court held that such a ruling letter is entitled to "respect according to its persuasiveness" according to the principles of *Skidmore v. Swift*, 323 U.S. 134, 140 (1944) ("*Skidmore*"). *Id.* NY Ruling Letter N005440, which contains scant discussion of the agency's reasoning, lacks the "power to persuade." *Id.* (citing *Skidmore*, 323 U.S. at 140). As plaintiff argues, the "[t]he ruling provides no references to, nor legal or factual analysis of, the applicability of chapter 69 note 1 shaping requirements, or the definition and applicability of the terms 'wares,' 'ceramic wares' or 'ceramic wares for other technical uses' as required by GRI 1." Mem. of Law & Authorities in Supp. of Schlumberger Tech. Corp.'s Mot. for Summ. J. 9 (Nov. 22 & 25, 2013), ECF Nos. 64 (conf.), 69 (public) ("Pl.'s Br.").

GRI 1 provides that classification, in the first instance, shall “be determined according to the terms of the headings and any relative section or chapter notes.” GRI 1, HTSUS. The terms of heading 6909, HTSUS are as follows:

Ceramic wares for laboratory, chemical or other technical uses; ceramic troughs, tubs and similar receptacles of a kind used in agriculture; ceramic pots, jars and similar articles of a kind used for the conveyance or packing of goods.

Heading 6909, HTSUS. According to defendant’s argument, the heading term “[c]eramic wares for . . . technical uses” describes the merchandise in question. Def.’s Br. 20.

The proppants may be described as “ceramic” and, at least arguably, are produced for a use that may be described by the term “technical.”⁷ The court concludes, however, that the heading term “[c]eramic wares,” when interpreted according to the intent of the drafters of the HS, does not describe this merchandise. Because the term “wares” is not defined in the HTSUS or the Explanatory Notes, the court looks for guidance to common dictionary definitions. *See E.M. Chems. v. United States*, 920 F.2d 910, 913 (Fed. Cir. 1990). Read collectively, the dictionary definitions indicate that the term “ware” generally is understood to refer to an “article” or “item” resulting from a manufacturing process or craft.⁸ Defendant argues that the term is

⁷ See EN, Gen. Note (A), (B), chapter 69 (applying the term “ceramic products” to products obtained from inorganic, non-metallic materials that are shaped and then fired, or “[f]rom rock, (e.g., steatite), fired after shaping.”). Because bauxite contains oxides of aluminum, it might be described as “metallic,” and it also may be described as “rock.” See “Bauxite,” *Encyclopedia Britannica Online*, available at <http://www.britannica.com/science/bauxite> (last visited July 13, 2015) (“[B]auxite, rock largely composed of a mixture of hydrous aluminum oxides.”).

⁸ The Oxford English Dictionary defines “ware” as: “A collective term for: Articles of merchandise or manufacture; the things which a merchant tradesman or peddler has to sell; goods, commodities.” “Ware” (n.3), *Oxford English Dictionary Online* (June 2015), available at <http://www.oed.com/view/Entry/225693?rskey=CPYR17&result=3> (last visited July 13, 2015). Webster’s Dictionary defines “ware,” *inter alia*, as: “1 a: manufactured articles, products of art or craft, or farm produce offered for sale: b: an item offered for sale: an article of (continued . . .)”

broad enough to encompass the proppants, Def.'s Br. 21, and defendant is correct that some definitions of the term "ware" use terms such as "goods," "commodities," or "produce of a specific class or kind" that are broader than the term "articles."⁹ However, the contexts in which the various definitions are presented connote that the term "ware" is too narrow to encompass crude or semi-processed substances, such as the proppants at issue.

The stipulated facts that the proppants are less than a millimeter in size and are produced in bulk, not as individual items or articles, support the conclusion that the proppants are not ceramic "wares" within the meaning of that term as used in heading 6909, HTSUS. *See* Stipulation Nos. 2(b), 3(b), 39, 41. This conclusion is also supported by samples of the merchandise. Plaintiff provided two plastic bags containing samples of proppants, which plaintiff describes as having been produced by the same two companies that produced the subject merchandise (one sample described as being of 20/40 proppants and the other of 40/70 proppants).¹⁰ Physical Samples (Nov. 22, 2013), ECF No. 63 ("Proppant Samples"). For

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merchandise . . . 2: goods, commodities, manufacturers, or produce of a specific class or kind <coopers' [ware]> <household [ware]> <mahogany [ware]>—usu. used in combination <hardware> <silverware> <tinware> <glassware>.” “Ware” (n.), *Webster’s Third New Int’l Dictionary*, Unabridged 2576 (3d ed. 2002) (emphasis added). Interestingly, a definition of “ware” included in the latter source is: “pottery, dishes, or other items of fired clay.” *Id.* at 2(d).

⁹ The Oxford English Dictionary defines an “article” as: “A particular material thing, *esp.* one belonging to a specified class; a commodity; an item of goods or property.” “Article” (n.14), *Oxford English Dictionary Online* (June 2015), available at <http://www.oed.com/view/Entry/11179?rskey=Y11Jo6&result=1#eid> (last visited July 13, 2015).

¹⁰ Defendant asserts that the samples are not representative of the proppants at issue because the samples were not taken from the actual entries that are the subject of this action. Mem. in Supp. of Def.’s Mot. for Summary J. 2-3 (Nov. 22, 2013), ECF Nos. 66 (conf.), 67 (public) (“Def.’s Br.”). Neither Customs nor Schlumberger retained samples from the 20/40 entry or the 40/70 entry. Stipulation No. 58. Nevertheless, the samples provided by plaintiff would be admissible at trial, and there is no dispute as to the bulk, granular nature of the merchandise or the size of the granules, as is evident from the parties’ stipulations.

purposes of summary judgment, the court rules that these samples would be admissible. Visual inspection of the samples reveals that bauxite proppants in the two size categories at issue appear as a dark gray granular substance with extremely small granules.

The Explanatory Note to heading 6909 further supports the court's conclusion that the term "[c]eramic wares" does not describe a semi-processed substance such as an ore that has been milled, granulated, and fired but not advanced to a state that is correctly described as an "item," "article," or "ware." The EN states that "[t]his heading covers a range of varied *articles* usually made from vitrified ceramics (stoneware, porcelain or china, steatite ceramics, etc.), glazed or unglazed."¹¹ EN 69.09 (emphasis added). The EN gives numerous examples of the "articles" that would fall within the scope of the heading, none of which is similar to a bulk granular substance such as the proppants in question.¹² The court interprets the phrase "ceramic

¹¹ A "vitrified" ceramic is one that is "converted into glass or a glassy substance by exposure to heat." "Vitrified" (adj.), *Oxford English Dictionary Online* (June 2015), available at <http://www.oed.com/view/Entry/224103> (last visited July 13, 2015); see also "Vitrify" (v.), *Webster's Third New Int'l Dictionary*, Unabridged 2559 (3d ed. 2002) ("to change into glass or a glassy substance by heat and fusion: make vitreous; *esp.*: to produce in (a ceramic ware) enough glassy phase or close crystallization by high firing to make nonporous . . ."). The proppants have been fired at a temperature sufficient to cause calcination of the granules, but, as an examination of the samples reveals, have not been converted to glass or a glassy substance.

¹² EN 69.09 provides that "[t]he heading covers in particular:"

- (1) Laboratory wares (e.g., for research or industrial use) such as crucibles and crucible lids, evaporating dishes, combustion boats, cupels; mortars and pestles; spoons for acids, spatulas; supports for filters and catalysts; filter plates, tubes, candles, cones, funnels, etc.; water-baths; beakers, graduated vessels (**other than** graduated kitchen measures); laboratory dishes, mercury troughs; small tubes (e.g., combustion tubes, including analysis tubes for estimation of carbon, sulphur, etc.).
- (2) Ceramic wares for other technical uses, such as pumps, valves; retorts, vats, chemical baths and other static containers with single or double walls (e.g., for electroplating, acid storage); taps for acids; coils, fractionating or distillation coils
(continued . . .)

wares” in light of the enumerated examples in the Explanatory Note to heading 6909 according to the principle of *ejusdem generis*, under which the term in question must possess the same essential characteristics or purposes that unite the listed exemplars. *See Avenues in Leather, Inc. v. United States*, 423 F.3d 1326, 1332 (Fed. Cir. 2005). The examples given are of articles that can be expected to be made to a specific shape and size, not a product manufactured as a bulk granular substance. EN 69.09; *see also* note 1 to chapter 69, HTSUS (“This chapter applies only to ceramic products which have been fired after shaping.”).¹³ The proppants are formed by a process described as “granulation” or “agglomeration,” in which milled bauxite is mixed with water and some binders and other materials and then formed into granules through rotation in a pan granulator. Stipulation Nos. 28(a), 28(b), 28(c). When the granules emerge from this granulation process, they range so substantially in size that sieving is necessary to eliminate granules that do not fall within the desired size range. Stipulation Nos. 31(a), 31(b), 31(c). Even after the proppants are sieved so that 90% of the proppants fall within the desired size range,

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and columns, Raschig rings for petroleum fractionating apparatus; grinding apparatus and balls, etc., for grinding mills; thread guides for textile machinery and dies for extruding man-made textiles; plates, sticks, tips and the like, for tools.

(3) Containers of the kinds used for the commercial transport or packing of goods, e.g., large containers, carboys, etc., for the transport of acids and other chemical products; flacons, jars and pots, for foodstuffs (jam, condiments, meat pastes, liqueurs, etc.), for pharmaceutical products or cosmetics (pomades, ointments, creams, etc.), for inks, etc.

(4) Troughs, tubs and similar containers of the type used in agriculture.

EN 69.09 (emphasis in original).

¹³ To “shape” is “to give a particular or proper form to by or as if by molding or modeling from an undifferentiated mass” or “to give definite or finished shape to especially by altering a prior shape.” “Shape” (v.1, 2), *Webster’s Third New Int’l Dictionary*, Unabridged 2087 (3d ed. 2002).

each of the two ranges characterizing the subject merchandise still permits 100% variation in size. Stipulation Nos. 20(b), 22(a), 23(a).

The Explanatory Note to Chapter 69 is another indication that the drafters of the Harmonized System did not consider HS heading 69.09 to be the correct heading for products such as bauxite proppants. The chapter Explanatory Note describes the organization of chapter 69 into two subchapters (Subchapters I and II), as follows:

According to the composition and the firing process adopted the following products are obtained:

- I. Goods of siliceous fossil meals or of similar siliceous earths and refractory goods of sub-Chapter I (headings 69.01 to 69.03).
- II. Other ceramic products, consisting essentially of common pottery, stoneware, earthenware, porcelain or china, etc. constituting sub-Chapter II (headings 69.04 to 69.14).

EN, Gen. Note (A), chapter 69. Subchapter I clearly does not describe the proppants. The description of Subchapter II in the chapter Explanatory Notes, even though containing the words “essentially” and “etc.” and thereby admitting of possible exceptions, nevertheless casts serious doubt on the government’s preferred classification. *Id.* Proppants produced from bauxite ore are of a different commercial category of goods than are “pottery, stoneware, earthenware, porcelain or china.” The Explanatory Note to Subchapter II further clarifies that “other ceramic products” include pottery made from clay, glazed white or coloured ceramics, stoneware that is normally glazed, semi- or imitation porcelains that are “decorated and glazed to give the commercial appearance of porcelain,” certain goods made from “powdered steatite, etc. generally mixed with clay,” and “articles made of refractory materials (e.g., sintered alumina) . . .” not designed as

refractory goods.¹⁴ EN, Gen. Note (II), chapter 69, sub-chapter II. In contrast, the proppants at issue are produced by milling, agglomerating, and firing bauxite ore, which consists of a crude and variable mixture of various aluminum oxides and various impurities. Stipulation Nos. 12, 13, 54.

Defendant argues that agglomeration shapes the bauxite ore into ceramic wares, within the meaning of note 1 to chapter 69, because the proppants “were intentionally formed into specification-conforming balls.” Def.’s Reply 7. Defendant adds that “[t]he process of granulation and agglomeration into particle spheres is commonly and commercially recognized in the industry as forming and shaping the particles to create the desired physical and mechanical performance requirements of the proppants.” Def.’s Br. 8 (citing Decl. of Michael Vincent ¶¶ 18-19, 22, 24 (“Vincent Decl.”), Ex. 7 to Def.’s Br.; Decl. of William M. Carty ¶¶ 37-43 (“Carty Decl.”), Ex. 6 to Def.’s Br.). This argument is unconvincing. Although the individual granules have a degree of sphericity, the agglomeration process produces granules of widely varying sizes, not individual articles of a precise size and shape.

Defendant notes that the Explanatory Note to heading 6909 provides “grinding apparatus and balls, etc., for grinding mills” as examples of “[c]eramic wares for other technical uses.” Def.’s Br. 26 (citing EN 69.09). Defendant asserts that ceramic grinding media may be shaped via granulation, directing the court’s attention to a patent for certain ceramic grinding media, *id.* at 27 (citing Carty Decl. ¶ 94; U.S. Patent No. 3,486,706 (Dec. 30, 1969) (“U.S. Patent

¹⁴ Steatite is “[a] massive variety of talc, commonly of a grey or greyish green colour, with an unctuous or soapy feel; soap-stone.” “Steatite” (n.), *Oxford English Dictionary Online* (June 2015), available at <http://www.oed.com/view/Entry/189507?Redirectedfrom=Steatite> (last visited July 13, 2015). Steatite is also described as “[a] mixture of talc, clay, and alkaline-earth oxides” that is chiefly used “as a ceramic insulator in electronic devices.” “Steatite,” *Hawley’s Condensed Chem. Dictionary* 1043 (14th ed. 2001) (Richard J. Lewis Sr. Ed.).

No. 3,486,706”), Ex. 27 to Def.’s Opp’n), specifically, “small ceramic spheroids” that are formed by a process of placing raw materials in “a rotating pelletizing disc or drum” with water, drying, and firing, U.S. Patent No. 3,486,706 at Column 1, 2. Defendant’s reference to U.S. Patent No. 3,486,706 does not convince the court that the proppants are classified under heading 6909. Grinding media are not the same product as the proppants, and as to the process of forming the grinding media, the patent itself states that “[i]t is generally desirable to screen and reprocess the green spheroids where a pelletizing disc is used, since oversized and undersized spheroids are generally formed along with the desired range.” U.S. Patent No. 3,486,706 at Column 2. The patent further notes that “[w]ith the other, direct forming methods, the screening step can sometimes be eliminated.” *Id.* The implication is that the rotating disc or drum method is a less precise method of forming than are the alternative methods of extrusion or molding. *See id.* Defendant has demonstrated only that a type of ceramic grinding media can be produced by granulation. Even were the court to accept the notion that forms of ceramic grinding media produced in this way necessarily are described by the term “grinding apparatus and balls, etc., for grinding mills” as used in the Explanatory Note to heading 6909, which defendant has not established, the court would not necessarily conclude that *any* ceramic product intended to perform a grinding function would fall within the scope of heading 6909, regardless of the limitation imposed by note 1 to chapter 69, HTSUS and the description of the scope of heading 6909 discussed in the Explanatory Note to the heading.

Defendant also asserts that the subject proppants are “shaped” within the meaning of the note 1 to chapter 69 because the proppants “are chosen for use in hydraulic fracturing specifically for their physical characteristics, such as spherical shape, roundness and strength.” Def.’s Br. 4. Defendant asserts further that the function of the subject proppants “derives

significant benefit from nearly perfect proppant spheres in order to maximize conductivity of hydrocarbon flow” *Id.* at 25 (citing Vincent Decl. ¶ 18). Defendant also notes that the Schlumberger’s own patent applications indicate “the importance of roundness and sphericity.” *Id.* (citing Patent Appl. (WO 2008/105678 A1)); *see also* Def.’s Opp’n 15-16; Carty Decl. ¶ 47 (“Schlumberger patents refer to granulation as a forming or shaping step.”). Defendant’s arguments highlight that a significant degree of roundness and sphericity are important for ceramic proppants, Def.’s Br. 25, but these arguments do not make the case that the proppants at issue are ceramic articles or “wares” that fall within the intended scope of heading 6909.

Defendant argues that Raschig rings, a type of ceramic ware for technical use provided as an example in the Explanatory Note to heading 6909, are analogous to the subject proppants. Def.’s Br. 27-28. The court disagrees. Raschig rings are hollow tubular goods made to a specific, cylindrical shape. *See* Ex. 11 to Def.’s Reply; “Raschig” (n.), *Oxford English Dictionary Online* (June 2015), available at <http://www.oed.com/view/Entry/158295?redirectedFrom=Raschig+ring#eid26685723> (last visited July 13, 2015) (“[A] small cylindrical ring usually made of glass, metal, or ceramic material, and used in large numbers as packing in towers and columns for fractionation, solvent extraction, etc.”). In this respect, they do not resemble the bulk, granular goods that are before the court.

In summary, because the proppants at issue are not described by the terms of heading 6909, defendant’s proffered classification of subheading 6909.19.50, HTSUS is incorrect, and the court, pursuant to GRI 1, HTSUS, next must consider other headings of the HTSUS.

Defendant suggests that, should the court conclude that the term “wares” as used in heading 6909 is insufficiently broad to include the proppants, then “an alternative classification would be for ‘other ceramic articles: other: other’ under subheading 6914.90.80, HTSUS,” which carries a duty of 5.6% *ad valorem*. Def.’s Br. 21 n. 16; subheading 6914.90.80, HTSUS. The court must reject this suggestion. Heading 6914 pertains only to “articles,” a limitation that is clear from the article description (“Other ceramic articles”) and from the examples given in the Explanatory Note to heading 6914. *See* subheading 6914.90.80, HTSUS; EN 69.14. The notes include as examples “[s]toves and other heating apparatus,” “non-decorative flower pots,” “fittings for doors, windows, etc.,” letters, numbers, and other ceramics for shop signs, ceramic spring level stoppers, jars and containers for laboratory purposes, and other articles such as knife handles. EN 69.14. The Explanatory Note to the heading provides that “[t]his heading covers all ceramic articles not covered by other headings this Chapter or other Chapters of the Nomenclature.” *Id.* Unlike the provided examples, the proppants are bulk substances that are not individual “articles” in the normal sense of the word.

E. The Proppants Are Described by the Terms of Heading 2606, HTSUS

In seeking summary judgment, plaintiff submits that the subject bauxite proppants are described by the terms of heading 2606, “[a]luminum ores and concentrates.” Plaintiff is correct.¹⁵

¹⁵ In concluding that the calcined bauxite proppants at issue here are classified under heading 2606, HTSUS, the court reaches a result consistent with an analysis published by the U.S. International Trade Commission. That analysis, although not binding on the court, is the product of an authoritative source with responsibilities pertaining to tariff matters (including the HTSUS and international responsibilities pertaining to the International Harmonized Commodity Description and Coding System). *See* Omnibus Trade and Competitiveness Act of 1988 § 1205, 19 U.S.C. § 3005 (2006). The Commission’s analysis of calcined bauxite proppants from Australia determined classification under heading 2606, HTSUS. Int’l Trade Comm’n, *Calcined* (continued . . .)

The proppants at issue are produced from non-metallurgical grade bauxite mined in China.¹⁶ Stipulation Nos. 12, 54. Bauxite is defined as “[a] hydrous oxide of alumina and iron, used in the manufacture of aluminium.”¹⁷ “Bauxite” (n.), *Oxford English Dictionary Online* (June 2015), available at <http://www.oed.com/view/Entry/16334?redirectedFrom=Bauxite> (last visited July 13, 2015). See also “Bauxite” (n.), *Webster’s Third New Int’l Dictionary*, Unabridged 188 (3d ed. 2002) (“[A]n impure mixture of earthy hydrous aluminum oxides and hydroxides that commonly contains similar compounds of iron and occasionally of manganese . . . and is the principal source of aluminum used in commerce and industry.”).

The processes to which the bauxite was subjected in the production of the proppants, as described in the parties’ stipulations, did not include concentration of the ore. Therefore, the question presented is whether the proppants are described by the heading term “aluminum ores” within the intended meaning of heading 2606.

Note 2 to chapter 26 states that “[f]or the purposes of headings 2601 to 2617, the term ‘ores’ means minerals of mineralogical species actually used in the metallurgical industry for the extraction of mercury, of the metals of heading 2844 or of the metals of section XIV or XV, even

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Bauxite Proppants From Australia Determination of the Comm’n in Investigation No. 731-TA-411 (Final) Under the Tariff Act of 1930, Together With the Info. Obtained in the Investigation at A-13, USITC Inv. No. 731-TA-411 (Final), March 1989 (“ITC Investigation on Calcined Bauxite Proppants”).

¹⁶ Arguing that the samples were not collected from the samples at issue, defendant asserts that plaintiff has not proved the composition of the proppants. Def.’s Br. 2. Nevertheless, defendant joins in stipulations that the subject proppants were produced from bauxite. Stipulation Nos. 12, 54.

¹⁷ The term “alumina” (Al₂O₃) refers to “[a] white highly heat-resistant solid, aluminium oxide, which is a major constituent of many rocks, esp. clays, and occurs crystallized as corundum, sapphire, etc. “Alumina” (n.), *Oxford English Dictionary Online* (June 2015), available at <http://www.oed.com/view/Entry/5877?redirectedFrom=Alumina> (last visited July 13, 2015).

if they are intended for non-metallurgical purposes.” Note 2 to chapter 26, HTSUS. The Explanatory Note to heading 2606 provides specifically that “[t]his heading covers bauxite (hydrated aluminum oxide containing variable proportions of iron oxide, silica, etc.)” EN 26.06.

Because there is no dispute that the proppants were produced from bauxite, the next question is whether the bauxite has been subjected to processes that exclude the resulting proppants from the scope of heading 2606. Note 2 to chapter 26, HTSUS, provides that “[h]eadings 2601 to 2617 do not, however, include minerals which have been submitted to processes not normal to the metallurgical industry.” Defendant argues that the subject proppants have been submitted to such processes. Def.’s Opp’n 34-35.

The Explanatory Note to chapter 26 provides that “[p]rocesses to which products of headings 26.01 to 26.17 may have been submitted include physical, physico-chemical or chemical operations, provided they are normal to the preparation of the ores for the extraction of metal.” EN, Gen. Note, chapter 26. The notes add that “[w]ith the exception of changes resulting from calcination, roasting or firing (with or without agglomeration), such operations must not alter the chemical composition of the basic compound which furnishes the desired metal.” *Id.* The Explanatory Note further provides that:

[P]hysical or physico-chemical operations include crushing, *grinding*, magnetic separation, gravimetric separation, flotation, *screening*, *grading*, *agglomeration of powders* (e.g., by sintering or pelleting) *into grains, balls or briquettes* (whether or not with the addition of small quantities of binders), *drying*, *calcination*, roasting to oxidize, reduce or magnetise the ore, etc. (but not roasting for purposes of sulphating, chloridating, etc.).

Id. (emphasis added).

The subject proppants were produced by “milling and mixing of raw materials; granulation; drying and screening; firing; cooling down and screening of the proppant, testing,

and packing.” Stipulation No. 13. Grinding and agglomeration “into grains, balls or briquettes” are processes specifically identified in the Explanatory Note to chapter 26. Additionally, the proppants underwent calcination, another process specifically identified in the EN to Chapter 29. To calcine a product is “to heat (as inorganic materials) to a high temperature but without fusing in order to effect useful physical and chemical changes” “Calcine” (v.), *Webster’s Third New Int’l Dictionary*, Unabridged 315 (3d ed. 2002); “Calcination,” *Hawley’s Condensed Chem. Dictionary* 190 (14th ed. 2001) (Richard J. Lewis Sr. ed.) (“Heating of a solid to a temperature below its melting point Calcination is often used in the benefaction of ores.”); *see also ITC Investigation on Calcined Bauxite Proppants* at A-13 (providing that calcination is “heating at approximately 800 F to drive out chemically held water” and that sintering is “firing at approximately 2,800 F to bring the product to 80 percent of its fusion (melting) point, maximizing the density of the crystal structure (a sintered proppant is twice as strong as a fused/melted proppant.”). The subject proppants were heated, but not to the fusing temperature of aluminum oxide, 2,030 C, and not to the point of sintering. Conf. Stipulation Nos. 30(g), 57. “Aluminum Oxide,” *Hawley’s Condensed Chem. Dictionary* 43 (14th ed. 2001) (Richard J. Lewis Sr. ed.). In addition, the Explanatory Note to heading 2606 states that “[t]he heading also covers bauxite, heat-treated (1,200 C to 1,400 C).” EN 26.06. The granulation, agglomeration, and calcination performed in the production of the subject proppants, then, must be considered normal to the metallurgical industry and not the sort of processing that would cause exclusion from chapter 26 by operation of note 2 to chapter 26, HTSUS.

The court next considers the question of whether the addition of one or both of the dopants removes the proppants from the scope of heading 2606 by operation of chapter note 2. The parties stipulate that during the milling of the raw bauxite, limited quantities of one or two

naturally-occurring minerals, described as dopants, were added and that these minerals are present in the final product.¹⁸ Stipulation No. 53. One dopant was added to both types of proppants to assist in phase formation and to lower firing temperature during production. *Id.* Another dopant was added only to the 20/40 proppants to help increase the crush resistance of the final product. *Id.*

The question presented is whether the court should hold that the addition of small amounts of one or both of these minerals to the milled ore prior to granulation and agglomeration is a process “not normal to the metallurgical industry” within the meaning of chapter note 2. Neither party has identified a technical dictionary or similar technical source that addresses the question as a matter of definition, and the court is unable to find such a source. Nevertheless, the court’s own construction of the intended meaning of chapter note 2 causes it to conclude, for a number of reasons, that the additions of the dopants is not the type of process the drafters of the Harmonized System intended would result in the exclusion of calcined bauxite proppants from classification within chapter 26, HTSUS.

First, in discerning the meaning of the phrase “submitted to processes not normal to the metallurgical industry,” the court finds persuasive the argument plaintiff advances, and supports with a citation to a technical source, as to the definitions of the two dopants. This technical source demonstrates that each of the two compounds that the parties identify as dopants are also found as impurities in bauxite ore.¹⁹ *See* Pl.’s Br. 34 (citing U.S. Geological Survey, *Bauxite &*

¹⁸ The identity of the dopants is on the record of this proceeding by means of confidential stipulations but is not revealed in this Opinion due to requests for proprietary treatment by the parties.

¹⁹ Additionally, a “dopant” is defined as “an impurity added usually in minute amounts to a pure substance to alter its properties.” “Dopant” (n.), *Webster’s Third New Int’l Dictionary* (continued . . .)

Alumina Statistics & Info, Ex. 24 to Pl.'s Br., available at

<http://minerals.usgs.gov/minerals/pubs/commodity/bauxite/> (last visited July 13, 2015)).

According to the stipulated facts, the addition of one or both dopants occurred very early in the process: the addition of these dopants was performed on bauxite that had been milled (i.e., ground) but not yet granulated or calcined (heat-treated). Stipulation No. 53. As a result, the addition of a small amount of the dopant or dopants merely altered, in a slight way, the composition of the particular batch of the source ore. Because the minerals used as dopants are also naturally-occurring impurities in bauxite, the addition could not have resulted in a composition that differed from that of a natural bauxite ore. In other words, the processes performed to make the ground bauxite ore into proppants following the initial grinding, i.e., granulation and firing, were performed on ground bauxite ore that was still in a natural state. The ground bauxite ore remained in a natural state following the addition of minute quantities of one or both of the dopants to the starting material. Because the additions of dopants made no change to the natural state of the bauxite ore, the step of adding these dopants, although it could be characterized as a process, does not rise to the type of “process” to which note 2 to chapter 26, HTSUS, was directed.

Second, the intended scope of HS Chapter 26 (and, as to bauxite, the specific scope of heading 2606) includes not only “ores” but also “concentrates,” which are “ores which have had part or all of the foreign matter removed by special treatments, either because such foreign matter might hamper subsequent metallurgical operations or with a view to economical transport.” EN to Chapter 26. The court considers it illogical to regard a “special treatment” that

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Online, Unabridged, available at <http://unabridged.merriam-webster.com/unabridged/dopant> (last visited July 13, 2015).

removes impurities as permissible under Chapter 26 but also to regard as impermissible the reverse—a step that is simpler than concentration and that essentially puts back into the source material a bauxite impurity.

Third, in addition to concentration of ore, other processes that actually advance milled ore beyond its natural condition are also permitted, including calcination. As the EN to Chapter 26 explains, “[w]ith the exception of changes resulting from calcination, roasting, or firing (with or without agglomeration), such operations must not alter the chemical composition of the basic compound which furnishes the desired metal.” The addition of the dopants to the milled ore could not have altered the chemical composition of the aluminum oxides present in the ore. Also, the addition of dopants is relatively insignificant when viewed in comparison to the processes that *are* permitted and that *do* advance the ore from its natural condition, including concentration, calcination, and “agglomeration of powders . . . into grains, balls, or briquettes (whether or not with the addition of small quantities of binders)” *id.*

Finally, concluding that the addition of one or both of the dopants is sufficient to change the tariff classification to one outside of chapter 26 produces an impracticable result. As demonstrated in this case, Customs has the capability of analyzing the composition of samples of calcined bauxite proppants. But such analysis could not be expected to distinguish between a calcined bauxite proppant to which one or both dopants have been added in small quantities from a calcined bauxite proppant in which the impurities in question already were present in the source ore. In this respect, adding a dopant is not, in a physical sense, distinguishable from combining separate batches of raw ore that have differing levels of various impurities. As plaintiff argues, “there is no difference between the underlying chemistry of the subject proppants and that of a bauxite or other aluminum ore that happened to naturally contain slightly

higher percentages . . . ” of the compounds added as dopants. Pl.’s Br. 34-35. The court notes, further, that according to common definitions cited in this Opinion, bauxite varies considerably in composition but is defined by the presence of any of various oxides or hydroxides of aluminum, which invariably are present along with a number of other minerals as impurities. In short, classification of bauxite as an “ore” under heading 2606 requires one or more aluminum compounds to be present among the other minerals but does not depend on any specific composition in the mixture of the various other inorganic compounds.

In summary, the court applies to this case a workable, common-sense interpretation of note 2 to chapter 26, HTSUS that does not preclude classification of the proppants under heading 2606, HTSUS. The note was intended to remove from the chapter those ores that have been subjected to certain (i.e., other than those specifically permitted) industrial processes that effect a change in the physical or chemical condition of bauxite ore, not those processes that merely make a slight change in the starting material and do not advance the condition of bauxite ore from a natural state.

Although arguing that the addition of the dopants does not preclude classification of the proppants under heading 2606, plaintiff joined in a stipulation that in the commercial extraction of aluminum metal from bauxite it is not a normal process to add the dopants at issue here. Stipulation No. 60. The stipulation in question does not alter the court’s conclusion. As mentioned previously, the EN to Chapter 26 provides that “[p]rocesses to which products of headings 26.01 to 26.17 may have been submitted include physical, physico-chemical or chemical operations, provided they are normal to the preparation of the ores for the extraction of metal.” EN, Gen. Note, chapter 26. This sentence from the EN, in referring to “physical, physico-chemical or chemical operations,” should not be construed so broadly, or in an

overly-literal sense, so as to preclude the addition of the dopants in question here. For the several reasons the court has discussed, the addition of these dopants in minor quantities does not effect a physical, physico-chemical, or chemical change to the composition of natural bauxite ore.

In opposing classification under heading 2606, defendant also argues that “[t]he proppants, in their condition as imported, are finished products; they are not used to make another product, but are used in their ‘as imported’ state for hydraulic fracturing.” Def.’s Opp’n 2. The court disagrees with the legal conclusion defendant draws as to the scope of heading 2606, HTSUS. Nothing in the terms of the heading, the section or chapter notes, or the relevant Explanatory Notes supports a conclusion that a product ready for the intended use in the condition as imported is outside the scope of the heading. To the contrary, note 2 to chapter 26 and the Explanatory Note to heading 2606 expressly contemplate the inclusion of products intended for non-metallurgical uses, imposing no condition that confines the scope of the heading to products intended for uses as intermediate products. Moreover, the proppants are combined with other materials and liquids to create fracturing fluid. Stipulation No. 36.

Defendant argues, further, that the subject proppants are produced from non-metallurgical grade bauxite and therefore, do not meet the definition of the term “ore” provided in note 2 to chapter 26.²⁰ Def.’s Opp’n 33-34. Defendant’s argument misconstrues note 2, which provides

²⁰ The parties stipulate as follows:

Bauxite from China is composed chiefly of monohydrate-type bauxite, mainly diaspora [*sic*], with significant amounts of boehmite. Virtually all the Chinese deposits contain or are closely associated with kaolinitic flint clay, which means that they have high reactive silica (aluminosilicate) levels. In fact, commercial definitions of what is actually termed bauxite differ between China and the rest of the world, with Chinese diasporic high-alumina clay being
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that “[f]or the purposes of headings 2601 to 2617, the term ‘ores’ means minerals of mineralogical species actually used in the metallurgical industry for the extraction of mercury, of the metals of heading 2844 or of the metals of section XIV or XV, *even if they are intended for nonmetallurgical purposes.*” Note 2 to chapter 26, HTSUS (emphasis added). Even if the bauxite used to produce the proppants is not commercially suitable for the extraction of aluminum, it is indisputably bauxite (as the parties have stipulated) and contains aluminum oxides, which are the “mineralogical species” used to obtain aluminum. The EN to HS Heading 26.06 supports the court’s interpretation of chapter note 2, providing that “[t]he heading also covers bauxite . . . suitable for use in metallurgy for the manufacture of aluminum (carbo-thermo-reduction in electric furnace, Gross, etc., progresses) *or for other uses* (in particular, for the manufacture of abrasives).” EN 26.06 (emphasis added).

Defendant also argues that “there are material issues of fact with respect to the tariff provisions upon which Schlumberger has the burden of proof, *i.e.* headings 2606 and 2828,” Def.’s Br. 11, but that there are no material issues of fact with respect to defendant’s proposed classification under either headings 6909 or 3824, *id.* Defendant asserts that “Schlumberger has not provided information to establish the actual composition of the proppants at issue,” *id.* at 2, and that “[t]his lack of information is fatal to plaintiff’s case,” *id.* at 13. Specifically, defendant notes that Schlumberger did not produce the subject proppants and argues that Schlumberger is

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classified as “equivalent” to bauxite. China is noted for its nonmetallurgical-grade bauxite production

Stipulation No. 12. Diaspore and boehmite are oxides of aluminum. “Diaspore” (n.1), *Webster’s Third New Int’l Dictionary*, Unabridged 625 (3d ed. 2002); “Boehmite” (n.), *Webster’s Third New Int’l Dictionary*, Unabridged 246 (3d ed. 2002). *See also* Oral Arg. Tr. 39-40, 68 (May 21, 2014), ECF No. 85 (conf.).

unaware of the precise chemical composition of the proppants. *Id.* at 2. Defendant further claims that certain specification sheets (material data safety sheets, etc.) provided by Schlumberger contain inconsistent information. *id.* at 2. Defendant argues, *inter alia*, that “documents produced by Schlumberger in discovery indicate clay is either added or present in the materials to make proppants.” *Id.* at 16; *see also* Oral Arg. Tr. 101-106 (May 21, 2014), ECF No. 85 (conf.) (“Oral Arg. Tr.”). According to defendant, the aforementioned samples plaintiff submitted are not representative of the proppants at issue because the samples were not taken from the actual entries that are the subject of this action. Def.’s Br. 2-3.

Although plaintiff insists that clay was not added to the raw materials used to produce the subject proppants, the court does not require the resolution of this factual question in order to conclude that the subject proppants are properly classified under heading 2606. Even where there are ongoing factual disputes between parties, summary judgment may be appropriate where the resolution of those disputes is not necessary to determine the appropriate classification under potential headings. *See, e.g., Dependable Packaging Solutions, Inc. v. United States*, 757 F.3d 1374, 1377 (Fed. Cir. 2014) (affirming a grant of summary judgment by the Court of International Trade despite parties’ ongoing disagreement as to the principle use of the considered merchandise).

Because there is no dispute that bauxite was used as the starting material and no dispute as to the processes performed on it to produce the proppants, the court concludes that there is no genuine issue of material fact pertinent to the classification issue presented in this case. As to defendant’s argument concerning clay, the parties stipulate that clay may have been present in the bauxite starting material. *See* Stipulation No. 12. Although defendant asserts that clay may have been added as a raw material, there is no indication in record evidence that clay was added

to the starting bauxite used to make the proppants in question, and evidence, including affidavits from the two manufacturers producing the proppants, indicates that clay was not added. *See* Aff. of Mfr. One, Ex. 39 to Conf. Pl.’s Opp’n; Aff. of Mfr. Two, Ex. 40 to Conf. Pl.’s Opp’n. The documents that defendant cites in support of its contention that clay was added correspond to proppants from the supplier that provided the proppants in question, but there is no indication that the proppants described therein are from the same two manufacturers that produced the merchandise at issue in this case. *See* Oral Arg. Tr. 103-05. Additionally, some of the documents do not indicate that clay was *added* to the starting materials—only that the proppants contain clay.

Nevertheless, even were clay added as a starting material, this would not preclude classification under heading 2606. Like the addition of dopants discussed above, any addition of clay to the starting material would not advance the starting material beyond the natural condition of bauxite ore. At least one dictionary definition of “bauxite” states that various clays are commonly present as impurities in bauxite. *Encyclopedia Britannica Online, available at* <http://www.britannica.com/science/bauxite> (last visited July 13, 2015) (“Clay minerals . . . are common impurities.”). In short, defendant’s argument that clay may have been added in the production of the proppants in question does not establish a genuine issue of material fact so as to preclude summary judgment in favor of plaintiff.

For the foregoing reasons, the court concludes that the proppants at issue in this case are described by the terms of heading 2606, HTSUS. As the court discusses below, the terms of no other heading of the HTSUS describe the merchandise at issue in this case.

F. The Proppants Are Not Described by the Terms of Any Other Heading of the HTSUS

Plaintiff argues in the alternative for classification of the proppants under heading 2828, “[a]rtificial corundum, whether or not chemically defined; aluminum oxide; aluminum hydroxide.” Heading 2828, HTSUS. Plaintiff argues that during the firing phase of production, the firing temperature was high enough such that “the naturally-occurring aluminum hydroxide phases converted to corundum.” Pl.’s Br. 41 (citing Donald D. Carr, *Industrial Minerals and Rocks* 140 (6th ed. 1994), Ex. 28 to Pl.’s Br.); Rebuttal Report of William M. Carty, PhD at 16 (Aug. 9, 2013), Ex. 13 to Pl.’s Br. The proppants do not fall within a common or commercial definition of the term “artificial corundum.” The Explanatory Note to heading 2818 states that “artificial corundum is formed by fusing aluminum oxide in an electrical furnace.” EN 28.18. The subject proppants were not formed by fusing aluminum oxide in an electrical furnace but rather through milling, pan granulation, drying, and firing. Stipulation No. 13. As the court noted above, the stipulated facts show that the subject proppants were not heated to the fusion temperature of aluminum oxide, 2,030 C. *See* Conf. Stipulation Nos. 30(g), 57. Nor do the proppants satisfy a definition of the term “aluminum oxide,” which, as the Explanatory Note provides, is a chemical compound and a white powder. EN B 28.18 (explaining that aluminum oxide “is a light white powder, insoluble in water . . .”).

Each party advocates, in the alternative, a classification under heading 3824, HTSUS, a residual heading that includes “chemical products and preparations of the chemical or allied industries (including those consisting of mixtures of natural products), not elsewhere specified or included.” Heading 3824, HTSUS. In opposition to defendant’s motion for summary judgment, plaintiff also suggested another alternative classification, this one under heading 6815, “[a]rticles of stone or of other mineral substances, not elsewhere specified or included.” Heading 6815,

HTSUS. Because the proppants are included under heading 2606, headings 6815 and 3824, each of which is limited to goods “not elsewhere specified or included,” must be rejected according to GRI 1.²¹ Moreover, the scope of heading 6815 was intended by the HS drafters to encompass, as a general matter, goods made from unfired mineral substances. *See* EN, Gen. Note, chapter 69 (“Firing, after shaping, is the essential distinction between the goods of [Chapter 69] and the mineral or stone products classified in Chapter 68 which are generally not fired, and the glass articles of Chapter 70 in which the vitrifiable compound has undergone complete fusion.”).

G. Disposition of the Pending Summary Judgment Motions

Within heading 2606, there is only one eight-digit subheading, and therefore this tariff provision, subheading 2606.00.00, HTSUS, for “[a]luminum ores and concentrates: Bauxite, calcined: other,” is, *eo nomine*, the correct classification for the imported proppants.²² The duty rate is free. The court, therefore, will enter summary judgment for plaintiff on this classification.

²¹ In its motion for summary judgment, defendant argues in the alternative for classification under subheading 3824.90.92, HTSUS, subject to duty at 5% *ad valorem*, on the premise that the proppants are not “mixtures of inorganic compounds” as is required for classification in subheading 3824.90.39, HTSUS, free of duty, plaintiff’s proposed alternative classification. Def.’s Br. 29-30. Defendant claims that “[t]he proppants do not satisfy the definition of ‘mixture’ because the chemical components do not retain their identities and are not able to be separated after firing.” *Id.* at 29. The term “mixtures of inorganic compounds” is used in subheading 3824.90.39 in a chemical context in that it uses both the term “mixtures” and the term “inorganic chemical compounds.” However, the novel definition of “mixtures” advocated by defendant is contrary to definitions of the term commonly understood in chemistry. *See, e.g.,* “Mixture,” *Hawley’s Condensed Chem. Dictionary* 754 (14th ed. 2001) (Richard J. Lewis Sr. Ed.) (defining a mixture as “[a] heterogeneous association of substances that cannot be represented by a chemical formula,” explaining that “[i]ts components may or may not be uniformly dispersed and can usually be separated by mechanical means,” and providing as examples of artificial mixtures glass, paint, cement, plastics, and cermets).

²² A ten-digit statistical breakout (subheading 2606.00.0060, HTSUS), is provided for calcined, non-refractory grade bauxite, a description to which the subject goods conform, as stated above. Subheading 2606.00.0060, HTSUS.

Defendant's motion for summary judgment must be denied. The primary classification defendant advocates, subheading 6909.19.50, HTSUS, is precluded by GRI 1, HTSUS, because the proppants are not "ceramic wares" within the intended meaning of that term as used in heading 6909, HTSUS. Defendant's alternate classification claim, subheading 3824.90.92, HTSUS, is incorrect because heading 3824, HTSUS is limited to goods "not elsewhere specified or included." Heading 3824, HTSUS. Defendant's other alternate classification claim for subheading 6914.90.80, HTSUS, is incorrect because heading 6914, HTSUS is confined to "ceramic articles" rather than substances such as the proppants at issue.

H. Denial of Remaining Motions

Also before the court are various motions related to discovery and confidentiality.²³ With the consent of the parties, the court has held in abeyance any rulings on these motions. June 3, 2013 Tel. Conference, ECF No. 45; Aug. 8, 2013 Status Conference, ECF No. 52; Oral Arg. Tr. 108-09.

Because the court reaches classification decisions upon a conclusion that there is no genuine issue of material fact precluding the granting of the summary judgment motion plaintiff has filed with respect to classification under heading 2606, HTSUS, the court will deny all discovery motions as moot. The confidentiality motions are also moot. Regarding confidentiality, plaintiff states that "Schlumberger's motion [to enforce the protective order] can be dismissed provided Defendant agrees not to publicly disclose documents marked as

²³ Schlumberger Tech. Corp.'s Mot. to Maintain Conf. Designations on Docs. it Produced (Mar. 20, 2013), ECF No. 29; Def.'s Mot. to Compel (Apr. 12, 2013), ECF Nos. 32 (conf.), 33 (public); Def.'s Mot. for a Stay of Completion of Disc. Pending Resolution of the Mot. to Compel (Apr. 12, 2013), ECF No. 34; Schlumberger Tech. Corp.'s Mot. for Leave to File its Reply to Def.'s Opp'n to Pl.'s Mot. to Maintain Conf. Designations on Docs. it Produced (Apr. 17, 2013), ECF No. 35; Def.'s Consent Mot. for Oral Arg. (May 13, 2013), ECF No. 41.

confidential. Defendant's two motions can be dismissed as moot." Pl.'s Br. 15 n.1. By the terms of the protective order entered in this case, Stipulated Protective Order ¶ 2(a) (April 24, 2012), ECF No. 21, confidential information remains protected and those portions of a document provided by a producing party that "are not confidential shall not be restricted by this Protective Order."

II. CONCLUSION

For the reasons stated above, the court will grant plaintiff summary judgment under which the imported proppants are classified under subheading 2606.00.00, HTSUS, free of duty. The court will deny defendant's motion. All other motions will be denied as moot.

/s/Timothy C. Stanceu
Timothy C. Stanceu
Chief Judge

Date: July 22, 2015
New York, NY