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31 May 2016

Federal Trade Commission
Office of the Secretary
600 Pennsylvania Avenue, NW, Suite CC-5610 (Annex O)
Washington, DC 20580

Re: Jewelry Guides, 16 CFR Part 23, Project No. G711001

In Re: Petition on Proposed Revisions to the Guides for the Jewelry, Precious Metals, and Pewter Industries (Jewelry Guides)

Introduction

The Diamond Producers Association (DPA) submits these comments to the Federal Trade Commission (FTC) on behalf of its members.[1] The DPA respectfully urges that the FTC reconfirm its conclusion that the term "cultured" is deceptive when used to refer to synthetic diamonds, and not expand the existing deceptive use of the term by permitting its use in conjunction with ineffective disclaimers. Permitting any use of the term "cultured" in association with synthetic diamonds will only serve to deceive and create consumer confusion. Adding "laboratory-created," "laboratory-grown," or any other qualifier does not change this analysis. To prevent deception and consumer confusion, the FTC should also harmonize the Jewelry Guides with international standards.

The DPA exists to help maintain and enhance consumer demand for, and confidence in, diamonds. By promoting the integrity and reputation of diamonds and the diamond industry, the DPA hopes to play a central role in ensuring the

[1] Formed in May 2015, member companies of the DPA are Public Joint Stock Company ALROSA, De Beers UK Ltd., Dominion Diamond Corporation, Gem Diamonds Ltd., Lucara Diamond Corporation, Petra Diamonds Ltd., Rio Tinto Diamonds Ltd.

long-term sustainability of the sector. Since the United States is a core market for polished diamonds,[2] the DPA and its members are concerned about U.S. consumers' confidence in diamonds and the diamond industry. As diamonds are an emotionally-driven, discretionary purchase, it is paramount that consumers can rely on the transparency and integrity of the diamond trade and have confidence that the purchases they make will be fully informed. The Jewelry Guides play an important role in maintaining this consumer confidence and the FTC should not dilute them or their credibility by allowing any use of the word "cultured" to describe synthetic diamonds.

I. The FTC acknowledges that use of the term "cultured" alone to describe synthetic diamonds is deceptive.

A. Synthetic diamonds are not "natural."

As the FTC recognizes, the unqualified use of the term "cultured" to describe synthetic diamonds is deceptive. It conveys the misleading impression that a synthetic diamond is "natural."[3] This is indisputably correct. As will be elaborated below, synthetic diamonds are manufactured in a factory process completely unlike natural diamonds, which were formed in the Earth's mantle at depths of 150–200 km and temperatures of 90–1200°C, approximately 0.9–3.5 billion years ago (from isotopic analysis of inclusions). Natural diamonds were stored under cratons at least 110 km below the Earth's surface at pressures of 45-60 kbar until forced to the surface by kimberlite or lamproite eruptions.

B. Synthetic diamonds are not "cultured."

Moreover, the term "cultured" is deceptive because the process by which synthetic diamonds are created is not an organic, cultured process. As the FTC recognizes in the context of pearls in the current Jewelry Guides, culturing involves human intervention or initiation in an *organic process*. A natural pearl is an organic material formed by a process which has not "in any way been caused or induced by humans."[4] By contrast, a "cultured pearl" is a "composite product created when a nucleus . . . planted by humans inside the shell or in the mantle of a mollusk is coated with nacre by the mollusk."[5]

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[2] *See* The De Beers Group of Companies, *The Diamond Insight Report: In Brief* (2015), available at http://www.debeersgroup.com/en/reports/insight/insight-reports/insight-report-2015/foreword.html. The report aims to provide an annual perspective on the global diamond industry, drawing on The De Beers Group of Companies' extensive proprietary data and insight as well as other industry sources.

[3] *See* Federal Trade Commission, Statement of Basis and Purpose: Proposed Revisions to the Jewelry Guides 103 (December 28, 2015), https://www.ftc.gov/system/files/documents/public_statements/896953/151222jewelryguidesstatement.pdf ("FTC Statement") ("As discussed below, the consumer perception evidence shows that the unqualified term may convey the deceptive impression that a diamond is natural, *i.e.*, not created in a laboratory.").

[4] *See* Guides for the Jewelry, Precious Metals, and Pewter Industries, 16 C.F.R. § 23.18(a) (defining "pearl").

[5] *See id.* § 23.18(b) (defining "cultured pearl").

But the process by which a synthetic diamond is manufactured is neither natural nor cultured. While synthetic diamonds may have the same optical, physical, and chemical properties as natural diamonds, they have different growth structures and impurities that enable their identification using specialist equipment. These differences stem from the fact that the processes by which they are manufactured do not replicate the growth conditions experienced during natural diamond formation and cannot be defined as organic.[6] Two different production technologies are used to create synthetic diamond material — the High Pressure, High Temperature (HPHT) process and the Chemical Vapor Deposition (CVD) process. These bear no commonality with the growth process experienced by natural diamonds which takes place over a significantly longer period of time and under very different conditions.

HPHT Synthesis: By contrast to natural diamond formation or an organic process, HPHT synthesis employs complex mechanical presses constructed to generate pressures of around 50,000 atmospheres and temperatures of around 1300^{o}C within a synthesis capsule (generally higher than pressures and temperatures natural diamonds are exposed to under the Earth's upper mantle). The synthesis capsule is made in a configuration and from materials which are entirely different from those associated with formation of natural diamonds. This is to enable the synthetic diamonds to be manufactured over short timeframes (typically weeks) at economically viable rates, whereas natural diamonds are necessarily formed under natural occurring geological conditions possibly over millions of years.

For the HPHT process, the source of carbon is normally purified graphite. The graphite dissolves in a solvent-catalyst typically formed of a combination of transition metals such as cobalt, iron and nickel. A temperature gradient is applied to the growth capsule so that carbon dissolved in the solvent-catalyst precipitates out onto synthetic diamond "seed" crystals, and diamond forms layer by layer on the seed crystal since diamond is the stable form of carbon under these temperature-pressure conditions. Natural diamonds are not formed in pure transition metals — evidence from inclusions show that they develop naturally from melts in environments of carbonates, eclogites, peridotites, garnets, and clino-pyroxenes.[7]

CVD Synthesis: For the CVD process, the production conditions are quite different from the HPHT process and entirely different from those associated with the formation of natural diamonds. The synthesis is achieved at sub-atmospheric pressure by introducing carbon containing gases into a reactor and heating them to a plasma (typically using

[6] See Annex 1: *The Technical Properties and Formation of Synthetic Diamonds*, De Beers Technologies UK (May 2016) for further details.

[7] De Beers Technologies UK researchers are not aware of a single case where purely metallic inclusions have been found in natural diamonds.

microwave energy). Many complex chemical reactions and species are formed and carbon from the plasma is deposited onto synthetic substrate or "seed" crystals in the form of diamond, growing layer by layer. This process is used to create the majority of gem quality synthetic diamonds.

In most cases, the seed used is also synthetic. In principle, natural diamonds can be used as seed crystals for both HPHT and CVD synthesis, but in practice synthetic crystals are used for all commercial processes because of their lower cost and wider availability. The seed crystals used for HPHT synthesis are typically synthetic grit particles which were originally produced by the HPHT process and those used in the CVD process are larger slabs of HPHT synthetic or CVD synthetic diamond material. It is not possible to detect the nature of the seed crystal used to create HPHT synthetics as the seed is removed after the material is created. Similarly with CVD, the nature of substrates or seeds used cannot be determined once these seeds have been removed from the grown crystal after the growth process has completed.

The synthetic process is wholly man-made and industrial. This process is not natural. This process is not organic. Any use of "cultured," which implies otherwise, is deceptive.

II. The deception inherent in using "cultured" in connection with diamonds cannot be cured by a disclaimer such as "laboratory-grown."

The confusion caused by use of the term "cultured" cannot cured by a disclaimer, such as "laboratory-grown." A disclaimer or qualifier alone cannot remedy a deceptive or confusing term, [8] especially if the disclaimer is "likely to cause confusion by creating contradictory double meanings."[9] Allowing "cultured" with qualifiers would still be inherently deceptive. Moreover, it would create an inconsistency within the Jewelry Guides and, as recent consumer perception evidence shows, would continue to confuse reasonable consumers.

A. Using the term "cultured" for synthetic diamonds is inherently deceptive.

As discussed above, synthesizing and culturing are completely different processes. The impression conveyed by "cultured" contradicts the reality of the process by which synthetic diamonds are manufactured. Adding "laboratory-grown" or "laboratory-created" does not adequately remedy the problem. It only creates a contradictory double meaning. A "cultured synthetic diamond" is an oxymoron. This is not a situation in which a disclaimer can provide useful context to prevent a potentially misleading claim from being misunderstood. Using "cultured" to refer to synthetic diamonds is simply inaccurate.

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[8] Bureau of Consumer Protection, FTC, Advertising on the Internet: Rules of the Road 3 (2000), https://www.ftc.gov/system/files/documents/plain-language/bus28-advertising-and-marketing-internet-rules-road.pdf.

[9] *Removatron International Corp. v. Federal Trade Commission*, 884 F.2d 1489, 1497 (1st Cir. 1989).

B. Allowing use of the term "cultured" to refer to diamonds, even with a disclaimer, creates a material inconsistency within the Jewelry Guides and would lead to consumer confusion.

Consumers are accustomed to hearing the term "cultured" in the context of "cultured pearls." The Jewelry Guides already provide a framework for when "cultured" can be used to describe pearls.[10] A natural pearl is created without any human intervention.[11] A cultured pearl is created when a human intervenes and initiates an organic process.[12] Given the difference between the organic process by which cultured pearls are created and the industrial process by which synthetic diamonds are created, allowing use of the term "cultured" to describe synthetic diamonds would create a fundamental terminological inconsistency within the Jewelry Guides.

Consumer perception evidence also shows that allowing "cultured diamonds" (even with the proposed disclaimer) alongside cultured pearls would likely confuse a significant minority of reasonable consumers.[13] In April 2016, Harris Poll surveyed 1,014 U.S. residents aged eighteen and older who either purchased fine jewelry in the past year or would at least consider purchasing any in the future ("jewelry non-rejecters" or "JNRs").[14] The consumer perception evidence from that survey shows that a significant minority of consumers associate the term "cultured" with pearls. When asked an open-ended question about spontaneous associations of the term "cultured" in the context of gems and jewelry, the biggest single mentions were pearls:

- Pearls/cultured pearls: 22%.
- Pearls that are created/grown inside of oysters: 4%.

Together, these two responses accounted for over a quarter of all respondents. (Only 85% respondents provided an association — 15% had no association or declined to answer.) Based on all who provided an association, 31% linked "cultured" to pearls. No other individual association came close.

Confirming this association, almost 1 in 7 surveyed JNRs believe that a "cultured laboratory-grown/created diamond" is made the same way as a cultured pearl. And half of surveyed JNRs simply do not know if the process is the

[10] *See* 16 C.F.R. § 23.18 (defining various kinds of pearls).

[11] *See id* § 23.18(a).

[12] *See id.* § 23.18(b).

[13] *See Pom Wonderful, LLC v. Federal Trade Commission*, 777 F.3d 478, 490 (D.C. Cir. 2015).

[14] See Annex 3. The final data has been weighted to reflect the composition of the U.S. adult population by age, sex, ethnicity, education, region and household income in line with U.S. population. All references in this submission to consumer perception evidence relies on the Harris Poll survey. Through its involvement in the Jewelers Vigilance Committee (JVC), DPA member De Beers UK Ltd. partially funded the Harris Poll through a donation to the JVC.

same, which makes them susceptible to misleading claims. Allowing "cultured" to be used in conjunction with diamonds could create the misleading impression that "cultured laboratory-grown diamonds" are similar to cultured pearls in how they are produced.

C. New consumer perception evidence supports that allowing the term "cultured diamonds," even with a qualifier, is misleading generally.

Even apart from the confusion with cultured pearls, consumer perception evidence shows that the term "cultured diamonds," even qualified by "laboratory-grown" or similar language, would be misleading and cause confusion for at least a significant minority of reasonable consumers.

1. Consumers have a low understanding of synthetic diamonds.

First, reasonable consumers have a low understanding of the terminology surrounding synthetic diamonds. The Harris Poll asked whether pairs of terms relating to "diamonds" meant the same thing. The responses showed a very low awareness and understanding of what synthetic diamonds, by any name, really are. Two in three respondents either did not know that the paired terms below meant the same thing or incorrectly stated that the terms did not mean the same thing:

Do the paired terms mean the same thing? (Correct: yes)	Do not know (%)	No, not the same (%)
A **[manufacturer name]-created diamond** and a **cultured [manufacturer name]-created diamond**	44	22
A **laboratory-created diamond** and a **cultured laboratory-created diamond**	45	22
A **laboratory-grown diamond** and a **cultured laboratory-grown diamond**	45	22
A **synthetic diamond** and a **cultured synthetic diamond**	43	24

When asked which was the best description of the term "cultured laboratory-grown/created" diamond, half (50%) said they did not know or that there was no good description. Nearly 1 in 6 thought it meant an artificial seed grown in a natural environment (like a cultured pearl) (16%) or a natural seed grown in a natural environment (like a cultured pearl) (14%).

Given this general unawareness of the underlying technical processes, consumers can be easily confused by misleading terms.

2. Allowing the term "cultured" when describing synthetic diamonds adds to consumer confusion.

Second, introducing the term "cultured" when describing synthetic diamonds only adds to consumer confusion. According to the Harris Poll, 45% of consumers find the term "synthetic" most accurate for this product. Of the 45% that chose the term "synthetic," 57% did so because it describes the product as not "real"/natural (which is the most accurate observation). The Harris poll also shows that "synthetic," "lab-grown," and "lab-created" have the highest associations with the statement "a product generated by man in special conditions" (agreement is in excess of 70% or respondents).

By contrast, "cultured diamond" and "cultured [manufacturer name]-created diamond" have considerably higher associations with holding value over time like a natural diamond, grown on a farm in natural conditions, generated the same way as a natural diamond, and as rare as a natural diamond than the options that do not contain the word "cultured."[15] The use of the term "cultured" evidently raises false expectations and beliefs and increases the perception that it is a better holder of value over time, rarity, and natural origins so as to makes it more appealing. Indeed, current advertising by some synthetic diamond manufacturers preys on this consumer confusion and may be driving it. Synthetic diamond manufacturers often misrepresent the production process, implying that it is "natural," and refer to their products as "cultured" diamonds. For example, Pure Grown Diamonds claim that it is "Growing Seeds of Beauty: Like the most exotic orchid found in nature, the orchid lovingly grown in the greenhouse is equally rare and beautiful. The same is true for Pure Grown Diamonds. Similar to a greenhouse, the grown diamond process duplicates what occurs naturally, creating a rare, beautiful and sustainable product." The Diamond Foundry's website states that it is "sustainably culturing diamonds," and Brilliant Earth's website uses the term "cultured diamond" as a category to describe its laboratory-created diamonds.[16]

III. The FTC should harmonize the Jewelry Guides with international standards.

The FTC should harmonize the Jewelry Guides' treatment of "cultured diamonds" with international standards. As the FTC recognizes, international harmonization is important, [17] especially for a product like diamonds where the

[15] Harris Poll, Q755.

[16] *See* Annex 4: *Evidence of the Marketing of Synthetic Diamonds* (May 2016) for further detail.

[17] *See* FTC Statement at 7 ("The Commission tries to harmonize its guidelines with international laws and standards whenever possible.").

appeal and consumption are worldwide.[18] Having different terms used in different countries is likely to create consumer confusion. Indeed, reasonable consumers believe that the use of different nomenclature is an attempt to trick them. Strong majorities agree that:

- Different terms should be clearly defined for consumers (93%).
- Different terms are used for man-made diamonds in an attempt to trick consumers (81%).

International nomenclature is important to JNRs. Strong majorities endorsed these statements:

- The same terms for man-made diamonds should be used universally (i.e., in the United States and other countries) (91%).
- I would find it confusing if different terms were used in the United States and other countries when describing man-made diamonds (85%).

To meet this expectation, current international standards such as the International Organization for Standardization (ISO), the Diamond Book produced by the World Jewellery Confederation (CIBJO), the Responsible Jewellery Council Code of Practices, and the Signet Jewelers' Responsible Source Protocol have a standard nonemclature, which allows use of the terms "laboratory-grown" and "laboratory-created" to describe synthetic diamonds, but prohibits use of the term "cultured" (even with qualifications).[19] The ISO Standard for Jewellery — Consumer confidence in the diamond industry (ISO 18323:2015(E)), for instance, was adopted with the aim of protecting the consumer. It is currently applicable in all major diamond markets, including the U.S., to support consistent disclosure to protect consumer confidence in the diamond industry. The development of the ISO Standard followed the transparent and consultative approach mandated by ISO and included a project committee of technical experts from a wide range of sources including trade bodies, academia, public authorities and industry, a public enquiry (in line with the European Committee for Standardization (CEN) and ISO Standards process) and a formal voting offered to all CEN and ISO members. It covers the nomenclature to be used by those involved in the buying and selling of diamonds, treated diamonds, synthetic diamonds,

[18] *See* The De Beers Group of Companies, *The Diamond Insight Report: In Brief* (2015), available at http://www.debeersgroup.com/en/reports/insight/insight-reports/insight-report-2015/foreword.html.

[19] *See* ISO 18323:2015(E), *Jewellery – Consumer confidence in the diamond industry* (2015); The World Jewellery Confederation, The Diamond Book (2015) at http://www.cibjo.org/introduction-to-the-blue-books/; Responsible Jewellery Council at http://www.responsiblejewellery.com/; Signet Jewelers, Responsible Sourcing Protocol – Diamonds (2016) at https://signetresponsiblesourcing.com/Signet%20Documents/Signet%20Jewelers%20D-SRSP_January2016.pdf.

composite diamonds, and imitations of diamonds as well as consumers. The ISO Standard was aligned with widely accepted industry self-regulating documents such as the Diamond Book produced by the CIBJO.

Given the importance of international consistency, given the robustness by which the international standards were developed, and given that the term "cultured" is inherently deceptive when used to describe synthetic diamonds, the FTC should harmonize the Jewelry Guides' treatment of the term with international standards.

Conclusion

First, the FTC should not add a new diamond example to Section 23.12(c)(3) that expands the deceptive use of "cultured" in diamond marketing through ineffective disclaimers such as "laboratory-created," "laboratory-grown," "[manufacturer name]-created," "synthetic," or any other word or phrase of like meaning.

Second, the FTC should make clear in its analysis of the revised Jewelry Guides that use of the word "cultured diamonds" (or any other terminology that suggest it is an organic or natural process, e.g., "cultivated diamonds") to describe synthetic diamonds (even together with qualifiers) is deceptive and misleading.

Third, the FTC should review the current marketing practices by synthetic manufacturers. Many synthetic diamond manufacturers misrepresent the production process of their product, implying that it is "natural," and refer to their products as "cultured" diamonds.

Fourth, the FTC should harmonize the jewelry guides with relevant international standards.

The DPA would welcome the opportunity to discuss this issue further with the FTC.

Respectfully submitted this May 31, 2016.

DIAMOND PRODUCERS ASSOCIATION

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Jean-Marc Lieberherr
Chief Executive Officer

Annex – Supporting Evidence

1. The Technical Properties and Formation of Synthetic Diamonds, De Beers Technologies UK, May 2016
2. Declaration of Professor Mark Newton, University of Warwick, attesting to the science of synthetic diamond formation, May 21, 2016
3. Jewelers Vigilance Committee (JVC) survey conducted by Harris Poll, April 20, 2016
4. Current Marketing Practices by Synthetic Diamond Manufacturers, May 2016