COMMENTS ON PROPOSED CHANGES TO 16CFR Part 23: Guides for the Jewelry, Precious Metals, and Pewter Industries (Jewelry Giudes; Request for Public Comments on Proposed amendments

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Background: Dr Corti has over 38yrs of experience in the precious metals industry, with Johnson Matthey Plc, World Gold Council and, latterly running his precious metals technology consultancy, COReGOLD.

He was research manager, Materials Technology at the Johnson Matthey Technology Centre, later Technical Director in their Colour & Print division [1978 – 1992]

He was Managing Director, International Technology at World Gold Council (the marketing organisation of the world's gold mining companies) [1994-2004; consultant to 2009]

He is Managing Director of his technology consultancy, COReGOLD [2004-]

He has presented and published on jewelry technology materials & processes extensively (80+ papers, including the prestigious Santa Fe Symposium in USA), has lectured extensively on jewelry technologies at major jewelry –producing centres around the world, has co-edited a book, *Gold Science and its Applications,* 2009, pub Taylor & Francis, has edited 2 journals, *Gold Bulletin* & *Gold Technology* and is currently consultant to the Worshipful Company of Goldsmiths in the UK (runs London Assay Office), GIA in California and to major jewelry companies around the world.

He led the MJSA/World Gold Council task force to define white gold

Comments

A] Below Threshold Metals

1. **Below Threshold (10K) gold:** This should not be changed. It would go against recognised international standards. The public perception of precious metals as noble, having high value and integrity would be destroyed.

   Low karat golds are essentially copper-based brasses with small amounts of gold. Their properties are more akin to base metal brasses than noble metals. They will suffer tarnish and corrosion problems that we do not see with current karat golds. They will be prone to premature failure (stress corrosion cracking).

   Such low karat gold products should not be marked as gold or low karat gold. They should be marked as base metal with gold content (%).

2. **Below Threshold (925) silver:** This should not be changed. Keep Sterling Silver as a standard in line with international standards and public perception of high silver content and value.. Lower fineness silvers are more prone to tarnish and corrosion problems, to firestain and have poorer color. The economic argument for lower fineness is not strong either. Sterling silver is affordable to the wider public.

Lower silver materials should be marked with silver content and other metal content (%) but not described as Silver.

3. **Below threshold (500) platinum:** such below 500 fineness platinum alloys are not platinum but are base-metal- or platinum group metal-based with platinum as an alloying metal. This threshold should not be changed. Such low platinum alloys would not be so noble, and the public perception of platinum as having a high value and integrity would be destroyed. Technically, such alloys would have much inferior tarnish and corrosion resistance and possibly be prone to premature failure through cracking mechanisms.

B] Using PPT to Describe gold

Use of fineness (parts per thousand, ppt, is widespread internationally. For example, in the UK, karat golds, silver and platinum jewelry are all Hallmarked in fineness terms, replacing use of karat some years ago, even though such gold jewelry is still described in karatage terms. I believe that both systems are valid, but switching to fineness would confuse the public. The public a understand karats and are happy with its use.

C] Surface layer Applications

4. **Misrepresentation of surface layer applications of gold**

I am happy with the proposed FTC definition of 'reasonable durability'.

5. **Gold plate:** 'Plated' cannot be used for both mechanical and electro processes. Such layers have different characteristics and properties. They must be named and described separately. I recommend keeping #23.4(c)(2) which sets a minimum 0f 0.5 microns (20 microinches) for 'plate'. Minimum for mechanical: 10K, disclose karat quality; disclose weight ratio if less than 1/20th No minimum thickness requirement Mininmum for electrolytic: at least 10K, disclose karat quality, at least 0.175 microns (7 microinches) thickness. Reasonable durability required for both types of plate.

6. **Gold Filled:** Leave unchanged. A mechanical process; should be a minimum of 1/20th and minimum of 10K. No thickness requirements. Reasonable durability required.

7. **Rolled gold plate:** Leave unchanged. Mechanical process. Disclose weight ratio if less than 1/20th. Minimum of 10K. Disclose karat quality. No thickness requirement. Reasonable durability required.
8. **Gold Overlay:** Leave unchanged. Mechanical process. Disclose weight ratio if less than 1/20th. Minimum of 10K. Disclose karat quality. No thickness requirement. Reasonable durability required.

9. **Gold bonded:** Should be similar rule to other products above: Mechanical process. Minimum of 1/20th; minimum of 10K. Disclose karat quality. Sterling base. No thickness requirement. Reasonable durability required.

10. **Gold Clad:** Should be similar rule to other products above: Mechanical process. Disclose weight ratio if less than 1/20th. Minimum of 10K. Disclose karat quality. No thickness requirement. Reasonable durability required.
11. **Gold Electroplate:** Karat quality needs to be disclosed. Hence, Minimum thickness of .175µ (7µin); at least 10K; disclose karat quality; reasonable durability required.
12. **Gold flashed & gold washed:** No major change but reasonable durability required

13. **Heavy gold electroplate:** Some change recommended: At least 10K; disclose karat quality; no minimum thickness; reasonable durability required.
14. **Duragold, Diragold, noblegold, Goldline and Layered Gold:** Terms no longer valid. Remove these terms.
15. **Gold layered:** Recommend: At least 10K; disclose karat quality; no minimum thickness; reasonable durability required.
16. **Gold over:** Recommend: At least 10K; disclose karat quality; no minimum thickness; reasonable durability required
17. **Vermeil:** Need to disclose karat quality. Recommend: Sterling base coated with gold alloy; at least 10K; disclose karat quality; minimum thickness of 2.54µ (100 µin); reasonable durability required.
18. **Gold tone:** Recommend: At least 10K; disclose karat quality; no minimum thickness; reasonable durability required
19. **Surface layer applications of silver:** I accept FTC's proposal on applications of silver
20. **Surface layer applications of platinum:** I accept FTC's proposal but would add reasonable durability as a requirement
21. **Surface application of rhodium:** Must be disclosed. I accept FTC's proposal but would add reasonable durability as a requirement
22. **Surface layer application of other PGMs:** Reasonable durability should be required.

D] Products with more than one precious metal

23. **Two or more precious metals (surface layer applications, as well as components that are precious metal throughout):** I accept FTC's proposal here.

E] Palladium

24. **PGMS generally:** I believe fineness standards are required to be consistent with the other jewelry metals. The public need assurance of the value and integrity of their jewelry.

F] Product Marking

25. **Use of term 'mark':** I recommend no change but need to reflect that marks are now put on by laser engraving as well as mechanical stamping

Dr Christopher W Corti. 3 rd June 2016