

SAFE GUARDS

SGS CONSUMER TESTING SERVICES

HARDGOODS, SOFTLINES

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ASTM PUBLISHES NEW STANDARD SAFETY SPECIFICATION FOR ADULT JEWELRY

In November 2011, the American Society for Testing and Materials (ASTM) International announced the release of the new standard method ASTM F 2923-2011 'Standard Specification for Consumer Product Safety for Children's Jewelry'¹. In May 2013, ASTM International published the new standard method ASTM F 2999-13 'Standard Consumer Safety Specification for Adult Jewelry'².

The new standard establishes test methods and requirements for chemicals as well as requirements for certain mechanical hazards³. It also provides guidelines for jewelry designed or intended primarily for consumers over the age of 12, including the use of intended user labeling such as:

- Not for children 12 and younger
- Not for < 12
- For 13+
- Adult use only

Under the new standard, jewelry is defined as a product principally designed and intended as an ornament worn by a person and includes:

1. Anklet, arm cuff, bracelet, brooch, chain, crown or tiara, cuff link, hair accessory with significant decorative elements, earrings, ear cuffs, necklace, pins such as tie tacks and trading pins, ring, body piercing jewelry,
2. Jewelry placed in the mouth for display or ornament,
3. Any component of a product listed in (1-2) above,
4. Any charm, bead, chain, link, pendant or other attachment to shoes or clothing designed to be removed and worn, alone or attached to an item in (1-2) above, as an ornament by a person,
5. Watch in which a timepiece is a component of an ornament, excluding the timepiece itself if the timepiece can be removed from the ornament,

6. Jewelry components in craft kits where the final assembled jewelry product is principally designed and intended as an ornament worn by a person.

Additional requirements covered by the new standard include:

1. body piercing jewelry is required to be manufactured exclusively from specific materials,
2. a list of materials that are exempted from lead limits (Table 1).

Body piercing jewelry shall be made exclusively from:

- Surgical implant stainless steel,
- Surgical implant grade titanium
- Niobium (Nb),
- Solid 14K or higher white or nickel-free gold,
- Solid platinum,
- A dense, low-porosity plastic, including, but not limited to Tygon or Polytetrafluoroethylene (PTFE) if the plastic contains no intentionally added lead.

[SafeGuards 203/11](#)

[ASTM site search](#)

[ASTM F2999-13 Standard Consumer Safety Specification for Adult Jewelry](#)

The logo for SGS, consisting of the letters 'SGS' in a bold, sans-serif font, with a vertical line to the right of the letters and a horizontal line below the letters.

Table 1

Materials excluded from lead limits	
•	Stainless or surgical steel
•	Precious metals [karat gold, sterling silver (at least 925/1000), platinum, palladium, iridium, ruthenium, rhodium, osmium and titanium]
•	Natural or cultured pearls
•	Glass, ceramic, or crystal decorative components, including cat's eye, cubic zirconia, cubic zirconium (CZ), rhinestones and cloisonné
•	Non-lead containing semi-precious gemstones and other minerals, excluding aragonite, bayldonite, boleite, cerussite, crocoite, ekanite, linarite, mimetite, phosgenite, samarskite, vanadinite, and wulfenite.
•	Wood provided not treated with lead
•	Paper and similar materials manufactured from wood or other cellulosic fiber, including, but not limited to, paperboard, linerboard and medium, and coatings on such paper that soak into the paper and cannot be scraped off
•	Elastic, fabric, ribbon, rope, or string, unless it contains intentionally added lead
•	All natural decorative material, including amber, bone, coral, feathers, fur, horn, leather, shell, or wood, that is in its natural state and is not lead treated
•	Adhesive
•	Repurposed components. These are found 'objects' that are incorporated into jewelry, and may include, but are not limited to, silver or pewter utensils, bottle caps, buttons

Highlights of the new standard for chemicals and non-chemicals are summarised in Tables 2, 3 and 4.

Table 2

ASTM F2999-13 (Chemical requirements)				
Item	Substance / parameter	Scope (Accessible unless liquid-filled)	Method	Requirement
1	Lead content	Electroplated metal	See Table 3	≤ 6.0%
2	Lead content	Unplated metal		≤ 1.5%
3	Lead content	Plastic or rubber including acrylic, polystyrene, plastic beads and stones and polyvinyl chloride (PVC)		≤ 200 ppm
4	Lead content	Materials not otherwise classified		≤ 600 ppm
5	Lead content	Paint or surface coating		≤ 600 ppm
6	Soluble heavy metals	Paint or surface coating (≤ 10 mg not to be tested)	ASTM F 963-11	≤ 60 ppm (antimony) ≤ 25 ppm (arsenic) ≤ 1000 ppm (barium) ≤ 75 ppm (cadmium) ≤ 60 ppm (chromium) ≤ 60 ppm (mercury) ≤ 500 ppm (selenium)

To be continued

ASTM F2999-13 (Chemical requirements)				
Item	Substance / parameter	Scope (Accessible unless liquid-filled)	Method	Requirement
7	Cadmium	Small part plastic / polymeric component	Cadmium content See Table 3 Soluble cadmium EN 71-3	≤ 1.5% cadmium content otherwise ≤ 75 ppm soluble cadmium
8	Cadmium	Small part metal	Cadmium content See Table 3 Migratable cadmium CPSC-CH-E1004-11	≤ 1.5% cadmium content otherwise ≤ 200 µg migratable cadmium
9	Cadmium	Mouthable plastic / polymeric or metal (component < 5 cm in 1 dimension) but not small part	Cadmium content See Table 3 Extractable cadmium Modified CPSC SOP for measuring lead in children's metal jewelry (Feb 3, 2005, Section II)	≤ 1.5% cadmium content otherwise ≤ 18 µg extractable cadmium
10	Nickel release	Metal components	EN 12472:2011 and / or EN 1811:2011 CR 12471:2002 (screening)	Statements regarding the propensity to release or expose consumers to nickel
11	16 CFR § 1500.14	Liquid filled	—	Liquid should not contain materials which would require special labeling under 6 CFR § 1500.14

Table 3

Test methods to determine total heavy element content, including for screening purposes			
Item	Method	Item	Method
1	ASTM F 2853-10	4	CPSC-CH-E1002-08.2
2	CPSC-CH-E1003-09.01	5	EPA 3050B, EPA 3051A or EPA 3052
3	CPSC-CH-E1001-08.2		

Table 4

Item	Scope	Remark
1	Adult jewelry containing batteries	Small part battery must not be accessible without use of coin, screwdriver or common household tool
2	Hazardous magnet	Presence of hazardous magnets should include warning statement EXAMPLE OF WARNING WARNING. Contains magnets. Prolonged wearing can form a hole in body tissue. Swallowed or inhaled magnets can attract through and squeeze intestines or other body tissue, causing serious injury or death. Seek immediate medical attention if swallowed or inhaled
3	Suction tongue studs	Should include warning statement EXAMPLE OF WARNING WARNING. CHOKING HAZARD. Keep away from children



SOLUTION

Throughout our global network of laboratories, we are able to provide a range of services, including materials composition and analytical testing for restricted substances including; California Proposition 65, California metal – containing jewellery law, ASTM F2923, CPSIA, US State laws and EU REACH. Please do not hesitate to contact us for further information or [visit our website](#).

FOR ENQUIRIES:

HARDGOODS Guangzhou Tel: +86 (0)20-82155522 Fax: +86 (0)20-82075192 hg.guangzhou@sgs.com
Shanghai Tel: +86 (0)21-61072799 Fax: +86 (0)21-54500353 hg.shanghai@sgs.com
SOFTLINES Guangzhou Paris Loo Tel: +86(0) 20 82155615 paris.loo@sgs.com
Shanghai Cathy Jiang Tel: +86(0) 21 61072801 cathy.jiang@sgs.com

Asia – Hong Kong. Tel: +852 2334 4481 Fax: +852 2144 7001 mktg.hk@sgs.com
Australasia – Perth. Tel: +61 (0) 3 9790 3418 Fax: +61 (0) 3 9701 0988 au.cts@sgs.com
Europe – London – UK. Tel: +44(0) 203 008 7860 Fax: +44 (0) 203 00 7870 gb.cts.sales@sgs.com
Africa & Middle East – Turkey. Tel: +90 212 368 40 00 Fax: +90 212 296 47 82 sgs.turkey@sgs.com
Americas – USA. Tel: +1 973 575 5252 Fax: +1 973 575 7175 uscts.inquiries@sgs.com

www.sgsgroup.com.cn Global Competence Support Centre: gcsc@sgs.com

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WHEN YOU NEED TO BE SURE

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