



GUESS GLOBAL

List of Restricted Substances and Materials (LRSM)





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1. INTRODUCTION

GUESS is committed to enhance the sustainability of both its global operations and local communities, and connect customers with more sustainable fashion choices. Building on that commitment, Guess has developed our List of Restricted Substances and Materials (LRSM) as a requirement to our suppliers and as assurance to our customers.

This LRSM identifies the chemicals we will limit or prohibit in our products or in the production process due to their potential impact on consumers, workers and the environment. It provides up-to-date information to our business partners, including direct sources and licensees, on product compliance with international consumer products regulations, to the best of our knowledge.

We continue to monitor changes in legal requirements as well as industry best practices and update this list as necessary. Additionally, we will collaborate and communicate with industry partners to foster these goals.

2. SCOPE

All GUESS branded products must comply with the relevant requirements.

3. BANNED MATERIALS

Type of materials	Remarks
Real Fur	In any part of the garments
Angora Wool	In any part of the garments
Gold	Electroplating of the hardware trims for apparel

4. RESTRICTED MATERIALS

Type of materials	Remarks
<u>Feathers and Down:</u> <ul style="list-style-type: none">- Feather and down is considered as an animal by-product in accordance with the International regulation- No live plucking for duck and goose material Feather and down coming from industrial plucking	Fillings



As for the dated test methods, only the edition cited applies. For undated test methods, the latest edition of the document available applies (including upgrades).

5. ALL PRODUCTS

Characteristic	Test Method*	Requirement	Substances
Azo dyes	Textile: EN 14362-1/3 Leather: EN 17234-1/2	Textile: max. 20 mg/kg Leather: max. 20 mg/kg	List 1
Carcinogenic dyes	ISO 16373-2	1 mg/kg	List 2
Disperse dyes (allergenic)	ISO 16373-2	Do not use	List 3
pH	Textile: ISO 3071 Leather: ISO 4045	Textile: 4.0-7.5 Leather: 3.2 – 7.5 ($\Delta pH \leq 0.7$)	
Formaldehyde	Textile: ISO 14184-1; JIS L 1041 Leather: ISO 17226-1 Wood: ISO EN 717-3	Baby: max. 16 mg/kg, Adult: max. 75 mg/kg Baby: max. 16 mg/kg, Adult: max. 75 mg/kg Adult, no skin contact max. 300 mg/kg	



Characteristic	Test Method*	Requirement	Substances
Formaldehyde	<p>[EAc]: GOST 25617 STB ISO 14184-1 ISO 14184.2 Leather: STB ISO 17226-1 GOST ISO 17226-1 GOST ISO 17226-2</p> <p>Fur: GOST 31280</p>	<p>KIDS</p> <p>SWIMWEAR and UNDERWEAR (first layer): 0-3 years: ≤ 20 µg/g 3-18 years: ≤ 75 µg/g</p> <p>BEACHWEAR: 0-18 years: ≤ 75 µg/g</p> <p>DENIM,KNIT and WOVEN first layer: 0-3 years: : ≤ 20 µg/g 3-18 years: ≤ 75 µg/g</p> <p>DENIM,KNIT and WOVEN second layer: 0-1 year: : ≤ 20 µg/g 1-18 years: ≤ 75 µg/g</p> <p>DENIM,KNIT and WOVEN third layer: 0-1 year: : ≤ 20 µg/g 1-18 years: ≤ 300 µg/g</p> <p>SWEATER (second layer) 0-1 year: : ≤ 20 µg/g 1-18 years: ≤ 75 µg/g</p> <p>LEATHER ≤ 20 µg/g</p> <p>FUR 0-1 year: : ≤ 20 µg/g 1-18 years: ≤ 75 µg/g</p>	



Characteristic	Test Method*	Requirement	Substances
Formaldehyde	[EAc]: GOST 25617 STB ISO 14184-1 ISO 14184.2 Leather: STB ISO 17226-1 GOST ISO 17226-1 GOST ISO 17226-2 Fur: GOST 31280	<p style="text-align: center;">ADULTS</p> <p>SWIMWEAR, BEACHWEAR and UNDERWEAR (first layer): ≤ 75 µg/g</p> <p>DENIM,KNIT and WOVEN: ≤ 75 µg/g first layer ≤ 300 µg/g second and third layer</p> <p>SWEATER ≤ 300 µg/g second layer</p> <p>LEATHER ≤ 300 µg/g ≤ 75 µg/g for leather lining</p> <p>ACCESSORIES ≤ 75 µg/g for kerchief and scarf products, handkerchiefs and other similar products ≤ 300 µg/g for gloves, mittens and other similar products</p> <p>FUR ≤ 300 µg/g</p>	



Characteristic	Test Method*	Requirement	Substances
Index of Toxicity	GOST P 53485	<p>ACCESSORIES (Kerchief and scarf products, handkerchiefs and other similar products;gloves, mittens and other similar products)</p> <p>In aqueous medium shall be from 70 to 120 percent inclusive In the air medium from 80 to 120 percent inclusive, or the local irritative effect shall be absent</p> <p>UNDERWEAR, SWIMWEAR, BEACHWEAR, DENIM (first-second layer), WOVEN (first-second layer), KNIT (first-second layer), SWEATER (second layer)</p> <p>In aqueous medium shall be from 70 to 120 percent inclusive In the air medium from 80 to 120 percent inclusive</p> <p>Alternatively, the local irritative effect shall be absent.</p>	
Phthalates	CPSC-CH-C 1001-09.3, EN 14372	≤ 0,1%	List 4
Lead content	CPSC-CH-E1001-08 CPSC-CH-E1002-08 CPSC CH E1003 9.1	Textile, leather, natural and plastic components < 40 mg/kg Metal < 90 mg/kg Paint < 40 mg/kg Glass < 100 mg/kg	
Cadmium content	EN 1122	< 50 mg/kg	
Chromium VI content	ISO 17075	3.0 mg/kg	



Characteristic	Test Method*	Requirement	Substances
Chromium VI content	[EAc]: Leather GOST R ISO 17075 Fur GOST 31280	Leather for KIDS: not allowed Fur for KIDS: 0-1 year: not allowed 1-18 years: ≤ 3,0 mg/kg Leather and FUR for ADULTS: ≤ 3,0 mg/kg	
Nickel release	EN 1811 (after ageing EN 12472 if coated)	Metal Components <0.50 µg/cm ² /week Body Piercings <0.11 µg/cm ² /week	
Arsenic and Mercury content	GB 28480	< 1000 mg/kg	
Extractable Cadmium	DIN 54233-3	0.1 mg/kg	
Extractable Arsenic	DIN 54233-3	0.2 mg/kg	
Extractable Mercury	DIN 54233-3	0.02 mg/kg	
Extractable Barium	DIN 54233-3	1000 mg/kg	
Extractable Selenium	DIN 54233-3	500 mg/kg	
Extractable Nickel	DIN 54233-3	1.0 mg/kg	
Extractable Copper	DIN 54233-3	25.0 mg/kg	
Extractable Lead	DIN 54233-3	0.2 mg/kg	
Extractable Chromium	DIN 54233-3	1.0 mg/kg	
Extractable Chromium VI	DIN 54233-3	0.5 mg/kg	
Extractable Cobalt	DIN 54233-3	1.0 mg/kg	
Extractable Antimony	DIN 54233-3	30.0 mg/kg	
Alkylphenols and Alkylphenols ethoxylates (APEO)	Textile; Solvent extraction, GC-MS analysis Leather; ISO/DIS 18218-1 GC-MS analysis	NP/OP: Maximum contamination limit SUM= 10 ppm Recycled Content Maximum contamination limit SUM= 50 ppm NPEO/OPEO: Maximum contamination limit SUM= 100 ppm Recycled Content Maximum contamination limit SUM= 250 ppm	List 5
Organotin compounds	Textile: ISO 23161 Modified Leather: ISO / TS 16179	Tri-substituted organotin compounds (TBT, TPT, TPhT): max. 0.5 mg/kg DBT, DOT, MBT: max. 1.0 mg/kg	List 6
Chlorinated Phenols	EN ISO 17070	PCP, TeCP, TriCP: 0.05 mg/kg OPP: 50 mg/kg	List 7
Chlorinated benzenes and toluenes	DIN 54232	Sum Max 1 mg/kg	List 8
N,N-Dimetilacetamide (DMA)	GCMS HS	< 20 mg/kg	
Acrylonitrile monomer	GC-MS HS	Max 2 mg/dm ³	



Characteristic	Test Method*	Requirement	Substances
Dimethylformamide (DMF)	Ultrasound extraction using ethylacetate/GC-MS analysis	< 1000 mg/kg	
Polycyclic Aromatic Hydrocarbons (PAH)	ZEK01.4-08	< 1.0 mg/kg	List 9
Other Volatile Content	GCMS-HS	< 20 mg/kg Benzene < 5 PPM	
Odour	GB 18401 section 6.7	Odourless	
Isocyanates	ISO 10283, EN 13130-2	< 0.002 mg/dm ³	List 10
Dimethylfumarate (DMFu)	ISO TS 16186	< 0.1 mg/kg	
Pesticides/ Herbicides	US EPA 8081A/8151A	0.2 mg/kg	List 11
N-Nitrosamine	GB/T 24153	0.5 mg/kg	List 12
Chlorinated solvents	DIN 54232	Max 0.1 mg/kg	List 13
Polyfluorinated chemicals (PFOS) (if water repellent treated)	CEN / TS 15968	Long Chain Perfluorinated and Polyfluorinated Chemicals (PFC's): BANNED FROM USE Short Chain Perfluorinated and Polyfluorinated Chemicals (PFC's): 2000 µg/m ²	List 14
Short chain chlorinated paraffins (if flame retardant treated)	Method based on ISO/DIS 18219	Sum Max. 0.01 % (100 mg/kg)	List 15
Brominated and chlorinated flame retardants (if flame retardant treated)	GB/T 24279	Tris(2-chloroethyl)phosphate (TCEP): 5 mg/kg Others: 10 mg/kg	List 16

*All applicable test method in EAC are present in the annex to TR 007, 017.



6. ADULTS

a. Chemical safety requirements for textile, polymeric and other materials, leather and light industry products made from them

Materials for product manufacturing	Name of determined substance	Requirement	
		water medium, (mg/dm ³), no more than	air medium, (mg/m ³), no more than
Natural materials from vegetative raw materials	Formaldehyde*	-	0.003
Cardboard Artificial (viscose and acetate)	Formaldehyde*	-	0.003
Polyester	Formaldehyde*	-	0.003
Polyamide	Formaldehyde*	-	0.003
	Caprolactam	1.0	0.06
	Hexamethylenediamine	0.01	0.001
Polyacrylonitrile	Formaldehyde*	-	0.003
	Acrylonitrile	2.0	0.03
	Dimethyl formamide	10	0.03
Polyvinylchloride	Formaldehyde*	-	0.003
	Acetone	-	0.003
	Benzene	2.2	0.35
	Toluene	0.01	0.1
	Dioctylphthalate	0.5	0.6
	Dibutylphthalate	2.0	0.02
	Dioctylbenzene-1,2-dicarbonate	not allowed	not allowed
	2.0	0.02	
	Cadmium (Cd)	0.001	-
	Zinc (Zn)	0.1	-
Chloroethane (vinyl chloride)	0.01	0.01	
Polyvinylacetate	Formaldehyde*	-	0.003
	Vinyl acetate	0.2	0.15
Polyolefine	Formaldehyde*	-	0.003
	Acetaldehyde	0.2	0.01
Polyurethane	Formaldehyde*	-	0.003
	Ethylene glycol	1.0	1.0
	Acetaldehyde	0.2	0.01
	Toluene diisocyanate	-	0.002
	Benzene	0.01	0.1
Toluene	0.5	0.6	
Polyorganosiloxane (silicones)	Formaldehyde*	-	0.003
	Acetaldehyde	0.2	0.01
	Methanole	3.0	0.5



Materials for product manufacturing	Name of determined substance	Requirement	
		water medium, (mg/dm ³), no more than	air medium, (mg/m ³), no more than
Leather, fur	Formaldehyde*	300	0.003
	Mass fraction of water-washable chrome (VI), mg/kg	-	-
		3.0	-
Rubber	Formaldehyde*	-	0.003
	Thiuram	0.5	-
	Diethylphthalate	2.0	0.02
	Dibutylphthalate	not allowed	not allowed
Extracted chemical elements (depending on colorant)	Arsenic (As)	1.0	-
	Lead (Pb)	1.0	-
	Chromium (Cr)	2.0	-
	Cobalt (Co)	4.0	-
	Copper (Cu)	50.0	-
	Nickel (Ni)	4.0	-

NOTES:

* The content of free formaldehyde shall be determined in all kinds of materials and shall be:

- no more than 75 g/g in clothes and materials for clothes of the first layer, inside layers of footwear, house and beach footwear;
- no more than 300 g/g for other products.

The normative is specified without background air pollution.



b. *Chemical safety requirements for textile materials and products from them treated with textile-processing chemicals*

Name of evolving volatile chemical	Requirements: air medium (mg/m³), no more than
Methylacrylate	0.01
Methylmethacrylate	0.01
Styrene	0.002
Xylenes (a mix of isomers)	0.2
Vinyl acetate	0.15
Methanol	0.5
Butanol	0.1
Phenol	0.003
Acetaldehyde	0.01
Toluene	0.6

NOTES:

Possibility of random inspection of "phenol" indicators is allowed.

Indicators shall be examined depending on composition of sizing agents being applied.



c. *Chemical safety requirements for leather accessories and materials for their manufacturing depending on material composition*

Material	Name of emitted substances	Requirements: air medium (mg/m³), no more than
Natural materials from vegetative raw materials, natural leather	formaldehyde	0,003*
Polyamide	formaldehyde caprolactam hexamethylendiamine	0,003* 0,06 0,001
Polyester	formaldehyde dimethyl terephthalate acetaldehyde	0,003* 0,01 0,01
Polyacrylonitrile	formaldehyde acrylonitrile vinyl acetate	0,003* 0,03 0,15
Polyurethane	formaldehyde toluene diisocyanate acetaldehyde	0,003* 0,002 0,01
Polyvinylchloride	formaldehyde phenol dioctylphthalate dibutylphthalate acetone	0,003* 0,003 0,02 - 0,35
Artificial viscose and acetate	formaldehyde	0.003*
Polyolefin	formaldehyde acetaldehyde	0.003* 0.01
Vinyl acetates (artificial leather)	formaldehyde vinyl acetate dioctylphthalate dibutylphthalate	0.003* 0.15 0.02 not allowed
Artificial leather with polyurethane or polyvinylurethane covering	formaldehyde dibutylphthalate dioctylphthalate	0.003* not allowed 0.02
Rubber	formaldehyde dibutylphthalate dioctylphthalate	0.003* not allowed 0.02
Cardboard	formaldehyde	0.003*

NOTES:

* The content of free formaldehyde shall be determined in all kinds of materials and shall be:

- no more than 75 g/g in clothes and materials for clothes of the first layer, inside layers of footwear, house and beach footwear;

- no more than 300 g/g for other products.

The normative is specified without background air pollution.



7. KIDS

a. Chemical safety requirements for textile materials

Materials for product manufacturing	Name of determined substance	Requirement	
		water medium, (mg/dm ³), no more than	air medium, (mg/m ³), no more than
Natural materials from vegetative raw materials	Formaldehyde*		0.003
Artificial (viscose and acetate)	Formaldehyde*		0.003
Polyester	Formaldehyde*	-	0.003
	Dimethyl terephthalate	1.5	0.01
	Acetaldehyde	0.2	0.01
Polyamide	Formaldehyde*		0.003
	Caprolactam	0.05	0.06
	Hexamethylenediamine	0.01	0.001
Polyacrylonitrile	Formaldehyde*		0.003
	Acrylonitrile	0.02	0.03
	Dimethyl formamide	10	0.03
	Vinyl acetate	0.2	0.15
Polyvinylchloride	Formaldehyde		0.003
	Vinyl chloride	1.0	0.01
	Acetone	0.1	0.35
	Benzene	0.01	0.1
	Toluene	0.5	0.6
	Dibutyl phthalate	2.0	0.02
	Dibutyl phthalate**	not allowed	not allowed
	Phenol or the amount of total phenols	0.05 0.1	0.003
Vinyl Alcohol	Formaldehyde*		0.003
	Vinyl acetate	0.2	0.15
Polyolefine	Formaldehyde*		0.003
	Acetaldehyde	0.2	0.01

NOTES:

*The aqueous medium - distilled water. Mass fraction of free formaldehyde must comply with the standards provided for each category.

**Only for materials made of natural fibers.



b. *Chemical safety requirements for textile materials and products from them treated with textile-processing chemicals**

Name of evolving volatile chemical	Requirements: air medium (mg/m³), no more than
Xylenes (mixed isomers)	0.05
Methylacrylate	0.02
Methylmethacrylate	0.25
Styrene	0.02
Methanol	0.2
Butanol	0.5
Phenol or the amount of total phenols	**
Vinyl acetate	**
Acetaldehyde	**
Formaldehyde	**

NOTES:

* indicators are examined, depending on the composition of the used coupling agents;

** standards of these indicators must comply with the requirements of Annex 10 of REACH technical regulation.



c. *Chemical safety requirements for leather accessories and materials for their manufacturing depending on material composition*

Material	Name of emitted substances	Requirements: air medium (mg/m³), no more than
Natural materials from vegetative raw materials, natural leather	formaldehyde	0,003*
Polyamide	formaldehyde caprolactam hexamethylendiamine	0,003* 0,06 0,001
Polyester	formaldehyde dimethyl terephthalate acetaldehyde	0,003* 0,01 0,01
Polyacrylonitrile	formaldehyde acrylonitrile vinyl acetate	0,003* 0,03 0,15
Polyurethane	formaldehyde toluene diisocyanate acetaldehyde	0,003* 0,002 0,01
Polyvinylchloride	formaldehyde phenol dioctylphthalate dibutylphthalate acetone	0,003* 0,003 0,02 not allowed 0,35
Artificial viscose and acetate	formaldehyde	0.003*
Polyolefin	formaldehyde acetaldehyde	0.003* 0.01
Vinyl acetates (artificial leather)	formaldehyde vinyl acetate dioctylphthalate dibutylphthalate	0.003* 0.15 0.02 not allowed
Artificial leather with polyurethane or polyvinylurethane covering	formaldehyde dibutylphthalate dioctylphthalate	0.003* not allowed 0.02
Rubber	formaldehyde dibutylphthalate dioctylphthalate	0.003* not allowed 0.02
Cardboard	formaldehyde	0.003*



8. JEWELRY

The limits refer to products for adults and have been selected in order to be according to the most authoritative compulsory regulations. Types of materials taken into consideration: metals, glassware and crystalware, plastic materials, wood and pottery; specific limits are not applicable to natural stones.

The below tables don't deal with textile and leather – which certainly can be involved in jewelry products – since the applicable limits for those materials have already been defined in the previous section of the same document.

a. Metal parts

Substance	Test Method	Requirement	Law/Country	Notes
<i>Total Metals</i>				
Cadmium	UNI EN 16711-1:2015 + UNI EN ISO 17294-2:2005	< 100 mg/kg	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	-
		Prohibited	CNS 15290/Taiwan	-
Lead	UNI EN 16711-1:2015 + UNI EN ISO 17294-2:2005	Total Lead: < 500 mg/kg	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	For jewellery articles
	UNI EN 16711-1:2015 + UNI EN ISO 17294-2:2005	Total Lead: 100 mg/kg	Statutory Order no. 856 of September 5, 2009 - Denmark	-
	Substrate: CPSC-CH-E1001-08.3 Surface coating: CPSC-CH-E1003-09.1	Total lead: ≤ 100 mg/kg Painted accessories: ≤ 90 mg/kg	USA CPSIA	Requirements for children
	CPSC-CH-E1001-08.3	Total lead: ≤ 40 mg/kg	USA: (not federal) Illinois "The Lead poisoning Prevention Act"	-
<i>Release</i>				
Nickel	Nickel release by UNI EN 1811:2015 and EN 12472:2009	< 0.2 µg/cm ² /week	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	In any post assemblies which are inserted into pierced ears and other pierced parts of the human body
		≤ 0.5 µg/cm ² /week		Abrasion of coated items shall guarantee the same requirement
<i>Extractable metals</i>				
Antimony	ASTM F 963-11 sec. 4.3.5.2	≤ 60 mg/kg	USA "Standard Consumer Safety Specification for Adult Jewelry" (for paint and similar surface coating materials).	For adults (> 14 years old)
Arsenic	ASTM F 963-11 sec. 4.3.5.2	≤ 25 mg/kg	USA "Standard Consumer Safety Specification for Adult Jewelry" (for paint and similar surface coating materials).	For adults (> 14 years old)
Chromium (total)	ASTM F 963-11 sec. 4.3.5.2	≤ 60 mg/kg	USA "Standard Consumer Safety Specification for Adult Jewelry" (for paint and similar surface coating materials).	For adults (> 14 years old)



Substance	Test Method	Requirement	Law/Country	Notes
Mercury	ASTM F 963-11 sec. 4.3.5.2	≤ 60 mg/kg	USA "Standard Consumer Safety Specification for Adult Jewelry" (for paint and similar surface coating materials).	For adults (> 14 years old)
Selenium	ASTM F 963-11 sec. 4.3.5.2	≤ 500 mg/kg	USA "Standard Consumer Safety Specification for Adult Jewelry" (for paint and similar surface coating materials).	For adults (> 14 years old)
Barium	ASTM F 963-11 sec. 4.3.5.2	≤ 1000 mg/kg	USA "Standard Consumer Safety Specification for Adult Jewelry" (for paint and similar surface coating materials).	For adults (> 14 years old)
Cadmium	ASTM F 963-11 sec. 4.3.5.2	≤ 75 mg/kg	USA "Standard Consumer Safety Specification for Adult Jewelry" (for paint and similar surface coating materials).	For adults (> 14 years old)

b. Glass and crystal parts

Substance	Test Method	Requirement	Law/Country	Notes
<i>Total Metals</i>				
Cadmium	UNI EN 16711-1:2015 + UNI EN ISO 17294-2:2005	< 100 mg/kg	Netherland: Cadmium decree	-
Lead	UNI EN 16711-1:2015 + UNI EN ISO 17294-2:2005	Total Lead: < 500 mg/kg	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	For jewelry; except for crystal glass as defined in Annex I (categories 1, 2, 3 and 4) to Council Directive 69/493/EEC
	UNI EN 16711-1:2015 + UNI EN ISO 17294-2:2005	Total Lead: 100 mg/kg	Statutory Order no. 856 of September 5, 2009 - Denmark	-
	Substrate: CPSC-CHE1002-08.1 Surface coating: CPSC-CH-E1003-09.1	Total lead: ≤ 100 mg/kg Painted accessories: ≤ 90 mg/kg	USA CPSIA	Requirements for children
	CPSC-CHE1002-08.1	Total lead: ≤ 40 mg/kg	USA: (not federal) Illinois "The Lead poisoning Prevention Act"	-



c. Plastic parts

Substance	Test Method	Requirement	Law/Country	Notes
Phthalates	UNI EN ISO 14389:2014	DBP, DEHP, BBP: \leq 1000 mg/kg the sum DINP, DIDP, DNOP: \leq 1000 mg/kg the sum	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	Requirements for children
	CPSC-CH-C1001-09.3:2010	DBP, DEHP, BBP, DINP, DIDP, DNOP: 1000 mg/kg each	USA CPSIA	Requirements for children
Total Lead	UNI EN 16711-1:2015 + UNI EN ISO 17294-2:2005	Total Lead: < 500 mg/kg	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	For jewelry
	UNI EN 16711-1:2015 + UNI EN ISO 17294-2:2005	Total Lead: 100 mg/kg	Statutory Order no. 856 of September 5, 2009 - Denmark	-
	Substrate: CPSC-CH-E1001-08.3 /CPSC-CHE1002-08.1 Surface coating: CPSC-CH-E1003-09.1	Total lead: \leq 100 mg/kg painted accessories: \leq 90 mg/kg	USA CPSIA	Requirements for children
Total cadmium	UNI EN 16711-1:2015 + UNI EN ISO 17294-2:2005	< 100 mg/kg	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	-
Polycyclic Aromatic Hydrocarbons (PAH)	AfPS GS 2014:01	\leq 1,0 mg/kg each	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	-
Organotin compound	Ref. to UNI CEN ISO/TS 16179:2012 (footwear)	DBT, DOT: \leq 1000 mg/kg of Sn each TBT TPhT: \leq 1000 mg/kg of Sn the sum	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	-
DMF	Solvent extraction and GC-MS analysis	To declare if \geq 0,1%	European Union REACH Regulation (EC) No. 1907/2006 SVHC	If PU based
Formaldehyde	UNI EN ISO 14184-1:2011	75 mg/kg	-	Not regulated in European Union REACH Regulation (EC) No. 1907/2006
SCCP	Solvent extraction and GC-MS analysis	Not used	Regulation (EC) No 850/2004 (POP)	-



d. Wood parts

Substance	Test Method	Requirement	Law/Country	Notes
Formaldehyde	UNI EN ISO 14184-1:2011	< 16 mg/kg	-	Not regulated in European Union REACH Regulation (EC) No. 1907/2006
Organotin compound	Ref. to UNI CEN ISO/TS 16179:2012 (footwear)	DBT, DOT: ≤ 1000 mg/kg of Sn each TBT TPhT: ≤ 1000 mg/kg of Sn the sum	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	-
<i>Total Metals</i>				
Mercury	UNI EN 16711-1:2015 + UNI EN ISO 17294-2:2005	< 0,3 mg/kg	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	-
Arsenic	UNI EN 16711-1:2015 + UNI EN ISO 17294-2:2005	< 3,0 mg/kg	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	-

e. Ceramic parts

Substance	Test Method	Requirement	Law/Country	Notes
<i>Total Metals</i>				
Lead	UNI EN 16711-1:2015 + UNI EN ISO 17294-2:2005	Total Lead: < 500 mg/kg	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	For jewelry; except for crystal glass as defined in Annex I (categories 1, 2, 3 and 4) to Council Directive 69/493/EEC
	Substrate: CPSC-CHE1002-08.1 Surface coating: CPSC-CH-E1003-09.1	Total lead: ≤ 100 mg/kg Painted accessories: ≤ 90 mg/kg	USA CPSIA	Requirements for children



f. GB 28480

Substance	Test Method	Requirement	Notes
Nickel	GB/T 19719 and GB/T 28485	< 0.2 µg/cm ² /week	Product for piercing at ear or any other part of human body, or used during healing period of piercing wound
		< 0.5 µg/cm ² /week < 0.5 µg/cm ² /week coating	Products with long contact to skin, such as: ---- ear rings; ---- necklace, bracelet, hand chain, foot chain, ring; ---- watchcase, watch chain, watch buckle; ---- press button, buckle, rivet, zipper and metal label (if not nailed on to clothing). For coating: within two years of normal usage
Arsenic	GB/T 28020	≤ 1000 mg/kg	-
Chromium VI	GB/T 28019	≤ 1000 mg/kg	-
Mercury	GB/T 28020	≤ 1000 mg/kg	-
Lead	GB/T 28020	≤ 1000 mg/kg	-
Cadmium	GB/T 28020	≤ 100 mg/kg	-



9. LIST OF SUBSTANCES

a. List 1 Azo dyes

	CAS number	Required detection Limit
biphenyl-4-ylamine; 4-aminobiphenyl xenylamine	92-67-1	5 ppm
benzidine	92-87-5	5 ppm
4-chloro-o-toluidine	95-69-2	5 ppm
2-naphthylamine	91-59-8	5 ppm
o-aminoazotoluene; 4-amino-2',3-dimethylazobenzene; 4-o-tolylazo-o-toluidine	97-56-3	5 ppm
5-nitro-o-toluidine	99-55-8	5 ppm
4-chloroaniline	106-47-8	5 ppm
4-methoxy-m-phenylenediamine	615-05-4	5 ppm
4,4'-methylenedianiline; 4,4'-diaminodiphenylmethane	101-77-9	5 ppm
3,3'-dichlorobenzidine; 3-3'-dichlorobiphenyl-4-4'-ylenediamine	91-94-1	5 ppm
3,3'-dimethoxybenzidine; o-dianisidine	119-90-4	5 ppm
3,3'-dimethylbenzidine; 4,4'-bi-o-toluidine	119-93-7	5 ppm
4,4'-methylenedi-o-toluidine	838-88-0	5 ppm
6-methoxy-m-toluidine p-cresidine	120-71-8	5 ppm
4,4'-methylene-bis-(2-chloro-aniline); 2,2'-dichloro-4,4'-methylene-dianiline	101-14-4	5 ppm
4,4'-oxydianiline	101-80-4	5 ppm
4,4'-thiodianiline	139-65-1	5 ppm
o-toluidine; 2-aminotoluene	95-53-4	5 ppm
4-methyl-m-phenylenediamine	95-80-7	5 ppm
2,4,5-trimethylaniline	137-17-7	5 ppm
o-anisidine; 2-methoxyaniline	90-04-0	5 ppm
4-amino azobenzene	60-09-3	5 ppm
2,4-Xylidin	95-68-1	5 ppm
2,6-Xylidin	87-62-7	5 ppm

b. List 2 Carcinogenic Dyes

	CAS number	Required detection Limit
Dyes- Basic		
Direct Brown 95	16071-86-6	1 ppm
Direct Black 38	1937-37-7	1 ppm
Direct Blue 6	2602-46-2	1 ppm
Direct Red 28	573-58-0	1 ppm
Dyes- Direct		
C.I. Basic Violet 3 with $\geq 0,1$ % of Michler's ketone (EC No 202-027-5)	n/a	100 ppm



c. List 3 Disperse Dyes

	CAS number	Required detection Limit
Disperse Blue 3	2475-46-9	1 ppm
Disperse Blue 7	3179-90-6	1 ppm
Disperse Blue 26	3860-63-7	1 ppm
Disperse Blue 102	12222-97-8	1 ppm
Disperse Yellow 1	119-15-3	1 ppm
Disperse Yellow 9	6373-73-5	1 ppm
Disperse Yellow 39	12236-29-2	1 ppm
Disperse Yellow 49	54824-37-2	1 ppm
Disperse Orange 1	2581-69-3	1 ppm
Disperse Red 11	2872-48-2	1 ppm
Disperse Red 17	3179-89-3	1 ppm
Disperse Brown 1	23355-64-8	1 ppm

d. List 4 Phthalates

	CAS number	Required detection Limit
Di(ethylhexyl) phthalate (DEHP)	117-81-7	50 ppm
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8	50 ppm
Di-n-octyl phthalate (DNOP)	117-84-0	50 ppm
Di-iso-decyl phthalate (DIDP)	26761-40-0	50 ppm
Di-isononyl phthalate (DINP)	28553-12-0	50 ppm
Di-n-hexyl phthalate (DnHP)	84-75-3	50 ppm
Dibutyl phthalate (DBP)	84-74-2	50 ppm
Benzyl butyl phthalate (BBP)	85-68-7	50 ppm
Dinonyl phthalate (DNP)	84-76-4	50 ppm
Diethyl phthalate (DEP)	84-66-2	50 ppm
Di-n-propyl phthalate (DPRP)	131-16-8	50 ppm
Di-isobutyl phthalate (DIBP)	84-69-5	50 ppm
Di-cyclohexyl phthalate (DCHP)	84-61-7	50 ppm
Di-iso-octyl phthalate (DIOP)	27554-26-3	50 ppm
1,2-benzenedicarboxylic acid, di-C7-11 branched and linearalkyl esters (DHNUP)	68515-42-4	50 ppm
1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	50 ppm
Dipentyl phthalate (DPP)	131-18-0	50 ppm
N-pentyl-isopentylphthalate (NPIPP)	776297-69-9	50 ppm
Diisopnetyl phthalate (DIPP)	605-50-5	50 ppm
1,2- Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	50 ppm
Dimethyl phthalate (DMP)	131-11-3	50 ppm



e. List 5 Alkylphenols and Alkylphenols ethoxylates (APEO)

	CAS number	Required detection Limit
Nonylphenol	104-40-5	1 ppm
Octylphenol	140-66-9	1 ppm
Nonylphenol monoethoxylates, NP1EO	Multiple	3 ppm
Nonylphenol diethoxylates, NP2EO	Multiple	3 ppm
Octylphenol monoethoxylates, OP1EO	Multiple	3 ppm
Octylphenol diethoxylates, OP2EO	Multiple	3 ppm
Nonylphenoethoxylates, n=4 to n= 15	Multiple	3 ppm
Octylphenoethoxylates, n=4 to n= 15	Multiple	3 ppm

f. List 6 Organotin Compounds

	CAS number	Required detection Limit
Dibutyltin (DBT)	Multiple	0.025 ppm
Dimethyltin (DMT)	Multiple	0.025 ppm
Monobutyltin (MBT)	Multiple	0.025 ppm
Monooctyltin (MOT)	Multiple	0.025 ppm
Diocetyl tin (DOT)	Multiple	0.025 ppm
Tricyclohexyltin (TCyHT)	Multiple	0.025 ppm
Trioctyltin (TOT)	Multiple	0.025 ppm
Tripropyltin (TPT)	Multiple	0.025 ppm
Trimethyltin (TMT)	Multiple	0.025 ppm
Triphenyltin (TPhT)	Multiple	0.025 ppm
Tetrabutyltin (TebT)	1461-25-2	0.025 ppm
Tributyltin (TBT)	Multiple	0.025 ppm
Monomethyltin (MMT)	Multiple	0.025 ppm
Monophenyltin (MPT)	Multiple	0.025 ppm
Diphenyltin (DPT)	Multiple	0.025 ppm



g. List 7 Chlorinated Phenols

	CAS number	Required detection Limit
Tetrachlorophenol (TeCP)	25167-83-3	0.05 ppm
Pentachlorophenol (PCP)	87-86-5	0.05 ppm
Ortho- Phenylphenol (OPP)	90-43-7	0.05 ppm
4-Chloro-3-methylphenol	59-50-7	0.05 ppm
2-Chlorophenol	95-57-8	0.05 ppm
2,4-Dichlorophenol	120-83-2	0.05 ppm
2,5-Dichlorophenol	583-78-8	0.05 ppm
2,6-Dichlorophenol	87-65-0	0.05 ppm
2,3,4,6-Tetrachlorophenol	58-90-2	0.05 ppm
2,4,5-Trichlorophenol	95-95-4	0.05 ppm
2,4,6-Trichlorophenol	88-06-2	0.05 ppm
2,3,4,5-Tetrachlorophenol	4901-51-3	0.05 ppm
2,3,5,6-Tetrachlorophenol	935-95-5	0.05 ppm

h. List 8 Chlorinated benzenes and toluenes

	CAS number	Required detection Limit
1,2-dichlorobenzene	95-50-1	0.1 ppm
Chlorobenzene	108-90-7	0.1 ppm
4-Chlorotoluene	106-43-4	0.1 ppm
1,3- Dichlorobenzene	541-73-1	0.1 ppm
1,4- Dichlorobenzene	106-46-7	0.1 ppm
1,2,4- Trichlorobenzene	120-82-1	0.1 ppm
1,2,3- Trichlorobenzene	87-61-6	0.1 ppm
1,3,5- Trichlorobenzene	108-70-3	0.1 ppm
1,2,3,4- Tetrachlorobenzene	634-66-2	0.1 ppm
1,2,3,5- Tetrachlorobenzene	634-90-2	0.1 ppm
1,2,4,5- Tetrachlorobenzene	95-94-3	0.1 ppm
Pentachlorobenzene	608-93-5	0.1 ppm
Hexachlorobenzene	118-74-1	0.1 ppm



i. List 9 Polycyclic Aromatic Hydrocarbons (PAH)

	CAS number	Required detection Limit
Benzo[a]pyrene (BaP)	50-32-8	0.2 ppm
Anthracene	120-12-7	0.2 ppm
Pyrene	129-00-0	0.2 ppm
Benzo[ghi]perylene	191-24-2	0.2 ppm
Benzo[e]pyrene	192-97-2	0.2 ppm
Indeno[1,2,3-cd]pyrene	193-39-5	0.2 ppm
Benzo[j]fluoranthene	205-82-3	0.2 ppm
Benzo[b]fluoranthene	205-99-2	0.2 ppm
Fluoranthene	206-44-0	0.2 ppm
Benzo[k]fluoranthene	207-08-9	0.2 ppm
Acenaphthylene	208-96-8	0.2 ppm
Chrysene	218-01-9	0.2 ppm
Dibenz[a,h]anthracene	53-70-3	0.2 ppm
Benzo[a]anthracene	56-55-3	0.2 ppm
Acenaphthene	83-32-9	0.2 ppm

j. List 10 Isocyanates

	CAS number
Diphenylmethane-4,4-diisocyanates	101-68-8
Hexamethylene diisocyanate	822-06-0
Isophorone diisocyanate	4098-71-9
Tetramethylxylene diisocyanate	2778-42-9



k. List 11 Pesticides/Herbicides

	CAS number	Required detection Limit
2-(2,4,5-trichlorophenoxy) propionic acid, its salts and compounds	93-72-1	0.2 ppm
2,4,5-trichlorophenoxyacetic acid	93-76-5	0.2 ppm
Aldrin	309-00-2	0.2 ppm
Chlordane	57-74-9	0.2 ppm
Dichloro-diphenyl-dichloro ethane (DDD)	72-54-8	0.2 ppm
Dichloro-diphenyl-dichloro ethylene (DDE)	72-55-9	0.2 ppm
Dichloro-diphenyl-trichloro ethane (DDT)	50-29-3	0.2 ppm
Dieldrin	60-57-1	0.2 ppm
Endrine	72-20-8	0.2 ppm
Epoxy-heptachlorine	1024-57-3	0.2 ppm
Hexachlorobenzene	118-74-1	0.2 ppm
Pentachlorobenzene	608-93-5	0.2 ppm
Tetrachlorobenzene	95-93-4	0.2 ppm
Hexachlorocyclohexane (HCH, all isomers) except gammahexachlorocyclohexane	608-73-1	0.2 ppm
Isodrin	465-73-6	0.2 ppm
Kelevane	4234-79-1	0.2 ppm
Kepone (Chlordecone)	143-50-0	0.2 ppm
Lindane	58-89-9	0.2 ppm
Methoxychlor	72-43-5	0.2 ppm
Mirex	2385-85-5	0.2 ppm
Perthane	72-56-0	0.2 ppm
Quintozene	82-68-8	0.2 ppm
Strobane	8001-50-1	0.2 ppm
Telodrin	297-78-9	0.2 ppm
Toxaphene	8001-35-2	0.2 ppm
Halogenated biphenyls including Polychlorinated biphenyl (PCB)	Multiple	0.2 ppm
Various Halogenated terphenols including Polychlorinated terphenyl (PCT)	Multiple	0.2 ppm
Various Halogenated naphthalenes	Multiple	0.2 ppm
Various Halogenated diarylalkanes	Multiple	0.2 ppm
Halogenated diphenyl methanes, including	Multiple	0.2 ppm
Monomethyl-dibromo-diphenyl methane	99688-47-8	0.2 ppm
Monomethyl-dichloro-diphenyl methane	99688-47-8	0.2 ppm
Monomethyl-tetrachloro-diphenyl methane	76253-60-6	0.2 ppm



l. List 12 N-Nitrosamine

	CAS number	Required detection Limit
N-nitrosodimethylamine	62-75-9	0.1 ppm
N-nitrosodiethylamine	55-18-5	0.1 ppm
N-nitrosodipropylamine	621-64-7	0.1 ppm
N-nitrosodibutylamine	924-16-3	0.1 ppm
N-nitrosopiperidine	100-75-4	0.1 ppm
N-nitrosopyrrolidine	930-55-2	0.1 ppm
N-nitrosomorpholine	59-89-2	0.1 ppm
N-nitroso-N-methylaniline	614-00-6	0.1 ppm
N-nitroso-N-ethylaniline	612-64-6	0.1 ppm

m. List 13 Chlorinated Solvents

	CAS number	Required detection Limit
1,2-Dichloroethane	107-06-2	0.1 ppm
Methylene chloride	75-09-2	0.1 ppm
Tetrachloroethene	127-18-4	0.1 ppm
Trichloroethene	79-01-6	0.1 ppm



n. List 14 Polyfluorinated Chemicals

	CAS number	Required detection Limit
<i>Long Chain Perfluorinated and Polyfluorinated Chemicals</i>		
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (EtFOSE)	1691-99-2	1µg/m ²
Perfluoro-3,7-dimethylotanoic Acid (PF-3,7-DMOA)	172155-07-6	1µg/m ²
1H,1H,2H,2H- Perfluorooctylacrylate (6:2 FTA)	17527-29-6	1µg/m ²
1H,1H,2H,2H- Perfluorododecylacrylate (10:2 FTA)	17741-60-5	1µg/m ²
Perfluoroundecanoic acid (PFUdA)	2058-94-8	1µg/m ²
1H,1H,2H,2H- Perfluorooctanesulphonic acid (1H,1H,2H,2H-PFOS)	27619-97-2	1µg/m ²
1H,1H,2H,2H- Perfluorodecylacrylate (8:2 FTA)	27905-45-9	1µg/m ²
Perfluorododecanoic acid (PFDoA)	307-55-1	1µg/m ²
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	1µg/m ²
Perfluorooctanoic acid (PFOA)	335-67-1	1µg/m ²
Perfluorodecanoic acid (PFDA)	335-76-2	1µg/m ²
2H,2H,3H,3H- Perfluoroundecanoic Acid (H4PFUnA)	34598-33-9	1µg/m ²
Perfluorononanoic acid (PFNA)	375-95-1	1µg/m ²
Perfluorotetradecanoic acid (PFTeA)	376-06-7	1µg/m ²
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	1µg/m ²
Perfluoroundecanoic acid (PFUnA)	4234-23-5	1µg/m ²
1H,1H,2H,2H-Perfluoro-1-Decanol (8:2 FTOH)	678-39-7	10µg/m ²
Perfluorotridecanoic acid (PFTrA)	72629-94-8	1µg/m ²
Perfluorooctane sulfonamide (PFOSA)	754-91-6	1µg/m ²
1H,1H,2H,2H-Perfluoro-1-Dodecanol (10:2 FTOH)	865-86-1	10µg/m ²
Perfluorooctane sulfonate (PFOS)	Multiple	1µg/m ²
7H-Dodecanefluoroheptane Acid	No CAS available	1µg/m ²
2H,2H-Perfluorodecane Acid	No CAS available	1µg/m ²
1H,1H,2H,2H-Perfluorooctanesulphonic acid	No CAS available	1µg/m ²
<i>Short Chain Perfluorinated and Polyfluorinated Chemicals</i>		
Perfluorocyclobutane- c-C4F8	115-25-3	1µg/m ²
7H-dodecafluoroheptanoate (HPFHpA)	1546-95-8	1µg/m ²
1H,1H,2H,2H-Perfluoro-1-Hexanol (4:2 FTOH)	2043-47-2	10µg/m ²
Perfluoropentanoic acid (PFPA)	2706-90-3	1µg/m ²
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	1µg/m ²
Perfluoropentane – C5F14	355-42-0	1µg/m ²
Perfluorohexane sulphonates (PFHxS)	355-46-4	1µg/m ²
Perfluorobutanoic acid (PFBA)	375-22-4	1µg/m ²
Perfluorobutane (PFBS)	375-73-5	1µg/m ²
Perfluoroheptanoic acid (PFHpA)	375-85-9	1µg/m ²
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	1µg/m ²
1H,1H,2H,2H-Perfluoro-1-Oktanol (6:2 FTOH)	647-42-7	10µg/m ²



o. List 15 Short chain chlorinated paraffins

	CAS number
Alkanes, C 10 -C 13 , chloro (Short Chain chlorinated paraffins) (SCCPs)	85535-84-8

p. List 16 Brominated and Chlorinated Flame Retardants

	CAS number	Required detection Limit
Tris(2-chloroethyl)phosphate (TCEP)	115-96-8	5 ppm
Decabromodiphenyl ether (DecaBDE)	1163-19-5	10 ppm
Tris(2,3,-dibromopropyl)- phosphate (TRIS)	126-72-7	10 ppm
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	10 ppm
Octabromodiphenyl ether (OctaBDE)	32536-52-0	10 ppm
Bis(2,3-dibromopropyl)phosphate (BIS) or (BBP)	5412-25-9	10 ppm
Tris(1-aziridinyl)phosphine oxide (TEPA)	5455-55-1	10 ppm
Polybromobiphenyls (PBB)	59536-65-1	10 ppm
Tetrabromobisphenol A (TBBPA)	79-94-7	10 ppm
Hexabromocyclodecane (HBCDD)	3194-55-6	10 ppm
2,2-bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	10 ppm
Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	10 ppm
Bis (2,3-dibromopropylether) of tetrabromobisphenol (BDBPT)	21850-44-2	10 ppm