

# GA OPERATIONS

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## RESTRICTED SUBSTANCES LIST

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### ADULT APPAREL - ACCESSORIES - PACKAGING

Version 10 - Effective as of the Season FW 2020

<i>Supplier's corporate seal:</i>	
<i>signed on:</i>	
<i>(name and surname of signer, in capital letters)</i>	<i>by :</i>
<i>in his / her capacity as:</i>	<i>Legal Representative</i>
<i>signature:</i>	

This RSL (generally based on the strictest global legislation) is part of Armani's commitment to protect consumers, workers, the environment and the brand image. It covers the materials most commonly used in the product's reference category only. Any different material from those mentioned in this RSL shall be evaluated case by case. Every mentioned test method shall be applied in the most updated version of the technical standards. The required parameters are intended where effectively applicable materials provided.

This RSL version includes in annex the China GB Standards

Changes from the previous version are highlighted in red

G.A. OPERATIONS S.p.A. - Società a socio unico soggetta ad attività di direzione e coordinamento di Giorgio Armani S.p.A.  
Sede legale: Via Borgonuovo n. 11 - 20121 Milano  
Capitale sociale Euro 24.275.795,44 i.v. - Registro Imprese Milano, Codice Fiscale e Partita IVA 00159600360 - REA MI 1946400  
Sede amministrativa: Via Pietro Giardini n. 1324 - 41126 Modena - Tel. 059 584411 - Fax 059 584414

**GENERAL AND MANUFACTURING REQUIREMENTS**

Supplier shall comply with every applicable legislation, including:

STANDARD/LEGISLATION	REQUIREMENT	NOTE
Regulation (EC) n 1907/2006 - Annex XVII	Articles provided shall comply with every applicable requirements of Regulation (EC) n 1907/2006 - Annex XVII	Supplier must comply with the substances listed in Annex XVII. The substances in this Annex which could be traced more frequently in the textile, leather, accessories in metal, plastic and wood, are given in the sections relating to the different materials of this RSL
Regulation (EU) 528/2012	Articles provided shall comply with the requirements of Regulation (EU) 528/2012 on biocides, including those requirements related to labeling of "treated articles"	
Regulation (EC) 842/2006	Fluorinated Greenhouse Gases shall not be used for the manufacture of all products supplied	
Regulation (EC) n 1907/2006 - "Candidate List":Substances Of Very High Concern Candidates For Authorization	The SVHC (substances of very high concern) candidates for authorization shall not be used in the manufacture of the supplied articles. Each component of the product shall not contain SVHC candidates for authorization in concentration above 0.1%. Since the list of SVHC candidate for authorization is constantly updated, it is the responsibility of the supplier to ensure that the conditions mentioned above refer to the list of SVHC in force at the time of supply.	Armani Group wants to phase out the use of substances SVHC described in the "Candidate List" in the most updated version. Suppliers are required not to use these substances in the manufacture of any products
Regulation (EC) 850/2004 on persistent organic pollutants and further amendments	Substances listed in the Regulation (with particular reference to Annex I, Annex II) shall not be used in the manufacture of the supplied articles	
California Proposition 65	The substances present in the list of California Proposition 65 shall not be used in the production of the supplied items. Each component of the product shall not contain substances in concentrations that require notification of the presence of this substance (within the meaning of what is specified by the law) to the citizens of California (e.g. through labeling).	
Directive 94/62/EC	The packaging materials shall comply with all essential requirements defined in European Parliament and Council Directive No. 94/62/EC on Packaging and Packaging Waste with all latest amendments and corresponding standards EN 13427-13432 hereto.	

# GA OPERATIONS

CATEGORIES	SUBSTANCES	LIMITS (mg/kg)	NOTES	TEST METHOD **	APPLICABILITY							
					TEXTILE	LEATHER	SURFACE COATINGS	PRINTINGS & POLYMERIC COMPONENTS	METAL COMPONENTS	PAPER	WOOD	
<u>ALKYLPHENOLS (AP)</u>	NP	sum ≤ 10	provisionally accepted : sum ≤ 50	T: ISO 18254 L: ISO 18218-1 (LC-MS method)	X	X						
	OP				X	X						
<u>ALKYLPHENOLS ETHOXYLATE (APEOS)</u>	NPEo		OPEO		recycled materials: sum ≤ 250	X	X					
						X	X					
<u>PHthalATES</u>	DIBP	BANNED ≤ 50		CPSC-CH-C1001-09.3 (T: EN ISO 14389) Shoes (T, L, P): CEN ISO/TS 16181			X	X				
	DBP	BANNED ≤ 50					X	X				
	BBP	BANNED ≤ 50					X	X				
	DEHP	BANNED ≤ 50					X	X				
	DINP	BANNED ≤ 50					X	X				
	<b>SUM OF ALL PHTHALATES *</b>				≤ 250				X	X		
<u>SHORT CHAIN CHLORINATED PARAFFINS - FLAME RETARDANTS *</u>		N.D. ≤ 50	Substances used not only as flame retardants	Solvent extraction GC- MS /LC-MS-MS (ref. ISO 18219)	X	X	X	X				
<u>FLAME RETARDANTS *</u>		N.D. ≤ 5 each		GB/T 24279 - (Boron and Antimony Trioxide): microwave digestion + ICP-OES/MS  ISO 17881-1 (Brominated Flame retardants);  ISO 17881-2 (Phosphorous Flame retardant);  KS C IEC 62321 (for South Korea)	X "Flame retardants" Articles	X "Flame retardants" Articles		X Applicable to soft plastics				
<u>CHLORINATED BENZENES AND TOLUENES *</u>		sum ≤ 1		DIN 54232 EN 17137	X							
<u>AZO DYES *</u>		T: N.D. (≤ 5 each) L: ≤ 30 each		T: EN 14362-1; EN 14362-3; GB/T 17592.1; GB/T 23344 KS K 0147 KS K 0734 L: ISO 17234-1; ISO17234-2; GB 20440 - GB/T 19942 KS K 0147 KS K 0734	X	X						

\* full list in the pages "Substances List"

\*\* please always refer to the most updated version

\*\*\* For fur definition, please refer to <https://www.armani.com/cloud/armanif31wp/uploads/2017/10/PELLICCIAdefinizioneHSUS-ENGL.pdf>

**LEGEND :**

T = TEXTILE  
L = LEATHER

SC =SURFACE COATINGS  
P = PRINTINGS & POLIMERIC COMPONENTS

Pa = PAPER  
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# GA OPERATIONS

CATEGORIES	SUBSTANCES	LIMITS (mg/kg)	NOTES	TEST METHOD **	APPLICABILITY							
					TEXTILE	LEATHER	SURFACE COATINGS	PRINTINGS & POLYMERIC COMPONENTS	METAL COMPONENTS	PAPER	WOOD	
ALLERGENIC DYES *		N.D. ≤ 5 each		DIN 54231; <b>KS K 0736</b>	X	X (fur)***						
CARCINOGENIC DYES *		N.D. ≤ 5 each			X	X						
OTHER DYES	BLU NAVY	N.D. ≤ 5 each			X	X						
	C.I. ACID VIOLET 49											
	C.I. BASIC BLUE 26											
	C.I. VIOLET BASIC 1											
	C.I. VIOLET BASIC 3											
ORGANOTIN COMPOUNDS *		≤ 0,1 each	provisionally accepted : ≤ 1 each	ISO/TS 16179; <b>KS K 0737</b>	X	X	X	X		X	X	
FORMALDEHYDE		≤ 75		T: ISO 14184-1; JIS L 1041; GB/T 2912.1; <b>KS K 0611, KS ISO 14184-1</b> L: ISO 17226-1; ISO 17226-2; GB/T 19941; <b>KS M ISO 17226-1</b> (S) (P): ISO 14184-1; JIS L 1041: Pa: EN 645 ; EN 1541 <b>Wood: EN 717-3</b>	X	X	X	X		X	X	
<u>HEAVY METALS TOTAL CONTENT</u>	CADMIUM	≤ 100		(Surface): CPSC-CH-E1003-09.1 (Substrate): CPSC-CH-E1002-08.3 ; EN 1122 (only for Cadmium) T : EN 16711-1 L : EN ISO 17072-2 W : CPSC-CH-E1002-08.3 M : CPSC-CH-E1001-08.3; GB/T 28021 Pa : ISO 8124-5:2015	X	X	X	X	X		X	
	LEAD	Painted: ≤ 90 Not Painted: ≤ 100			X	X	X	X	X	X	X	X
	MERCURY	≤ 1 M: ≤ 1000			X	X	X	X	X	X	X	X
	ARSENIC	≤ 1 M: ≤ 1000			X	X	X	X	X	X		X
	CHROMIUM VI	M: ≤ 1000								X		
	LEAD + CADMIUM + MERCURY + CHROMIUM VI	sum ≤ 100	For all Packaging materials			X		X	X	X	X	X

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					TEXTILE	LEATHER	SURFACE COATINGS	PRINTINGS & POLYMERIC COMPONENTS	METAL COMPONENTS	PAPER	WOOD
<u>HEAVY METALS EXTRACTABLE</u>	ANTIMONY	≤ 30		EN 16711-2 L: ISO 17072-1	X	X	X	X			
	ARSENIC	≤ 1			X	X	X	X			
	LEAD	T: ≤ 1 L: ≤ 0,8			X	X	X	X			
	CADMIUM	≤ 0,1			X	X	X	X			
	CHROMIUM	≤ 2			X		X	X			
	COBALT	≤ 4			X	X	X	X			
	COPPER	≤ 50			X		X	X			
	NICKEL	≤ 4			X	X	X	X			
	MERCURY	T: ≤ 0,02 L: ≤ 0,05			X	X	X	X			
	CHROMIUM VI	T: ≤ 0,5 L: ≤ 3		T: Extraction according to ISO 105 E04, analyzed by UV. L: ISO 17075-2 with ageing according to ISO 10195 only on raw material; KS M 6902/KS ISO 17075	X	X	X	X			
	NICKEL RELEASE	≤ 0,5 µg/cm <sup>2</sup> /week		EN 1811 + (EN 12472)					X		
LEAD	≤ 90	For PVC Artificial Leather	GB 21550				X				
CADMIUM	≤ 75	For PVC Artificial Leather	GB 21550				X				
<u>PESTICIDES *</u>		≤ 0,2 each Sum ≤ 1		US EPA 8081 US EPA 8141 US EPA 8151	X only for natural fiber						
<u>BIOCIDES</u>	DMFu	N.D. (≤ 0,1)		ISO TS 16186	X	X					
	OTHER	Are banned all the biocides unauthorized in the Reg. UE 528/2012 and subsequent amendments		Solvent Extraction GC -MS / LC-MS-MS	X	X					

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CATEGORIES	SUBSTANCES	LIMITS (mg/kg)	NOTES	TEST METHOD **	APPLICABILITY							
					TEXTILE	LEATHER	SURFACE COATINGS	PRINTINGS & POLYMERIC COMPONENTS	METAL COMPONENTS	PAPER	WOOD	
<b>CHLOROPHENOLS *</b>		T: ≤ 0,05 each L: ≤ 0,5 each		T: LFGB B 82.02.8 - GB/T 18414.1 L: EN-ISO 17070; <b>KS K 0733</b>	X	X						X
ORTHOPHENYLPHENOL	OPP	≤ 100		T: LFGB B 82.02.8 - GB/T 18414.1	X							
<b>VOLATILE MATTER</b>		<20µg/m2	For PVC Artificial Leather	GB 21550			X	X				
VINYL CHLORIDE MONOMER		≤5	For PVC Artificial Leather	GB/T 4615			X	X				
PAH *		Group 1: ≤ 1 mg/kg each; Naphtalene: ≤ 2 ; Total sum : ≤ 10 ;	Artificial Leather and textile made of synthetic organic polymer eg. Polyester	AfPS GS 2014:01 PAK	X (made of synthetic organic polymer eg. Polyester)		X	X				X
ISOCYANATE *		N.D. (≤ 1)	Applicable to polyurethane	EN 13130-8			X	X				
NITROSAMINES *		≤ 0,5 each	Applicable to rubber and similar of footwear	GB/T 24153				X				
SOLVENTS	NMP	≤ 500		Solvent Extraction // GC_MS; HS-GC ISO/TS 16189 per DMF		X	X	X				
	DMAc	≤ 500					X	X				
	DMFa	≤ 200					X	X				
<b>CHLORINATED SOLVENTS *</b>		≤ 0,5	Provisionally accepted : sum ≤ 500	Solvent Extraction // GC_MS; HS-GC Headspace HS-GCMS GB 19340 EPA 5021 + EPA 8260	X	X						

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					TEXTILE	LEATHER	SURFACE COATINGS	PRINTINGS & POLYMERIC COMPONENTS	METAL COMPONENTS	PAPER	WOOD
pH		T: 4 - 7,5 L: 3,5 - 7,5 ΔpH ≤ 0,7	Vegetable tanning : 3,2 - 7,5	T: ISO 3071; GB/T 7573 L: ISO 4045	X	X					
<b>PERFLUORINATED CHEMICALS *</b>	PFOS/PFOA	≤ 1 µg/m <sup>2</sup>	From 2020 : PFOA ≤ 0,025 mg/kg	T: CEN/TS 15968; L: ISO 23702-1	X oil repellent water repellent	X oil repellent water repellent	X oil repellent water repellent				
	Other PFC's	≤ 1 µg/m <sup>2</sup> ≤10 µg/m <sup>2</sup> for FTOH									
<u>GLYCOL</u>		≤ 50 each		HPLC, GC-MS	X	X	X				
<u>VOC</u>		Benzene ≤ 5 others ≤ 500		GC-MS	X	X					
<u>BENZENE</u>		≤ 5		For general VOC screening:GC/MS headspace 45 minutes at 120 degrees C			X	X			
<u>QUINOLINE</u>		≤ 50		Extraction with methanol or THF, analysis by HPLC-MS/MS or HPLC- DAD	X						

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## SUBSTANCES LIST

Alkylphenols (AP)	
SUBSTANCES	CAS
Octylphenol (OP), mixed isomers	27193-28-8; 1806-26-4; 140-66-9; Various
Nonylphenol (NP), mixed isomers	25154-52-3; 104-40-5; 84852-15-3; 90481-04-2; 1173019-62-10
Alkylphenols ethoxylate (APEOs)	
SUBSTANCES	CAS
Octylphenol Ethoxylates (OPEO) [1-18]	Various; 9002-93-1; 19036-19-5; 68987-90-6
Nonylphenol Ethoxylates (NPEO)[1-18]	Various; 9016-45-9; 26027-38-3; 68412-54-4; 127087-87-0
Phthalates	
SUBSTANCES	CAS
Benzyl Butyl Phthalate (BBP)	85-68-7
Di(2-Ethyl Hexyl) Phthalate(DEHP)	117-81-7
Di-Iso-Butyl Phthalate (DIBP)	84-69-5
Di-Butyl Phthalate (DBP)	84-74-2
Di-Iso-Nonyl Phthalate (DINP)	28553-12-0 ; 68515-48-0
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4
1,2-benzenedicarboxylic acid dipentylester, branched and linear	84777-06-0
Di-(2-methoxyethyl) phthalate (DMEP)	117-82-8
Di-Iso-Decyl Phthalate (DIDP)	26761-40-0 ; 68515-49-1
Dimethyl phthalate (DMP)	131-11-3
Di-N-Hexyl Phthalate (DnHP)	84-75-3
Di-N-Octyl Phthalate (DNOP)	117-84-0
Diisopentylphthalate (DIPP)	605-50-5
Di-n-pentyl phthalate (DnPP)	131-18-0
N-pentyl-isopentylphthalate(NPIPP)	776297-69-9
Di-iso-octylphthalate (DIOP)	27554-26-3
Di-hexylphthalate (DHxP)	68515-50-4
Dicyclohexyl phthalate (DCHP)	84-61-7
Diethylphthalate (DEP)	84-66-2
Di-nonylphthalate (DNP)	84-76-4
Di-n-propylphthalate (DPrP)	131-16-8
Flame retardants	
SUBSTANCES	CAS
Hexabromocyclododecane (HBCDD) and all isomers	25637-99-4
Diphenylether, tetrabromo derivative (TetraBDE)	40088-47-9
Diphenylether, pentabromo derivative (PentaBDE)	32534-81-9
Diphenylether, hexabromo derivative (HexaBDE)	36483-60-0
Diphenylether, heptabromo derivative (EptaBDE)	68928-80-3
Diphenylether, octabromo derivative (OctaBDE)	32536-52-0
Decabromodiphenylether (DecaBDE)	1163-19-5
Tetrabromobisphenol A	79-94-7
Tetrabromobisphenol A bis(dibromopropyl ether)	21850-44-2
Triethylenephosphoramidate (TEPA)	545-55-1
Nonabromodiphenyl ether (Nona BDE)	63936-56-1
Tris(1,3-dichloro-isopropyl)phosphate (TDCPP)	13674-87-8
Tris(2-chloroisopropyl)phosphate (TCPP)	13674-84-5
tri-o-cresyl phosphate	78-30-8
Tris(2-chloroethyl)phosphate (TCEP)	115-96-8
Tris (2,3 dibromopropyl)phosphate (TDBPP/Tris)	126-72-7
2,2',4,4',5-pentabromodiphenyl ether	60348-60-9
2,2',4,4',6-pentabromodiphenyl ether	189084-64-8
Tetraboron disodium heptaoxide, hydrate	12267-73-1
Boron Trioxide	1303-86-2
Antimony Trioxide	1309-64-4
Trixylyl phosphate	25155-23-1
2-Ethylhexyl-2,3,4,5-tetrabromobenzoate (TBB)	183658-27-7
Bis(2-Ethylexyl)-3,4,5,6-tetrabromophthalate (TBPH)	26040-51-7
2,2-Bis(bromomethyl)-1,3-propanediol	3296-90-0
Bis (2,3-dibromopropyl) phosphate	5412-25-9
Mono and Polybrominated biphenyls (PBBs)	59536-65-1



## SUBSTANCES LIST

Chlorinated benzenes and toluenes	
SUBSTANCES	CAS
Benzy-chloride	100-44-7
<b>Monochlorobenzene</b>	<b>108-90-7</b>
<b>Dichlorobenzenes, all isomers</b>	<b>25321-22-6</b>
1,2-dichlorobenzene	95-50-1
1,3-dichlorobenzene	541-73-1
1,4-dichlorobenzene	106-46-7
<b>Trichlorobenzenes, all isomers</b>	<b>12002-48-1</b>
1,2,3-trichlorobenzene	87-61-6
1,2,4-trichlorobenzene	120-82-1
1,3,5-trichlorobenzene	108-70-3
<b>Tetraclorobenzenes, all isomers</b>	
1,2,3,4-tetrachlorobenzene	634-66-2
1,2,3,5-tetrachlorobenzene	634-90-2
1,2,4,5-tetrachlorobenzene	95-94-3
<b>Pentachlorobenzene</b>	<b>608-93-5</b>
<b>Exachlorobenzene</b>	<b>118-74-1</b>
<b>Monochlorotoluenes, all isomers</b>	<b>25168-05-2</b>
2-chlorotoluene	95-49-8
3-chlorotoluene	108-41-8
4-chlorotoluene	106-43-4
<b>Dichlorotoluenes, all isomers</b>	<b>29797-40-8</b>
2,3-dichlorotoluene	32768-54-0
2,4-dichlorotoluene	95-73-8
2,5-dichlorotoluene	19398-61-9
2,6-dichlorotoluene	118-69-4
3,4-dichlorotoluene	95-75-0
<b>Trichlorotoluenes, all isomers</b>	
2,3,6-trichlorotoluene	2077-46-5
a,a,a-trichlorotoluene	98-07-7
<b>Tetrachlorotoluenes, all isomers</b>	
a,a,a,2-tetrachlorotoluene	2136-89-2
a,a-2,6-tetrachlorotoluene	81-19-6
a,a,a,4-tetrachlorotoluene	5216-25-1
<b>Pentachlorotoluene</b>	<b>877-11-2</b>
Aromatic amines that may released from azo dyes	
SUBSTANCES	CAS
biphenyl-4-ylamine; 4-aminobiphenyl xenylamine	92-67-1
benzidine	92-87-5
4-chloro-o-toluidine	95-69-2
2-naphthylamine	91-59-8
o-aminoazotoluene; 4-amino-2',3'-dimethylazobenzene; 4-o-tolylazo-o-toluidine	97-56-3
2-Amino-4-nitrotoluene	99-55-8
4-chloroaniline	106-47-8
4-methoxy-m-phenylenediamine	615-05-4
4,4'-methylenedianiline; 4,4'-diaminodiphenylmethane	101-77-9
3,3'-dichlorobenzidine; 3-3'-dichlorobiphenyl-4-4'-ylenediamine	91-94-1
3,3'-dimethoxybenzidine; o-dianisidine	119-90-4
3,3'-dimethylbenzidine; 4,4'-bi-o-toluidine	119-93-7
4,4'-methylenedi-o-toluidine	838-88-0
6-methoxy-m-toluidine p-cresidine	120-71-8
4,4'-methylene-bis-(2-chloro-aniline); 2,2'-dichloro-4,4'-methylene-dianiline	101-14-4
4,4'-oxydianiline	101-80-4
4,4'-thiodianiline	139-65-1
o-toluidine; 2-aminotoluene	95-53-4
4-methyl-m-phenylenediamine	95-80-7
2,4,5-trimethylaniline	137-17-7
o-anisidine; 2-methoxyaniline	90-04-0
4-amino azobenzene	60-09-3
2,4-Xylidin	95-68-1
2,6-Xylidin	87-62-7
4-chloro-o-toluidinium chloride	3165-93-3
2-Naphthylammoniumacetate	553-00-4
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate	39156-41-7
2,4,5-trimethylaniline hydrochloride	21436-97-5

## SUBSTANCES LIST

Allergenic Dyes	
SUBSTANCES	CAS
C.I. Disperse Blue 1	2475-45-8
C.I. Disperse Blue 3	2475-46-9
C.I. Disperse Blue 7	3179-90-6
C.I. Disperse Blue 26	3860-63-7
C.I. Disperse Blue 35	12222-75-2
C.I. Disperse Blue 102	12222-97-8
C.I. Disperse Blue 106	12223-01-7
C.I. Disperse Blue 124	61951-51-7
C.I. Disperse Brown 1	23355-64-8
C.I. Disperse Orange 1	2581-69-3
C.I. Disperse Orange 3	730-40-5
C.I. Disperse Orange 37	12223-33-5
C.I. Disperse Orange 76	13301-61-6
C.I. Disperse Red 1	2872-52-8
C.I. Disperse Red 11	2872-48-2
C.I. Disperse Red 17	3179-89-3
C.I. Disperse Yellow 1	119-15-3
C.I. Disperse Yellow 3	2832-40-8
C.I. Disperse Yellow 9	6373-73-5
C.I. Disperse Yellow 39	12236-29-2
C.I. Disperse Yellow 49	54824-37-2
C.I. Disperse Yellow 23	6250-23-3
C.I. Pigment Red 104	12656-85-8
C.I. Pigment Black 25	68186-89-0
C.I. Pigment Yellow 157	68610-24-2
C.I. Solvent Yellow 14	842-07-9
Carcinogenic Dyes	
SUBSTANCES	CAS
C.I. Disperse Blue 1	2475-45-8
C.I. Disperse Orange 11	82-28-0
C.I. Disperse Yellow 3	2832-40-8
C.I. Basic Red 9	569-61-9
C.I. Basic Violet 14	632-99-5
C.I. Acid Red 26	3761-53-3
C.I. Direct Black 38	1937-37-7
C.I. Direct Red 28	573-58-0
C.I. Direct Blue 6	2602-46-2
C.I. Disperse Yellow 23	6250-23-3
C.I. Disperse Orange 149	85136-74-9
C.I. Direct Brown 95	16071-86-6
C.I. Direct Black 3	6227-04-9
C.I. Direct Yellow 1	6472-91-9
C.I. Pigment Yellow 34	1344-37-2
C.I. Solvent Yellow 2	60-11-7
Other dyes	
SUBSTANCES	CAS
Navy blue	118685-33-9
C.I. Acid Violet 49	1624-09-3
C.I. Basic Blue 26	2580-56-5
C.I. Violet Basic 1	8004-87-3
C.I. Violet Basic 3	548-62-9; 603-48-5; 14426-25-6
Organotin Compounds	
SUBSTANCES	CAS
Dibutyltin (DBT)	1002-53-5
Diocetyl tin (DOT)	15231-44-4
Tributyltin (TBT)	56573-85-4
Triphenyltin (TPHT)	668-34-8
Bis(tributyltin) oxide (TBTO)	56-35-9
Monobutyltin (MBT)	1118-46-3
Monoocetyl tin (MOT)	15231-57-9
Tetrabutyltin (TeBT)	1461-25-2
Tricyclohexyltin (TCyT)	3047-10-7; various
Tri-n-propyl tin (TPT)	761-44-4
Triocetyl tin (TriOT)	250252-89-2
Dibutyltin hydrogen borate (DBB)	75113-37-0

## SUBSTANCES LIST

Formaldehyde	
SUBSTANCES	CAS
Formaldehyde	50-00-0
Heavy metals	
SUBSTANCES	CAS
Antimony	7440-36-0
Arsenic	7440-38-2
Barium	7440-39-3
Cadmium	7440-43-9
Cobalt	7440-48-4
Chromium	7440-47-3
Chromium VI	18540-29-9
Mercury	7439-97-6
Nickel	7440-02-0
Lead	7439-92-1
Copper	7440-50-8
Selenium	7782-49-2
Zinc	7440-66-6
Pesticides	
SUBSTANCES	CAS
Aldrin	309-00-2
azinphos-ethyl	86-50-0
azinphos-ethyl	2642-71-9
Bromophos-ethyl	4824-78-6
captafol	2425-06-1
carbaryl	63-25-2
chlordan	57-74-9
Clorodimeform	6164-98-3
chlorfenvinphos	470-90-6
Coumafos	56-72-4
cyfluthrin	68359-37-5
Cyhalothrin, lambda	91465-08-6
cypermethrin	52315-07-8
deltamethrin	52918-63-5
diazinon	333-41-5
o, p'-dichlorodiphenyldichloroethane (o, p'-DDD)	53-19-0
p, p'-dichlorodiphenyldichloroethane (p, p'-DDD)	72-54-8
o, p'-dichlorodiphenyldichloroethane (o, p'-DDE)	3424-82-6
p, p'-dichlorodiphenyldichloroethane (p, p'-DDE)	72-55-9
o, p'-dichlorodiphenyldichloroethane (o, p'-DDT) and its isomers;	789-02-6
p, p'-dichlorodiphenyldichloroethane (p, p'-DDT) and its isomers;	50-29-3
2,4-dichloro phenoxy acetic acid, its salts and compounds	94-75-7
dichlorprop	120-36-5
dieldrin	60-57-1
dimethoate	60-51-5
Dinoseb and salt	88-85-7
Endosulfan, alpha	959-98-8
Endosulfan, beta	33213-65-9
endrin	72-20-8
esfenvalerate	66230-04-4
fenvalerate	51630-58-1
heptachlor	76-44-8
Eptacloroepossido	1024-57-3
Lindane (gamma-HCH)	58-89-9
MCPA (2-methyl-4-chlorophenoxy acetic acid)	94-74-6
MCPB (4- (4-chloro-or-tolyossi) butyric acid)	94-81-5
mecoprop	93-65-2
methamidophos	10265-92-6
methoxychlor	72-43-5
Methyl parathion	298-00-0
Mevinofos (Fosdrin)	7786-34-7
mirex	2385-85-5
monocrotophos	6923-22-4
Ethyl parathion	56-38-2
Profenophos	41198-08-7
Propetamphos	31218-83-4

SUBSTANCES LIST	
Quinalphos	13593-03-8
toxaphene	8001-35-2
2,4,5-trichloro phenoxy acetic acid, its salts and compounds	93-76-5
trifluralin	1582-09-8
α-hexachlorocyclohexane	319-84-6
β-hexachlorocyclohexane	319-85-7
δ-hexachlorocyclohexane	319-86-8
<b>Biocides - dimethylfumarate</b>	
SUBSTANCES	CAS
Dimethylfumarate	624-49-7
<b>Biocides - Other</b>	
SUBSTANCES	CAS
Are BANNED all the Biocides NOT listed on EU Regulation 528/2012 and subsequent amendments	
<b>Chlorophenols - Chlorinated Phenols</b>	
SUBSTANCES	CAS
Trichlorophenol (TCP), mixed isomers	25167-82-2
2,3,5-trichlorophenol	933-78-8
2,3,6-trichlorophenol	933-75-5
2,4,5-trichlorophenol	95-95-4
2,4,6-trichlorophenol	88-06-2
3,4,5-trichlorophenol	609-19-8
Tetrachlorophenol (TeCP), mixed isomers	25167-83-3
2,3,4,5-Tetrachlorophenol	4901-51-3
2,3,4,6-Tetrachlorophenol	58-90-2
2,3,5,6-Tetrachlorophenol	935-95-5
Pentachlorophenol (PCP)	87-86-5
<b>O-Phenylphenol</b>	
SUBSTANCES	CAS
O-Phenylphenol (OPP)	90-43-7
<b>Vinyl chloride - monomer</b>	
SUBSTANCES	CAS
Vinyl chloride	75-01-4
<b>PAHs</b>	
SUBSTANCES	CAS
Benzo(a)pyrene (BaP)	50-32-8
Benzo(a)anthracene (BaA)	56-55-3
Benzo(b)fluoranthene (BbF)	205-99-2
Benzo(e)pyrene (BeP)	192-97-2
Benzo(j)fluoranthene (BjF)	205-82-3
Benzo(k)fluoranthene (BkF)	207-08-9
Chrysene (CHR)	218-01-9
Dibenzo(a, h)anthracene (DBA)	53-70-3
Indeno(1,2,3-cd)pyrene (IPY)	193-39-5
Benzo(g,h,i)perylene (BPE)	191-24-2
Naphtalene (NAP)	91-20-3
Acenaphtylene (ANY)	208-96-8
Acenaphtalene (ANA)	83-32-9
Fluorene (FLU)	86-73-7
Phenanthrene (PEH)	85-01-8
Fluoranthene (FLT)	206-44-0
Pyrene (PYR)	129-00-0
Anthracene	120-12-7
Cyclopenta[c,d]pyrene	27208-37-3
Dibenzo[a,e]pyrene	192-65-4
Dibenzo[a,h]pyrene	189-64-0
Dibenzo[a,j]pyrene	189-55-9
Dibenzo[a,l]pyrene	191-30-0
1-Methylpyrene	2381-21-7

GROUP 1

## SUBSTANCES LIST

Isocyanate	
SUBSTANCES	CAS
MDI mixed isomers	26447-40-5
4,4'-Diphenylmethane diisocyanate	101-68-8
2,2'-methylenebis(phenyl diisocyanate)	2536-05-2
2,4'-Methylenebis(phenyl isocyanate)	5873-54-1
Technical grade MDI	9016-87-9
Hexamethylene diisocyanate (HMDI)	822-06-0
4,4'-Methylene dicyclohexyl diisocyanate (4,4 MDI)	5124-30-1
Nitrosamines	
SUBSTANCES	CAS
N-Nitrosodibutylamine (NDBA)	924-16-3
N-Nitrosodiethanolamine	1116-54-7
N-Nitrosodiethylamine (NDEA)	55-18-5
N-Nitrosodimethylamine (NDMA)	62-75-9
N-Nitrosodipropylamine (NDPA)	621-64-7
N-Nitroso-N-ethylaniline	612-64-6
N-Nitroso-N-methylaniline	614-00-6
N-Nitrosomorpholine (NMOR)	59-89-2
N-Nitrosopiperidine (NPIP)	100-75-4
N-Nitrosopyrrolidine	930-55-2
Short chain chlorinated paraffins - flame retardants	
SUBSTANCES	CAS
Alkanes C10-13, chloro (Short chain chlorinated paraffins) SCCPs	85535-84-8
2,2-Bis(bromomethyl)-1,3-propanediol	3296-90-0
bis(2,3-dibromopropyl) phosphate	5412-25-9
Solvents	
SUBSTANCES	CAS
N-metil-2-pirrolidone (NMP)	872-50-4
N,N-Dimethylacetamide (DMAc)	127-19-5
Dimethylformamide (DMFa)	68-12-2
Chlorinated Solvents	
SUBSTANCES	CAS
Chlorinated ethanes, all isomers	
1,1-Dichloroethane	75-34-3
1,2-Dichloroethane	107-06-2
1,1,1-Trichloroethane	71-55-6
1,1,2-Trichloroethane	79-00-5
1,1,1,2-Tetrachloroethane	630-20-6
1,1,2,2-Tetrachloroethane	79-34-5
Hexachloroethane	67-72-1
Dichloromethane	75-09-2
Chloroform	67-66-3
Tetrachloromethane	56-23-5
1,1-Dichloroethylene	75-35-4
Trichloroethylene	79-01-6
Perfluorinated Chemicals (PFCs)	
SUBSTANCES	CAS
PFOS	1763-23-1
PFOA	335-67-1
PFAS chemicals	
Perfluorohexano sulfonic acid / Perfluorohexano sulfonate (PFHxS)	355-46-4 / 432-50-7
Perfluoro hexane sulfonate Na-salt (PFHxS-Na)	82382-12-15
Perfluoro heptane sulfonate-Na salt (PFHpS-Na)	68555-66-8
Perfluoro dodecane sulfonate-Na salt (PFDS-Na)	2806-15-7
Perfluoroaliphatic Dean-sulfonate potassium salt (PFDS-K)	2806-16-8
Perfluoroaliphatic Dean-sulfonate salt of NH4 (PFDS-NH4)	67906-42-7
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8
Perfluorododecano sulfonic acid (PFDS)	335-77-3
Acid perfluoro-3,7-dimethyl octanoic (PF-3,7-DMOA)	172155-07-6
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (1H, 1H, 2H, 2H-PFOS)	27619-97-2
2H, 2H, 3H, 3H-perfluoro undecanoic acid (H4PFUnA)	34598-33-9
1H, 1H, 2H, 2H-Perfluorodecano sulfonate (8: 2 FTS)	39108-34-4
Perfluoroottan sulfonamide (PFOSA)	754-91-6
N-Methyl-Perfluoroottan sulfonamide (N-Me-FOSA)	31506-32-8

SUBSTANCES LIST			
N-Ethyl-Perfluoroottan sulfonamide (N-Et-FOSA)			4151-50-2
N-Methyl-sulphonamide Perfluoroottan ethanol (N-Me-FOSE)			24448-09-7
N-Ethyl-Perfluoroottan sulfonamide ethanol (N-Et-FOSE)			1691-99-2
Acid perfluoroaliphatic butansulfonico (PFBS)	375-73-5	59933-66-3	749861-23-2
Perfluoroaliphatic butansulfonato-potassium salt (PFHxS-K)			29420-49-3
<b>Fluorotelomer alcohols (FTOHs) F (CF2) n CH2CH2OH</b>			
4: 2 FTOH, perfluorohexane-1-ol			2043-47-2
6: 2 FTOH, perfluoro hexyl ethanol			647-42-7
8: 2 FTOH, Perfluoro octyl ethanol			678-39-7
10: 2 FTOH, Perfluorododecano-1-ol			865-86-1
<b>Olefins fluorotelomer (FTOs)</b>			
6: 2-FTA, perfluorooctyl acrylate			17527-29-6
8: 2-FTA, Perfluorododecil acrylate			27905-45-9
10: 2_FTA, Perfluorododecil acrylate			17741-60-5
Perfluorottan sulfonyl fluoride (PFOSF)			307-35-7
<b>Perfluorocarboxylic acids and salts (PFCA)</b>			
Perfluorobutanoico acid (PFBA)			375-22-4
Perfluoroetanoico acid (PFHxA)			307-24-4
Perfluorononanoico acid (PFNA)			375-95-1
7H-Dodecafluoroeptanoico (HPFHpA)			1546-95-8
2H, 2H-acid perfluorododecanoico (H2PFDA)			27854-31-5
Perfluoroetanoico acid (PFPeA)			2706-90-3
Perfluoroeptanoico acid (PFHpA)			375-85-9
Perfluorododecanoico acid (PFDA)			335-76-2
Perfluoro undecanoico acid (PFUnA)			2058-94-8
Perfluoroaliphatic dodecanoico acid (PFDoA)			307-55-1
Perfluoroaliphatic tridecanoico acid (PFTrA)			72629-94-8
Acid perfluoroaliphatic tetradecanoico (PFTeA)			376-06-7
<b>Phenylmercury Compounds</b>			
SUBSTANCES		CAS	
Phenylmercury acetate		62-38-4	
Phenylmercury propionate		103-27-5	
Phenylmercury 2-ethylhexanoate		13302-00-6	
Phenylmercury octanoate		13864-38-5	
Phenylmercury neodecanoate		26545-49-3	
<b>Quinoline</b>			
SUBSTANCES		CAS	
Quinoline		91-22-5	
<b>Benzene</b>			
SUBSTANCES		CAS	
Benzene		71-43-2	
<b>Glycol</b>			
SUBSTANCES		CAS	
Bis(2-methoxyethyl)-ether		111-96-6	
2-ethoxyethanol		110-80-5	
2-ethoxyethyl acetate		111-15-9	
Ethylene glycol dimethyl ether		110-71-4	
2-methoxyethanol		109-86-4	
2-methoxyethylacetate		110-49-6	
2-methoxypropylacetate		70657-70-4	
Triethylene glycol dimethyl ether		112-49-2	
<b>VOC</b>			
SUBSTANCES		CAS	
Benzene		71-43-2	
Xylene		1330-20-7	
o-cresol		95-48-7	
p-cresol		106-44-5	
m-cresol		108-39-4	

## Annex

## CHINA GB STANDARDS

These limits are only for information of the readers. Suppliers must refer to the limits exposed in the previous section of this RSL

## TEXTILE PRODUCTS - GB 18401:2010

Test items	Category A	Category B	Category C
	Children	Direct contact with skin	No direct contact with skin
Formaldehyde content (mg/Kg)	≤ 20	≤ 75	≤ 300
pH value (a)	4.0 to 7.5	4.0 to 8.5	4.0 to 9.0
Colorfastness class (b)	to water	3 to 4	3
	to acid perspiration	3 to 4	3
	to basic perspiration	3 to 4	3
	to dry rubbing	4	3
	to saliva	4	-
Colorfastness (GB 31701)	3 (Dark Colour 2-3)	2-3	-
Determination of odor	None		
Azo dyestuff-produced banned aromatic amines (c)	Cannot be used (20 mg/kg)		

(a) pH value can be only extended to the range of 4.5 to 10.5 when the products should be again treated in wet during the subsequent handling

(b) not applicable to the dis colored products in washing

(c) list of banned carcinogenic aromatic amine released under reducing conditions given in Annex C in Technical code GB 18401-2003

## LEATHER PRODUCTS - GB 20400:2006

Test items	Category A	Category B	Category C
	Children	Direct contact with skin	No direct contact with skin
Formaldehyde content (mg/Kg) GB/T 19941	≤ 20	≤ 75	≤ 300 (600 for the white sheep shearing)
AZO (mg/Kg) GB/T 19942	≤ 30	≤ 30	≤ 30

## JEWELRY - GB28480: 2012

Items	Children's jewelry	Adults' jewelry	Method
Nickel release	Body-Piercing: 0.2 µg/cm <sup>2</sup> /week Direct contacted: 0.5 µg/cm <sup>2</sup> /week	Body-Piercing: 0.2 µg/cm <sup>2</sup> /week Direct contacted: 0.5 µg/cm <sup>2</sup> /week	GB 28585, GB/T 19719
Pb	300 mg/kg	1000 mg/kg	GB 28480, GB/T 28021
Cd	100 mg/kg	100 mg/kg	
As/Hg/Cr (VI)	1000 mg/kg	1000 mg/kg	GB 28480, GB/T 28021
Soluble heavy metals	Pb: 90mg/kg Cd: 75mg/kg Hg: 60mg/kg Cr: 60mg/kg As: 25mg/kg Se: 500mg/kg Sb: 60mg/kg Ba: 1000mg/kg		

## OTHER STANDARDS

Garment			
Printing cashmere knitting goods	FZ/T 24019-2012	Knitted sportswear	GB/T 22853-2009
Silk Knitting Garment	FZ/T 43015-2011	Knitted school uniform	GB/T 22854-2009
Low wool content and wool knitting goods	FZ/T 73005-2012	Woven garments for students	GB/T 23328-2009
Knitted Underwear in Acrylic Fibers	FZ/T 73006-1995	Knitted Wadded Garment	GB/T 26384-2011
Knitted workmanship sweater	FZ/T 73010-2016	Knitting patchwork clothing	GB/T 26385-2011
Knitted swimming suits	FZ/T 73013-2017	Infant and Children's Textile Products	GB 31701-2015
Knitted homewear	FZ/T 73017-2014	PVC artificial leather	GB 21550-2008
Wool Knitting goods	FZ/T 73018-2012		
Knitted constrictive in-wear—Elastic-style	FZ/T 73019.1-2017		
Knitted constrictive in-wear—Figured-style	FZ/T 73019.2-2013	Footwear	
Knitted Sportswear	FZ/T 73020-2012	Rubber shoes healthy and safe specification	GB 25038-2010
Knitted thermal underwear	FZ/T 73022-2012	Shanks for footwear	GB 28011-2011
Knitted underwear in Chemical fibres	FZ/T 73024-2014	Children's canvas rubber footwear	GB 25036-2010
Knitted garment and adornment for infant	FZ/T 73025-2013		
Knitted skirt suit	FZ/T 73026-2014	Athletic footwear	GB/T 15107-2013
Knitted artificial leather garment	FZ/T 73028-2017	Football shoes	GB/T 19706-2015
Knitted Shirts	FZ/T 73043-2012	Leather sandals	GB/T 22756-2017
Pajamas	FZ/T 81001-2016	Sport shoes	HG/T 2017-2011
Skirts and Skirted Suit	FZ/T 81004-2012	Casual	HG/T 2018-2014
Jeanswear	FZ/T 81006-2017	Leather shoes	QB/T 1002-2015
Casual Wear	FZ/T 81007-2012	Polyvinyl Chloride assembled sandals	QB/T 1652-1992
Jackets	FZ/T 81008-2011	Polyvinyl Chloride-plastic Sandals and Slippers	QB/T 1653-1992
Trench coats	FZ/T 81010-2018	Children's leather shoes	QB/T 2880-2016
Infant's wear	FZ/T 81014-2008	Casual shoes	QB/T 2955-2017
Shirts and blouses	GB/T 2660-2017	Copolymer(EVA) slippers and sandals.	QB/T 2977-2008
Cotton wadded clothes	GB/T 2662-2017	Children's athletic shoes	QB/T 4331-2012
Men's Suits and Coats	GB/T 2664-2017	Slippers	QB/T 4552-2013
Women's Suits and Coats	GB/T 2665-2017	Technical Specification for Children's Footwear	GB 300585-2014
Trousers	GB/T 2666-2017		
Cotton Knitted Underwear	GB/T 8878-2014	Bags & leather accessories	
Down Garment	GB/T 14272-2011	Handbag and knapsack	QB/T 1333-2018
Silk Garment	GB/T 18132-2016	Leather glove	QB/T 1584-2018
Washed Garments	GB/T 22700-2016	Leather belt	QB/T 1618-2018
Knitted T-shirt	GB/T 22849-2014	Wallet	QB/T 1619-2018