



**American Apparel & Footwear Association (AAFA)
Restricted Substance List (RSL)
August 2009
Release 5**

Introduction

This Restricted Substances List (RSL) was created by a special working group of the American Apparel & Footwear Association's (AAFA) Environmental Task Force. The RSL is intended to provide apparel and footwear companies with information related to regulations and laws that restrict or ban certain chemicals and substances in finished home textile, apparel, and footwear products around the world.

It is our hope that this RSL will serve as a practical tool to help those individuals in textile, apparel and footwear companies, and their suppliers, responsible for environmental compliance throughout the supply chain, to become more aware of various national regulations governing the amount of substances that are permitted in finished home textile, apparel and footwear products.

Our effort is to create a dynamic and useful instrument. The RSL will be updated on a regular basis and will be supplemented with additional resources to help officials in these companies undertake responsible chemical management practices in the aforementioned finished products.

Methodology

The RSL includes only those materials, chemicals, and substances that are restricted or banned in finished home textile, apparel, and footwear products because of a regulation or law. In each case, the RSL identifies the most restrictive regulation.

The RSL does not include regulations that restrict the use of substances in production processes or in the factory; rather the focus is on whether or not the substance can be found in finished home textile, apparel, and footwear products at a certain level.

A. Structure

For each substance the RSL identifies the following features:

1. CAS number
2. Common chemical or color name
3. Information on the Restriction/Limit on Final Product or Tested Component
 - a. Restriction Level
 - b. Country where that Restriction/Limit is found
 - c. Test Method
 - d. Other countries that maintain equal or less restrictions
 - e. Comments (if applicable)

B. What is Included and What is Not

The RSL is not intended to address product safety regulations outside the chemical management area – such as Consumer Product Safety Commission (CPSC) regulations related to small parts. Moreover, it is not structured to cover toys, automotive textiles, or other industrial textiles. This list does not include restrictions related to use of substances in packaging or related materials.

The following legislation is not listed because there are not regulatory concentration limits but may warrant evaluation for applicability.

1. The US EPA, following the Montreal Protocols, promulgated legislation on ozone depleting compounds. Class I and Class II listed chemicals used in the process of manufacturing of product or packaging requires special labeling as detailed in the regulation. Residuals of the chemical components in the product or package are not necessary to trigger the requirement. Minor usage in textiles as a spot cleaner is acceptable.
2. California Proposition 65 requires labeling for products containing chemicals known to the state to cause cancer. Typically labeling requirements are dependent on consumer exposure to the chemical, not the concentration in the

product. Exposure levels have been determined for certain chemicals under certain applications, products, or use through legal settlements in the State of California.

C. Technical Notes

1. Chemical nomenclature can take several forms. Technical chemical names may take numerous forms. It is the responsibility of the user to verify synonyms of any regulated chemicals referenced.
2. It is possible that regulated components may be present in raw materials below the levels that require reporting on Material Safety Data Sheets (Meds). Care should be taken to verify the presence of all regulated ingredients regardless of the concentration.
3. This list represents the known and applicable standards at the time of publication; any inaccuracy or omission is not the responsibility of AAFA.

About AAFA

The American Apparel & Footwear Association (AAFA) is the national trade association representing apparel, footwear and other sewn products companies, and their suppliers, which compete in the global market. AAFA's mission is to promote and enhance its members' competitiveness, productivity and profitability in the global market by minimizing regulatory, commercial, political, and trade restraints.

Acknowledgements

The AAFA gratefully acknowledges the support and contribution of the following individuals and organizations in developing this RSL:

RSL Task Force:

Sean Cady, Levi Strauss & Co.
John Eapen, American & Efird, Inc.
Elizabeth Hausler, Bureau Veritas
Andy Kahn, Kahn Lucas Lancaster
Helmut Krause, PhD, SGS
Lydia Lao, Intertek
Andy Chen, PhD, Nike Inc
Tommy Thompson, Hanesbrands, Inc.
Manfred Wentz, PhD, Oeko Tex

AAFA also acknowledges the contributions of the following individuals who served as Peer Reviewers of this RSL.

Peer Review Group:

Michael Walls, American Chemistry Council
Henry Boyter, PhD, Institute of Textile Technology NCSU College of Textiles
Nick Odom, Springs Industries
John Easton, PhD, Dystar, Inc.

Arylamines*

Arylamines							
CAS Number	Chemical Name/Color Index Name	Restriction / Limit on Final Product or Tested Component	Country	Regulation	Test Method [detection limit]	Other Countries, U.S. States that also Regulate this Substance	Comment
60-09-3	4-Amino azobenzene	Not Detected	EU and	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	Textiles (EU): EN 14362-1	South Korea	
97-56-3	<i>o</i> -Aminoazotoluene	(below detection limits- see test method)	China		Polyester(EU): EN 14362-2		
92-67-1	4-Aminodiphenyl		Leather(EU): CEN ISO/TS 17234 detection limit is				
99-55-8	2-Amino-4-nitrotoluene		[30 ppm]				
90-04-0	<i>o</i> -Anisidine		The National Standard of the People's Republic of China GB 18401		Textiles(China) GB/T 17592-2006 [detection limit 20 ppm] Test Method for 4-Aminoazobenzene (pAAB) confirmation § 64 LFGB B 82.02-9		
92-87-5	Benzidine						
106-47-8	<i>p</i> -Chloroaniline						
95-69-2	4-Chloro- <i>o</i> -toluidine						
120-71-8	<i>p</i> -Cresidine						
615-05-4	2,4-Diaminoaniso						
101-77-9	4,4'-Diamino-						
91-94-1	3,3'-Dichlorobenzidine						
119-90-4	3,3'-Dimethoxybenzidine						
119-93-7	3,3'-Dimethylbenzidine						
838-88-0	3,3'-Dimethyl-4,4'-diamino-diphenylmethane		The National Standard of the People's Republic of China GB20400-2006		Leather and Fur (China)		
101-14-4	4,4'-Methylene-bis-(2-chloroaniline)						
91-59-8	2-Naphthylamine						
101-80-4	4,4'-Oxydianiline						
139-65-1	4,4'-Thiodianiline						
95-80-7	2,4-Toluediamine						
95-53-4	<i>o</i> -Toluidine						
137-17-7	2,4,5-Trimethylaniline						
95-68-1	2,4-Xylidine (China only)						
87-62-7	2,6-Xylidine (China only)						

* AZO Dyes which, by reductive cleavage of one or more AZO groups, may release one or more of the following aromatic amines

Disperse Dyes

Disperse Dyes							
CAS Number	Chemical Name/Color Index Name	Restriction / Limit on Final Product or Tested Component	Country	Regulation	Test Method [detection limit]	Other Countries, U.S. States that also Regulate this Substance	Comment
2475-45-8	Disperse Blue 1	Not Detected	Germany	German Food, Feed and Commodities Law §30 (LFGB §30)	§64 LFGB B82.02-10		
12222-75-2	Disperse Blue 35	(below detection limits - see test method)					
12223-01-7	Disperse Blue 106						
61951-51-7	Disperse Blue 124						
730-40-5	Disperse Orange 3						
13301-61-6	Disperse Orange 37/76						
2872-52-8	Disperse Red 1						
2832-40-8	Disperse Yellow 3						

Solvents

Solvents							
CAS Number	Chemical Name/Color Index Name	Restriction / Limit on Final Product or Tested Component	Country	Regulation	Test Method [detection limit]	Other Countries, U.S. States that also Regulate this Substance	Comment
76-01-7	Pentachloroethane	0.1% (mass)- TOTAL	Germany and Japan	Germany - Chemikalienverbot Verordnung (Prohibition of Chemicals Ordinance), section 16 Japan Law for the Control of Household Products Containing Harmful Substances	Headspace for components (industry practice - not specified by the regulation)		
56-23-5	Carbon Tetrachloride						
630-20-6	1,1,1,2-Tetrachloroethane						
79-34-5	1,1,2,2-Tetrachloroethane						
67-66-3	Chloroform						
79-00-5	1,1,2-Trichloroethane						
75-35-4	1,1-Dichloroethylene						
71-55-6	1,1,1-Trichloroethane						
127-18-4	Tetrachloroethylene (Japan only)						
	Chloroalkanes (C10 - C13)	1000ppm in preparations	EU	European Union REACH Regulation (EC) No 1907/2006 Annex XVII			

Pesticides

Pesticides												
CAS Number	Chemical Name/Color Index Name	Restriction / Limit on Final Product or Tested Component	Country	Regulation	Test Method [detection limit]	Other Countries, U.S. States that also Regulate this Substance	Comment					
93-72-1	2-(2,4,5-trichlorophenoxy) propionic acid, its salts and compounds	Not Detected	Switzerland and Finland (those pesticides without indication are regulated under Switzerland only)	Switzerland: Art. 9, 11, 35 and 61 Ordinance relating to Environmentally Hazardous Substances(Ordinance on Substances) Finland: Ministry of Environment Government Decree on persistent organic substances (735/2002)	U.S. EPA Method 8081A/ 8151A - (industry practice - not specified by the regulation)	Japan, South Korea	For Dieldrin, PCP, and TeCP, South Korea restrictions apply at different levels for underwear, baby clothing (<24 months) and bedclothes.					
93-76-5	2,4,5-trichlorophenoxyacetic acid, its salts and compounds											
309-00-2	Aldrin (both Switzerland and Finland)											
57-74-9	Chlordane (both Switzerland and Finland)											
72-54-8	Dichloro-diphenyl-dichloro ethane (DDD)											
72-55-9	Dichloro-diphenyl-dichloro ethylene (DDE)											
50-29-3	Dichloro-diphenyl-trichloro ethane (DDT) (both Switzerland and Finland)											
60-57-1	Dieldrin (5) (both Switzerland and Finland)										Japan, South Korea	
72-20-8	Endrine (both Switzerland and Finland)											
76-44-8	Heptachlorine (both Switzerland and Finland)											
1024-57-3	Epoxy-heptachlorine											
118-74-1	Hexachlorobenzene (both Switzerland											
608-73-1	Hexachlorocyclohexane (HCH, all isomers) except gamma-hexachlorocyclohexane (except linande [58-89-9] in medical products)											
465-73-6	Isodrin											
4234-79-1	Kelevane											
143-50-0	Kepone (Chlordecone)											
58-89-9	Lindane											
72-43-5	Methoxychlor											
2385-85-5	Mirex (Finland only)											

Pesticides (continued)

72-43-5	Methoxychlor						
2385-85-5	Mirex (Finland only)						
72-56-0	Perthane						
82-68-8	Quintozene						
8001-50-1	Strobane						
297-78-9	Telodrin						
8001-35-2	Toxaphene (both Switzerland and Finland)						
1336-36-3 53469-21-9 and Various	Halogenated biphenyls, including Polychlorinated biphenyl (PCB) (both Switzerland and Finland)						
Various	Halogenated terphenols, including Polychlorinated terphenyl (PCT)						
Various	Halogenated naphthalenes						
Various	Halogenated diarylalkanes						
	Halogenated diphenyl methanes, including						
99688-47-8	Monomethyl-dibromo-diphenyl methane						
81161-70-8	Monomethyl-dichloro-diphenyl methane						
76253-60-6	Monomethyl-tetrachloro-diphenyl methane						
87-86-5	Pentachlorophenol (PCP), its salts and compounds					South Korea	
25167-83-3	Tetrachlorophenol (TeCP), its salts and					South Korea	

Asbestos

Asbestos							
CAS Number	Chemical Name/Color Index Name	Restriction / Limit on Final Product or Tested Component	Country	Regulation	Test Method [detection limit]	Other Countries, U.S. States that also Regulate this Substance	Comment
77536-66-4	Actinolite	Not detected	European Union	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	Microscopic examination; minimum magnification 1-250, attached; ratio of fiber length to diameter is at polarized light filter least 3:1- (industry practice - not specified by the regulation)		
12172-73-5	Amosite						
77536-67-5	Anthrophyllite						
12001-29-5	Chrysotile						
12001-28-4	Crocidolite						
77536-68-6	Tremolite						

Fluorinated Greenhouse Gases

Fluorinated Greenhouse Gases							
CAS Number	Chemical Name/Color Index Name	Restriction / Limit on Final Product or Tested Component	Country	Regulation	Test Method [detection limit]	Other Countries, U.S. States that also Regulate this Substance	Comment
2551-62-4	Sulfur hexafluoride - SF ₆	May Not be Used	European Union	European Union Council Directive 2006/842/EC	Headspace for components (industry practice - not specified by the regulation)		
	Hydrofluorocarbons (HFCs):						
75-46-7	HFC-23 - CHF ₃						
75-10-5	HFC-32 - CH ₂ F ₂						
593-53-3	HFC-41 - CH ₃ F						
138495-42-8	HFC-43-10mee - C ₅ H ₂ F ₁₀						
354-33-6	HFC-125 - C ₂ HF ₅						
359-35-3	HFC-134 - C ₂ H ₂ F ₄						
811-97-2	HFC-134a - CH ₂ FCF ₃						
75-37-6	HFC-152a - C ₂ H ₄ F ₂						
430-66-0	HFC-143 - C ₂ H ₃ F ₃						
420-46-2	HFC-143a - C ₂ H ₃ F ₃						
431-89-0	HFC-227ea - C ₃ HF ₇						
677-56-5	HFC-236cb - CH ₂ FCF ₂ CF ₃						
431-63-0	HFC-236ea - CHF ₂ CHFCF ₃						
690-39-1	HFC-236fa - C ₃ H ₂ F ₆						
679-86-7	HFC-245ca - C ₃ H ₃ F ₅						
460-73-1	HFC-245fa - CHF ₂ CH ₂ CF ₃						
406-58-6	HFC-365mfc - CF ₃ CH ₂ CF ₂ CH ₃						
	Perfluorocarbons (PFCs):						
75-73-0	Perfluoromethane - CF ₄						
76-16-4	Perfluoroethane - C ₂ F ₆						
76-19-7	Perfluoropropane - C ₃ F ₈						
355-25-9	Perfluorobutane - C ₄ F ₁₀						
678-26-2	Perfluoropentane - C ₅ F ₁₂						
355-42-0	Perfluorohexane - C ₆ F ₁₄						
115-25-3	Perfluorocyclobutane - c-C ₄ F ₈						

Dioxins & Furans

Dioxins & Furans							
CAS Number	Chemical Name/Color Index Name	Restriction / Limit on Final Product or Tested Component	Country	Regulation	Test Method [detection limit]	Other Countries, U.S. States that also Regulate this Substance	Comment
1746-01-6 40321-76-4 51207-31-9 57117-31-4	Group 1) 2,3,7,8-Tetrachlorodibenzo-p-dioxin 1,2,3,7,8-Pentachlorodibenzo-p-dioxin 2,3,7,8-Tetrachlorodibenzofuran 2,3,4,7,8-Pentachlorodibenzofuran	Sum of Group 1: 1 µg/kg	Germany	German Chemicalienverbots Verordnung (4) Dioxine	US EPA 8290 - (industry practice - not specified by the regulation)		
39227-28-6 19408-74-3 57653-85-7 57117-41-6 70648-26-9 72918-21-9 57117-44-9 60851-34-5	Group 2) 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin 1,2,3,7,8-pentachlorodibenzofuran 1,2,3,4,7,8-Hexachlorodibenzofuran 1,2,3,7,8,9-Hexachlorodibenzofuran 1,2,3,6,7,8-Hexachlorodibenzofuran 2,3,4,6,7,8-Hexachlorodibenzofuran	Sum of Group 1 & 2: 5 µg/kg					
35822-46-9 3268-87-9 67562-39-4 55673-89-7 39001-02-0	Group 3) 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin 1,2,3,4,6,7,8-Heptachlorodibenzofuran 1,2,3,4,7,8,9-Heptachlorodibenzofuran 1,2,3,4,6,7,8,9-Octachlorodibenzofuran	Sum of Group 1, 2 & 3: 100 µg/kg					
50585-41-6 109333-34-8 6733-57-7 131166-92-2	Group 4) 2,3,7,8-Tetrabromodibenzo-p-dioxin 1,2,3,7,8-Pentabromodibenzo-p-dioxin 2,3,7,8-Tetrabromodibenzofuran 2,3,4,7,8-Pentabromodibenzofuran	Sum of Group 4: 1 µg/kg					
110999-44-5 110999-46-7 110999-45-6 107555-93-1	Group 5) 1,2,3,4,7,8-Hexabromodibenzo-p-dioxin 1,2,3,7,8,9-Hexabromodibenzo-p-dioxin 1,2,3,6,7,8-Hexabromodibenzo-p-dioxin 1,2,3,7,8-Pentabromodibenzofuran	Sum of Group 4 & 5: 5 µg/kg					

Flame Retardants

Flame Retardants							
CAS Number	Chemical Name/Color Index Name	Restriction / Limit on Final Product or Tested Component	Country	Regulation	Test Method [detection limit]	Other Countries, U.S. States that also Regulate this Substance	Comment
85535-84-8	Chlorinated paraffins (C10-C13)	May not be used	European Union	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	Solvent extraction and GC-MS or LC-MS (industry practice - not specified by the regulation)	South Korea	This chemical may also be present in leather and should not exceed 1% for fat liquoring of leather
59536-65-1	Polybrominated biphenyls (PBBs)	May not be used	European Union	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	Methanol extraction: analysis by GC-MS or LC-MS (industry practice - not specified by the regulation)	Turkey, Switzerland, Canada, and South Korea	South Korea requirement applicable only to bedclothes and nightclothes among underwear.
32534-81-9	Penta-bromodiphenyl ether (pentaBDE)	May not be used	European Union	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	Solvent extraction and analysis by GC-MS or LC-MS (industry practice -	United States, Switzerland, and South Korea	South Korea requirement applicable only to bedclothes and nightclothes among underwear.
32536-52-0	Octa-bromodiphenyl ether (octaBDE)						
126-72-7	Tris (2,3-dibromopropyl) phosphate (TRIS)	Not Detected	European Union	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	Methanol extraction and analysis by LC-MS or GC-MS (industry practice - not specified by the regulation)	Turkey, Switzerland, Japan, and South Korea	South Korea requirement applicable only to bedclothes and nightclothes among underwear.
5412-25-9	Bis (2,3-dibromopropyl) phosphate	Not Detected	Japan	Japanese law for the control of household products containing harmful substances; Law no. 112, October 12, 1973. Partially amended in 1978 and 1981	Solvent extraction and analysis by GC-MS or LC-MS (industry practice - not specified by the regulation)		
545-55-1	Tris (1-aziridinyl)-phosphine oxide (TEPA)	Not Detected	European Union	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	KOH or NaOH digestion followed by GC-MS headspace analysis for ethyleneimine (industry practice - not specified by the regulation)	Switzerland, Turkey, Japan, and South Korea	
1163-19-5	Decabromodiphenyl ether (DecaBDE)	0.1% by weight	Sweden	Swedish Legislation. Repealed in May 2008			

Metals

Restrictions for Textiles

Metals							
CAS Number	Chemical Name/Color Index Name	Restriction / Limit on Final Product or Tested Component	Country	Regulation	Test Method [detection limit]	Other Countries, U.S. States that also Regulate this Substance	Comment
Restrictions for Textiles							
7440-43-9	Cadmium (Cd)	100 ppm	Netherlands	Cadmium Decree of the Netherlands	Total Digestion	UK	If Cadmium is used as a coloring agent
7439-92-1	Lead (Pb)	100 ppm	Denmark	Danish statutory order no. 1012 of November 13, 2000 on the Prohibition, Sale, Import, and Manufacture of Lead and Products Containing Lead	Total Digestion (industry practice - not specified by the regulation)	U.S.	U.S. federal lead substrate restrictions for each component in children's products (12 years and under) sold on or after February 10, 2009 are set at 600 ppm. After August 14, 2009 level drops to 300 ppm. After August 14, 2011 level drops to 100 ppm.
		0.2 ppm	China	FZ/T 81014-2008 (Textile Industry Standard of the People's Republic of China ISC 61.020 Y76) effective October 1, 2008.	GB/T 17593.1 Textiles-Determination of heavy metals Part 1: Atomic absorption spectrophotometry		Applies to infant wear (<24 months) only. Infant's wear defined as mainly made of textiles and woven fabrics as well as infant's adornment products.
18540-29-9	Chromium (Cr6+) Cr(VI)	Not Detected (below detection limits - see test method)	Germany	German Food, Feed and Commodities Law §30 (LFGB §30)	DIN 53314; C18 filtration and re-analysis of all positive results (for leather) [limit is 3 ppm] BS EN420 ISO 17075		
7440-47-3	Chromium	1.0 ppm	China	China FZ/T 81014-2008 (Textile Industry Standard of the People's Republic of China ISC 61.020 Y76) effective October 1, 2008.	GB/T 17593.1 Textiles-Determination of heavy metals Part 1: Atomic absorption spectrophotometry		Applies to infant wear (<24 months) only. Infant's wear defined as mainly made of textiles and woven fabrics as well as infant's adornment products.
7439-97-6	Mercury	0.02 ppm	China	FZ/T 81014-2008 (Textile Industry Standard of the People's Republic of China ISC 61.020 Y76) effective October 1, 2008.	GB/T 17593.4 Textiles-Determination of heavy metals Part 4: Determination of tear force of tongue-shaped test specimens		Applies to infant wear (<24 months) only. Infant's wear defined as mainly made of textiles and woven fabrics as well as infant's adornment products.
7440-38-2	Arsenic	0.2 ppm	China	FZ/T 81014-2008 (Textile Industry Standard of the People's Republic of China ISC 61.020 Y76) effective October 1, 2008.	GB/T 17593.4 Textiles-Determination of heavy metals Part 4: Determination of tear force of tongue-shaped test specimens		Applies to infant wear (<24 months) only. Infant's wear defined as mainly made of textiles and woven fabrics as well as infant's adornment products.
7440-50-8	Copper	25 ppm	China	FZ/T 81014-2008 (Textile Industry Standard of the People's Republic of China ISC 61.020 Y76) effective October 1, 2008.	GB/T 17593.1 Textiles-Determination of heavy metals Part 1: Atomic absorption spectrophotometry		Applies to infant wear (<24 months) only. Infant's wear defined as mainly made of textiles and woven fabrics as well as infant's adornment products.

Restrictions for Leather

Restrictions for Leather							
7440-43-9	Cadmium (Cd)	100 ppm	Netherlands	Cadmium Decree of the Netherlands	Total Digestion	UK	If Cadmium is used as a coloring agent
7439-92-1	Lead (Pb)	100 ppm	Denmark	Danish statutory order no. 1012 of November 13, 2000 on the Prohibition, Sale, Import, and Manufacture of Lead and Products Containing Lead	Total Digestion (industry practice - not specified by the regulation)	U.S.	U.S. federal lead substrate restrictions for each component in children's products (12 years and under) sold on or after February 10, 2009 are set at 600 ppm. After August 14, 2009 level drops to 300 ppm. After August 14, 2011 level drops to 100 ppm.
18540-29-9	Chromium (Cr 6+) - hexavalent	Not Detected (below detection limits - see test method)	Germany	German Food, Feed and Commodities Law §30 (LFGB §30)	DIN 53314; C18 filtration and re-analysis of all positive results (for leather) [limit is 3 ppm] BS EN420 ISO 17075		

Restrictions for Metal Parts

Restrictions for Metal Parts							
7439-92-1	Lead (Pb)	100 ppm	Denmark	Danish statutory order no. 1012 of November 13, 2000 on the Prohibition, Sale, Import, and Manufacture of Lead and Products Containing Lead	Total Digestion (industry practice - not specified by the regulation)	U.S.	U.S. federal lead substrate restrictions for each component in children's products (12 years and under) sold on or after February 10, 2009 are set at 600 ppm. After August 14, 2009 level drops to 300 ppm. After August 14, 2011 level drops to 100 ppm.
7440-02-0	Nickel (Ni) (in metal items)	0.5 µg/cm ² /week	European Union	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	Nickel release by EN 1811 Abrasion of coated items by EN 12472		

Restrictions for Plastics and Plastic Film

Restrictions for Plastics and Plastic Film							
7439-92-1	Lead (Pb)	100 ppm	Denmark	Danish statutory order no. 1012 of November 13, 2000 on the Prohibition, Sale, Import, and Manufacture of Lead and Products Containing Lead	Total Digestion (industry practice - not specified by the regulation)	U.S.	U.S. federal lead in paint rules for children 12 and under will drop from 600 ppm to 90 ppm for goods made on or after August 14, 2009. U.S. federal lead substrate restrictions for each component in children's products (12 years and under) sold on or after February 10, 2009 are set at 600 ppm. After August 14, 2009 level drops to 300 ppm. After August 14, 2011 level drops to 100 ppm. Argentina: Resolution 7/2009 established a restriction on lead content in paints, lacquers and varnishes. Lead restriction set to 600 ppm and applies to paints, lacquers and varnishes defined as fluids, semi-fluids or solids with or without pigments which change to a solid film after their application in thin layers on metal, wood, stone, paper, leather, fabric, plastic or other materials.'
7440-43-9	Cadmium (Cd)	100 ppm	European Union	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	EN 1122 (industry practice - not specified by the regulation)		

Restrictions for Surface Coatings and Printing

Restrictions for Surface Coatings and Printing							
7439-92-1	Lead (Pb)	100 ppm	Denmark	Danish statutory order no. 1012 of November 13, 2000 on the Prohibition, Sale, Import, and Manufacture of Lead and Products Containing Lead	Total Digestion (industry practice - not specified by the regulation)	U.S., Argentina	U.S. federal lead in paint rules for children 12 and under will drop from 600 ppm to 90 ppm for goods made on or after August 14, 2009. U.S. federal lead substrate restrictions for each component in children's products (12 years and under) sold on or after February 10, 2009 are set at 600 ppm. After August 14, 2009 level drops to 300 ppm. After August 14, 2011 level drops to 100 ppm. Argentina: Resolution 7/2009 established a restriction on lead content in paints, lacquers and varnishes. Lead restriction set to 600 ppm and applies to paints, lacquers and varnishes defined as 'fluids, semi-fluids or solids with or without pigments which change to a solid film after their application in thin layers on metal, wood, stone, paper, leather, fabric, plastic or other materials.'

Organotin Compounds

Organotin Compounds							
CAS Number	Chemical Name/Color Index Name	Restriction / Limit on Final Product or Tested Component	Country	Regulation	Test Method [detection limit]	Other Countries, U.S. States that also Regulate this Substance	Comment
56573-85-4	Tributyltin (TBT)	Not Detected (0.05 ppm EACH)	Japan	Japanese law for the control of household products containing harmful substances (Law no. 112)	Performance-based method of ethanol extraction derivitization and analysis by GC-MS or LC-MS ISO 17353-2004-(industry practice - not specified by the regulation)	TBT - South Korea	South Korea also regulates TBT for baby clothing (less than 24 months), for bedclothes, and products that come into skin contact. EU Decision 2009/425/ EC (0.1%)
668-34-8	Triphenyltin (TPhT)						EU Decision 2009/425/EC (0.1%)
1002-53-5	Dibutyltin (DBT)	1 ppm	South Korea	Self Regulatory Confirmation Notice (Notice No. 2007-34) issued by Korean Agency for Technology and Standards			Applies to baby clothing only (less than 24 months). EU Decision 2009/425/EC (0.1%)
15231-44-4	Diocetyl tin (DOT)	0.10%	EU	EU Decision 2009/425/EC restriction on the marketing and use of Organostannic compounds			

Misc. Chemicals

Miscellaneous							
CAS Number	Chemical Name/Color Index Name	Restriction / Limit on Final Product or Tested Component	Country	Regulation	Test Method [detection limit]	Other Countries, U.S. States that also Regulate this Substance	Comment
624-49-7	Dimethyl Fumarate	Prohibited	Spain, Belgium	Spain (1229 Resolution of 22 December 2008) Belgium: The Minister for Public Health and the Minister for Consumer Protection, The Minister for Public Health and the Minister for Consumer Protection, Ministerial Decree concerning the prohibition of placing articles and products containing DMF on the market. Belgian Official Journal , 12.1.2009		European Union: EU Decision 2009/251/EC (0.1 ppm), France (1 year ban)	Spain (Footwear), Belgium (Articles and Products), EU (Products), France: Are suspended for one year the importation and marketing for free or expensive, seats and footwear containing dimethyl fumarate (EC number: 210-849-0).

Misc. Chemicals (continued)

50-00-0	Formaldehyde 0-36 months old	Not Detected (below detection limits - see test method)	Japan	Japanese Law 112	ISO 14184-1 or JIS L1041 (Law 112) or DIN 53315 [detection limit is 20 mg/kg]	Poland, China, Russia, Finland, Norway, France, Netherlands, Austria, Lithuania, Germany, New Zealand, South Korea	Poland defines baby products as 0-36 months, other countries including Japan, South Korea, and China define baby products as 0-24 months. South Korea also regulates bedclothes with a limit of of 300 ppm.
	>36 months old (with direct skin contact)	75 ppm	Japan	Japanese Law 112	ISO 14184-1 or JIS L1041 (Law 112) or DIN 53315 [detection limit is 20		
	>36 months old (no direct skin contact)	300 ppm	See other countries		ISO 14184-1 or JIS L1041 (Law 112) or DIN 53315 [detection limit is 20		
50-00-0	Formaldehyde (leather)	150ppm	Japan	Japanese Law 112		EU, China	
2795-39-3	Perfluorooctane sulfonate (PFOS)	1 µg/m ²	European Union	EU Directive 2006/122/EC amending for the thirtieth time 76/769/EEC	Solvent Extraction LC-MS - (industry practice - not specified by the regulation)	Canada	The Canadian Environmental Protection Act, 1999 (CEPA 1999), Registration SOR 2008/178 prohibits the manufacture, use, sale, offer for sale and import of PFOS, as well as products containing PFOS, but does not specify limit.
87-86-5	Pentachloropyridine	1000ppm	European Union	European Union REACH Regulation (EC) No 1907/2006 Annex XVII		Germany (5 ppm), USA zero ppm	

Misc. Chemicals (continued)

2402-79-1	Tetrachloropyridine	1000ppm	European Union	European Union REACH Regulation (EC) No 1907/2006 Annex XVII		Germany (5 ppm), USA zero ppm	
	Blue Colorant	Prohibited	European Union	European Union REACH Regulation (EC) No 1907/2006 Annex XVII			
25154-52-3	Nonyl phenol	1000ppm preparations	European Union	European Union REACH Regulation (EC) No 1907/2006 Annex XVII			
	Nonyl phenoethoxylates						

Phthalates

Phthalates							
CAS Number	Chemical Name/Color Index Name	Restriction / Limit on Final Product or Tested Component	Country	Regulation	Test Method [detection limit]	Other Countries, U.S. States that also Regulate this Substance	Comment
	<i>Phthalates</i>	0.1%	South Korea, U.S.	Self Regulatory Confirmation Notice (Notice No. 2007-issued by Korean Agency for Technology and Standards.		European Union, California	In South Korea, applies to baby clothing (less than 24 months). In the U.S., DEHP, DBP and BBP are restricted in child care articles (3 years and under) that facilitate sleep or feeding. Unclear
117-81-7	Di (2-ethylhexyl) phthalate						
117-84-0	Di-n-octyl phthalate (DNOP)						
85-68-7	Benzyl Butyl phthalate (BBP)						
84-74-2	Di-n-butyl phthalate (DBP)						
68515-48-0 28553-12-0	Di-isonyl phthalate (DINP)			U.S. Consumer Product Safety Information Act (PL 110-787).			
68515-49-1 26761-40-0	Di-isodecyl phthalate (DIDP)						In the U.S., DINP, DIDP and BBP are restricted in toys and child care articles that can be placed in the mouth.

Glossary of Terms/Acronyms related to the AAFA RSL list

BS—British Standard

CAS—Chemical Abstracts Service. CAS Registry Numbers (often referred to as CAS RNs or CAS Numbers) are unique identifiers for chemical substances. CAS is a division of the American Chemical Society. See www.cas.org.

CEN—European Committee for Standardization

Detection limit—the lowest quantity of a substance that can be distinguished from the absence of that substance (a blank value) within a stated confidence limit

DIN—German Standards Institute (Deutsches Institut für Normung)

Dioxins and Furans—Chemical compounds that are an undesirable by-product in the manufacture of herbicides, disinfectants, and other agents

EEC—European Economic Community

EN—European Norm

EPA—Environmental Protection Agency (U.S.)

EU—European Union

GB—Guo Biao in Chinese which means National Standards

GC-MS—Gas Chromatography/Mass Spectrometer - instrument used to identify components of mixtures or unknown substances - liquids, gases.

ISO—International Standards Organization

JIS—Japanese Industrial Standard

KOH—Potassium Hydroxide

LFGB—Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuch – German Law Book on food, consumer article and feed.

LC-MS—Liquid Chromatography/Mass Spectrometer - instrument used to identify components of mixtures or unknown substances - liquids, gases.

mg/L—milligram per liter.

mg/kg—milligram per kilogram.

MSDS Information—Material Safety Data Sheet Information – this is chemical safety & toxicological information supplied with chemicals

NaOH—Sodium Hydroxide

Percent by Mass—also called weight percent or percent by weight, this is the mass of the solute divided by the total mass of the solution and multiplied by 100% (also see ppm)

Pesticide—A chemical agent or substance used for destroying pests

ppm—Parts Per Million. A unit describing concentrations of chemical substances. 1 ppm can also be notated as 1 milligram per kilogram (mg/kg) or 1 microgram per gram ($\mu\text{g/g}$).

ppb—Parts per Billion. A unit describing concentrations of chemical substances. 1 ppb can also be notated as 1 microgram per kilogram ($\mu\text{g/kg}$).

PVC—Polyvinyl Chloride

Solvent—A substance in which another substance is dissolved, forming a solution.

UK—United Kingdom

$\mu\text{g/cm}^2/\text{week}$ —microgram per square centimeter per week

$\mu\text{g/g}$ —microgram per gram

µg/kg—microgram per kilogram

µg/m²—microgram per square meter

Changes from Release 4 to Release 5

Arylamines	<p>Changed EU regulation citation to: European Union REACH Regulation (EC) No 1907/2006 Annex XVII</p> <p>Added Chinese regulation for leather and fur under GB20400-2006</p>
Disperse Dyes:	<p>Changed disperse blue 35 CAS from "56524-77-7 or 56524-76-6" to 12222-75-2</p>
Solvents:	<p>Added: Chloroalkanes (C10-C13) as per European Union REACH Regulation (EC) No 1907/2006 Annex XVII</p>
Pesticides:	<p>No changes</p>
Asbestos	<p>Changed EU regulation citation to: European Union REACH Regulation (EC) No 1907/2006 Annex XVII</p>
Flame Retardants	<p>Changed EU regulation citations to: European Union REACH Regulation (EC) No 1907/2006 Annex XVII</p>
Dioxins and Furans:	<p>No changes</p>
Metals:	<p>Changed: "Chromium +6" to "Chromium 6+ / Cr(VI)"</p> <p>Changed EU regulation citations under "Restrictions for Metal Parts" to: European Union REACH Regulation (EC) No. 1907/2006 Annex XVII</p> <p>Changed EU regulation citations under "Restrictions for Plastics and Plastic Film" to: European Union REACH Regulation (EC) No. 1907/2006 Annex XVII</p> <p>Reworded comments on lead, placing information about lead in paint before comments about lead substrates.</p>
Organotin Compounds:	<p>Phthalates now separated from Organotin Compounds</p> <p>Added: 15231-44-4 Dioctyltin (DOT)</p> <p>Changed the EU regulation citation to : EU Decision 2009/425/EC (0.1%) for TBT, TPhT, and DBT</p> <p>Confirmed CAS # 56573-85-4.</p>
Phthalates:	<p>No changes</p>
Misc Chemicals:	<p>Placed Spain and Belgium as the DMF regulators as they have the strictest policy. We have also added the EU regulation in the table in the "other countries" column.</p> <p>Added Belgian prohibition to regulation column for DMF.</p> <p>Added EU Decision 2009/251/EC (0.1ppm) to "other countries" column under DMF</p> <p>Added PCP (or TeCP) which are legislated under European Union REACH Regulation (EC) No 1907/2006 Annex XVII at <1000ppm but Germany requires</p> <p>Added: Blue colorant ban under European Union REACH Regulation (EC) No 1907/2006 Annex XVII</p> <p>Added: Nonyl phenol and nonyl phenoethoxylates under European Union REACH Regulation (EC) No 1907/2006 Annex XVII</p> <p>Added: Limit on formaldehyde in leather per Japanese Law 112</p>

Disclaimer

NOTE: This Restricted Substances List (“RSL”) is provided by the American Apparel & Footwear Association (“AAFA”) for informational purposes only. This list represents the known and applicable standards at the time of publication; any inaccuracy or omission is not the responsibility of AAFA. Determination of whether and/or how to use all or any portion of this RSL is to be made in your sole and absolute discretion. Prior to using this RSL, you should review it with your own legal counsel. Use of this RSL is voluntary.

AAFA does not make any representations or warranties with respect to this RSL or its contents. The RSL is provided on an “AS IS” and on an “AS AVAILABLE” basis. AAFA HEREBY DISCLAIMS ALL WARRANTIES OF ANY NATURE, EXPRESS, IMPLIED OR OTHERWISE, OR ARISING FROM TRADE OR CUSTOM, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, NONINFRINGEMENT, QUALITY, TITLE, FITNESS FOR A PARTICULAR PURPOSE, COMPLETENESS OR ACCURACY.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAWS, AAFA SHALL NOT BE LIABLE FOR ANY LOSSES, EXPENSES OR DAMAGES OF ANY NATURE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, PUNITIVE, DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES OR LOST INCOME OR PROFITS, RESULTING FROM OR ARISING OUT OF A COMPANY’S OR INDIVIDUAL’S USE OF THE RSL, WHETHER ARISING IN TORT, CONTRACT, STATUTE, OR OTHERWISE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.