

RESTRICTED SUBSTANCE LIST (RSL)

February 2023 | 23rd Edition



Table of Contents

Introduction	03
Methodology	03
Technical Notes	04
About AAFA	05
RSL Task Force	06
AP & APE	07
Arylamines	08
Dioxins & Furans	09
Disperse Dyes	10
Flame Retardants	12
Formaldehyde	17
Heavy Metals (Extractable)	18
Heavy Metals (Soluble)	19
Heavy Metals (Total)	20
Miscellaneous	21
Organotin Compounds	26
PAH	27
Pesticides	28
PFAS	31
Phthalates	32
Solvents	34
Glossary of Terms	36
Appendix IA – Updated SVHC¹	39
Appendix 1B – US States ²	49
AppendixII - Labeling ³	52
Change Log	53
Disclaimer	53

¹ Appendix I lists regulations which have a reporting requirement for the SVHC that are not necessarily otherwise listed in the RSL. ² Appendix 1B lists regulations which have a reporting requirement for U.S. states that are not necessarily otherwise listed in the RSL.

³ Appendix II lists regulations which have a labeling requirement that are not necessarily otherwise listed in the RSL.

Introduction

The Restricted Substance List (RSL) was created by a special working group of the American Apparel & Footwear Association (AAFA). This RSL is intended to provide apparel and footwear companies, and their supply chain partners, with information related to regulations and laws that restrict or ban certain chemicals and substances in finished home textile, apparel, footwear, and related accessory products (such as travel goods) around the world.

The RSL was developed to 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 local, national, and international regulations governing the amount of substances that are permitted in finished home textile, apparel, footwear, and related accessory products.

The RSL is 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, footwear, and related accessory 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 the substance can be found in finished home textile, apparel, footwear, and related accessory products at a certain level.

A. Structure

For each substance, the RSL identifies the following features:

- 1. CAS number
- 2. Common chemical name or color index
- 3. Information on the Restriction/Limit on Final Product or Tested Component
 - a. Restriction Level
 - b. Country where that Restriction/Limit is found to be most stringent
 - c. Test Method (where no test method is stipulated in the regulation, the comments column may suggest one)
 - d. Other countries that maintain equal or less restrictions

e. Comments (if applicable)

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 no regulatory concentration limits, but may warrant evaluation for applicability.

- 4. The U.S. Environmental Protection Agency (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.
- 5. California Proposition 65 requires a "clear and reasonable" warning label for all products sold in the state of California containing one or more chemicals known to the state to cause cancer or reproductive toxicity. Labeling requirements are dependent on consumer exposure to the chemical (measured in micrograms (μg)/day) not the concentration in the product. To comply with the law, manufacturers must either ensure that consumer exposure to regulated chemicals in their products do not exceed the established safe harbor levels or label their products. For more information on California Proposition 65, please visit our website at https://www.aafaglobal.org/AAFA/Solutions Pages/RSL Covering California Proposition 65.

B. 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 Safety Data Sheets (SDS). 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. Representing more than 1,000 world famous name brands, retailers, and manufacturers — AAFA is the trusted public policy and political voice of the apparel and footwear industry, its management and shareholders, its three million U.S. workers, and its contribution of \$470 billion in annual U.S. retail sales.

AAFA stands at the forefront as a leader of positive change for the apparel and footwear industry. With integrity and purpose, AAFA delivers a unified voice on key legislative and regulatory issues. AAFA enables a collaborative forum to promote best practices and innovation. AAFA's comprehensive work ensures the continued success and growth of the apparel and footwear industry, its suppliers, and its customers.

Acknowledgements

The AAFA gratefully acknowledges the support and contribution of the past and present members of the RSL Task Force in developing the RSL. The current members of the RSL Task Force are listed below.

RSL Task Force:

Jennifer Barbarisi, North America Regulatory and Compliance Manager, TUV Rheinland

Antonio Barberi Ettaro, Senior Advisor International Trade, MODINT

Lori Bestervelt, Ph.D, Global Operational Lead, Scivera - An Enhesa Company

Anne Bonhoff, Ph. D, Principal Chemist, UL Solutions

Henry Boyter, Ph.D, Director of CESTAB, Center for Environmentally Sustainable Textile and Apparel Businesses

Sean Cady, Vice President, Global Sustainability, Responsibility and Trade, VF Corporation

Harsha Chenna, Senior Director, Global Product Stewardship, VF Corporation

Gamma Cheung, Ph.D, Manager, Product Stewardship Asia, Kontoor Brands

Lisa Clerici, Senior Manager Global Restricted Substances Compliance, Under Armour, Inc.

Warren Gerhardt, Senior Research Scientist, Standard Textile Co., Inc.

John Gerringer, Analytical Director, Eurofins MTS

Meg Hughes, Senior Global Consulting Specialist, Analytical Services, Bureau Veritas Consumer Products Services Pratik Ichhaporia, Ph. D., Technical Services Vice President North America, Eurofins Consumer Product Testing

Sandeep Khatua, Ph. D, Global Technical Director, TUV SUD America Inc.

Kathy Leung, Ph.D, Senior Technical Director, Global Softlines Technical Services, Intertek

Seemanta Mitra, Vice President - Business Development and Sales (North America), Geo Chem CPS

Jongsei Park, CEO, Eurofins MTS

Lillian Peregrina, Director of Softlines, TUV Rheinland

Regina Quimby, Director of Global Product Integrity and Quality Compliance, Fanatics Inc.

Pankajkumar Sarda, Director, Global Softlines Technical Services, Intertek

Nathaniel Sponsler, Director, AFIRM (Phylmar Group)

Steffen Tuemptner, Chemical Expert, TUV Rheinland LGA Products

Min Zhu, Ph. D, US and Canada Softlines Technical Director, SGS Connectivity and Products

AAFA Legal Counsel

Arthur L. Herold, Partner, Webster, Chamberlain and Bean

James S. Wilson, Partner, Webster, Chamberlain & Bean

AAFA Staff

Steve Lamar, President and CEO

Nate Herman, Senior Vice President, Policy

Natalie LaBella, Vice President, Communications and Marketing

Megan Balkovic, Senior Director, Membership Experience & Industry Engagement

Chelsea Murtha, Director of Sustainability

CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
All CAS of isomers of NP	Nonylphenol C6H4(OH)C9H19	Taiwan - sum of NP and NPEO <1000 ppm;	Taiwan, South Korea	Taiwan CNS 15290 (for all textile products)	EN ISO 21084:2019		
		South Korea - sum of NP and NPEO <100 ppm for children <13 years old		Korea			
		EU, Switzerland, Turkey - NPEO < 100 ppm (textile articles intended to be washed);					
All CAS of isomers of NPEO	Nonylphenol ethoxylates (C2H4O)nC15H24O		Taiwan, South Korea, EU	European Union REACH Regulation (EC) No 1907/2006 Annex XVII entry 46a and European Union REACH Regulation (EC) no. 1907/2006 Candidate List	BS EN ISO 18254 Textiles- Methods for the Detection and Determination of alkyl phenol ethoxylates APEOS		REACH Annex XVII entry 46a is applicable to textile articles which can reasonably be expected to be washed in water
All CAS of isomers of NP, OP, NPEO, OPEO	Nonylphenol (NP) Octylphenol (OP) Nonylphenol Ethoxylates (NPEO) Octylphenol Ethoxylates (OPEO)	NP, OP: <10 mg/kg (sum) NP, OP, NPEO, OPEO: <100 mg/kg (sum)	China	GB/T 14272-2021 (Down Garment) FZ/T 73005-2021 (Low Wool Content and Wool-Like Knitting Goods) FZ/T 73018-2021 (Wool Knitting Goods)	Textile: GB/T 23322 Down: GB/T 14272-2021 Clause 5.6.2	China: FZ/T 73009-2021 (Cashmere Knitting Goods)	Updated China Product Standards ito 2021 version in which AP (NP, OP) and APEO (NPEO, OPEO) are added.

Arylamines							
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comment
60-09-3	4-Amino azobenzene	Reported as not detected.	EU, China,	Regulations below apply to all	Textiles (EU): ISO 14362-1	South Korea (KC Mark, for more	4- Amino azobenzene is
97-56-3	o-Aminoazotoluene		Vietnam	Arylamines listed in this RSL	:2017 / EN ISO 14362-3:2017 Leather (EU): EN ISO 17234-	information review Appendix II), and Indonesia	not listed in GB20400- 2006;
92-67-1	4-Aminodiphenyl	China restriction limit:			1:2015		
99-55-8	2-Amino-4-nitrotoluene	Textiles 20 ppm Leather 30 ppm					Only 23 arylamines are subject to this standard
90-04-0	o-Anisidine			European Union REACH	Test methods specific for 4-	O To look Not to the Triber	0
92-87-5	Benzidine	EU restriction limit:		Regulation (EC) No. 1907/2006 Annex XVII entry 43	Aminoazobenzene confirmation: LFGB 82.02-9	Switzerland, Norway, and Taiwan, Turkey	Can test with arylamine salts
106-47-8	p-Chloroaniline	Textiles and Leather: <=30 ppm			LFGB 82.02-15 EN ISO 17234-2:2011	"Indonesia: No.72/M-IND/PER/7/2012 SNI7617:2013	
95-69-2	4-Chloro-o-toluidine				AAB ISO 14362 - 3:2017	SIN17617.2013	
120-71-8	p-Cresidine	Vietnam restriction limit: restricts AZO dyes and			∘GB/T 23344-2009 (pAAB) confirmation		
615-05-4	2,4-Diaminoanisole	Formaldehyde		The National Standard of the	(pAAB) confirmation	Egypt:	
101-77-9	4,4'-Diaminodiphenylmethane	Azo dyes limit: <=30 ppm		People's Republic of China GB18401-2010		ES 7266-4/2011 ES 7322/2011"	GB 30585-2014 (Safety
				GB10401-2010	Textiles (China)	ES /322/2011	technical specification for
91-94-1	3,3'-Dichlorobenzidine				GB/T 17592-2011	Taiwan: CNS 15290	children's footwear) - will apply on 1 Jan 2016
119-90-4	3,3'-Dimethoxybenzidine			The National Standard of the		CNS 15290 CNS 15503 (children products)	apply off 1 Jail 2010
119-93-7	3,3'-Dimethylbenzidine			People's Republic of China GB20400-2006-Leather and Fur	Leather and fur (China)	CNS 8634 (leather casual shoes) CNS 10632 (leather shoes)"	
838-88-0	3,3'-Dimethyl-4,4'-diamino- diphenylmethane			GB20400-2000-Leattlet and Ful	GB/T 19942-2005	CNS 10032 (leatilet Silves)	
101-14-4	4,4'-Methylene-bis-(2- chloroaniline)			Vietnam Circular no.21/2017/TT-BCT		Japan:	
91-59-8	2-Naphthylamine			Going into force May 1, 2018		Textile:	
101-80-4	4,4'-Oxydianiline					JIS L 1940 Leather: ISO 17234-1:2015 / EN ISO	
139-65-1	4,4'-Thiodianiline					17234-2:2011	
95-80-7	2,4-Toluenediamine						
95-53-4	o-Toluidine						
137-17-7	2,4,5-Trimethylaniline						
95-68-1	2,4-Xylidine (China, Japan only)						
87-62-7	2,6-Xylidine (China, Japan only)						
3165-93-3	4-chloro-o-toluidinium chloride	limit for entry 72 is < 30 mg/kg	EU	European Union REACH	EN ISO 14362:2017		
553-00-4 39156-41-7	2-Naphthylammoniumacetate 4-methoxy-m-phenylene			Regulation (EC) No. 1907/2006 Annex XVII entry 72			
J91JU-41-7	diammonium sulphate; 2,4- diaminoanisole sulphate						
21436-97-5	2,4,5-trimethylaniline hydrochloride						

Dioxins & Furans	<u> </u>						
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
Group 1			Germany	GERMANY: Dioxins &	USA: EPA 8290		
1746-01-6	2,3,7,8- Tetrachlorodibenzo-p-dioxin	Sum of Group 1:		Furans can be found in § 3 Abs 2, Anlage 1 Eintrag 2	(industry practice-not specified by the		
40321-76-4	1,2,3,7,8- Pentachlorodibenzo-p-dioxin	— 1 μg/kg		ChemikalienverbotsVO	regulation)		
51207-31-9	2,3,7,8-Tetrachlorodibenzofuran						
57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran						
Group 2							
19408-74-3	1 ,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	Sum of Group 1 & 2:					
39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	— 5 μg/kg					
57117-41-6	1,2,3,7,8- pentachlorodibenzofuran						
57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran						
57653-85-7	1 ,2,3,6,7,8-Hexachlorodibenzo-p-dioxin						
60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran						
70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran						
72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran						
Group 3							
3268-87-9	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	Sum of Groups 1, 2 & 3:					
35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	100 μg/kg					
39001-02-0	1,2,3,4,6,7,8,9-Octachlorodibenzofuran						
55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran						
67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran						
Group 4							
109333-34-8	1,2,3,7,8-Pentabromodibenzo-p-dioxin	Sum of Group 4:					
131166-92-2	2,3,4,7,8-Pentabromodibenzofuran	— 1 μg/kg					
50585-41-6	2,3,7,8-Tetrabromodibenzo-p-dioxin						
67733-57-7	2,3,7,8-Tetrabromodibenzofuran						
Group 5							
107555-93-1	1,2,3,7,8-Pentabromodibenzofuran	Sum of Groups 4 & 5:					
110999-44-5	1,2,3,4,7,8-Hexabromodibenzo-p-dioxin	— 5 μg/kg					
110999-45-6	1,2,3,6,7,8-Hexabromodibenzo-p-dioxin	-					
110999-46-7	1,2,3,7,8,9-Hexabromodibenzo-p-dioxin	-					

Disperse Dye	S						
CAS Number	Chemical Name/Color Index Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
91-22-5	Quinoline	50 mg/kg	EU	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII entry 72	DIN 54231		Previously listed in Arylamines, but now listed in this tab as it is an impurity in disperse dyes.
548-62-9	[4-[4,4'- bis(dimethylamino)benzhydrylidene]cycloh exa-2,5-dien-1- ylidene]dimethylammonium chloride; C.I. Basic Violet 3 with ≥ 0,1 % of Michler's ketone (EC no. 202-027-5)	50 mg/kg	EU	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII entry 72	DIN 54231		
2475-45-8	Disperse Blue 1	50 mg/kg	EU				
569-61-9	Benzenamine, 4,4'-(4-iminocyclohexa-2,5- dienylidenemethylene)dianiline hydrochloride; C.I. Basic Red 9	50 mg/kg	EU				
12222-75-2	Disperse Blue 35	Not Detected (below detection limits - see test method)	Germany	German Food, Feed and Commodities Law §30 (LFGB §30)	DIN 54231 KS K 0736:2014	South Korea (applicable to babywear, children's wear and adult underwear)	The following disperse dyes are also restricted in Korea KC Mark:
12223-01-7	Disperse Blue 106			930 (LFGB 930)	NS N 0730.2014		
13301-61-6	Disperse Orange 37/59/76						Disperse Blue 3 Disperse Blue 7 Disperse Blue 26, Disperse
2475-45-8	Disperse Blue 1						Blue 102 Disperse Orange 1 Disperse Yellow 1 Disperse Yellow 9 Disperse
2832-40-8	Disperse Yellow 3						Yellow 39 Disperse Yellow 49 Disperse Red 11
2872-52-8	Disperse Red 1						Disperse Red 17
61951-51-7	Disperse Blue 124						
730-40-5	Disperse Orange 3						

Disperse Dyes	S						
CAS Number	Chemical Name/Color Index Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
	Carcinogenic Dyes*						
1937-37-7	Direct Black 38	Prohibited	Egypt	ES 7266-4/2011	DIN 54231		* Carcinogenic is not used
2475-45-8	Disperse Blue 1	1					as a description of a sub
2602-46-2	Direct Blue 6	1					category of dyes The term appears in the
2832-40-8	Disperse Yellow 3						Egyptian law restricting the
3761-53-3	Acid Red 26						use of carcinogenic dyes in
569-61-9	Basic Red 9	1					clothing & textiles
573-58-0	Direct Red 28	1					
632-99-5	Basic Violet 14						
82-28-0	Disperse Orange 11	1					

REMARK: Few US states who restrict entire class of Flame Retardant [FR] chemicals such as Nevada FR bill (AB 97) restrict Organohalogenated Flame retardants in children's products, Maryland FR Bill (SB447) restricts FRs in Juvenile products that are Organohalogenated, FR that contains Phosphorous element, FR that contains Nitrogen element; for such FR laws, since there is no list of FR chemicals provided in the bill, it is recommended to work with your suppliers on identifying active FR chemical with the help of MSDS document and make sure active FR chemical doesn't belong to above restricted class of FRs. Additionally, one can also utilize screening test to identify specific element or group of elements such total halogen screening.

CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comment
Various	Halogenated, Phosphorus, Nitrogen, or Nanoscale Flame Retardants	0.1% by mass	Maryland, USA	SB0447			Applicable to "Juvenile products" : consumer product intended for use by a child under the age of 12 years.
115-96-8	Tris(2-chloroethyl) phosphate (TCEP)	Prohibited	Maryland and New York, USA	A6195	Solvent extraction and analysis by GC-MS or LC-MS (industry practice - not specified by the regulation)	Canada, EU	Maryland ban above 0.1% by mass on TCEP in childcare products. New York ban applies to consumer products, such as baby products, toys, car seats, nursing pillows, crib mattresses, and strollers for intended for use by a child under three years of age. European Union REACH Regulation (EC) No. 1907/2006 Candidate List The Canada requirement is only applied for children's products (< 3 years) made of polyurethane foam. Delaware bans above 0.1% of this FR in Children products designed for residential use by infants and children under 12 years old such as booster seats, changing pads, children's nap mats, floor play mats, highchair pads, infant carriers, infant seats, etc. Effective July 1, 2023.
5436-43-1, 40088-47-9	Tetrabromodiphenyl ether (TetraBDE)	10 ppm	Switzerland	POP regulation and in Switzerland: ORRChem textiles annex 1.1 (Art.3)	ISO 18219: 2015	EU (see comment)	Limit for EU (POP EU 2019/1021) is Sum of TetraBDE, PentaBDE, HexaBDE, HeptaBDE and DecaBDE < 500 mg/kg
32534-81-9	Penta-bromodiphenyl ether (pentaBDE)	≤ 0.001% by weight	EU	European Union POPs Regulation (EC) No. 2019/1021, Annex I	Solvent extraction and analysis by GC-MS or LC-MS (industry practice - not specified by the regulation)	USA, Switzerland, South Korea (KC Mark, for more information review Appendix II) EU (see comment)	South Korea requirement applicable only to bedclothes and nightclothes among underwear [applicable to textile products for babies, children and adult, and textile bedding] Limit for EU (POP EU 2019/1021) is Sum of TetraBDE, PentaBDE, HexaBDE, HeptaBDE and DecaBDE < 500 mg/kg

REMARK: Few US states who restrict entire class of Flame Retardant [FR] chemicals such as Nevada FR bill (AB 97) restrict Organohalogenated Flame retardants in children's products, Maryland FR Bill (SB447) restricts FRs in Juvenile products that are Organohalogenated, FR that contains Phosphorous element, FR that contains Nitrogen element; for such FR laws, since there is no list of FR chemicals provided in the bill, it is recommended to work with your suppliers on identifying active FR chemical with the help of MSDS document and make sure active FR chemical doesn't belong to above restricted class of FRs. Additionally, one can also utilize screening test to identify specific element or group of elements such total halogen screening.

CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comment
68631-49-2, 207122-15-4, 36483-60-0	Hexabromodiphenyl ether (HexaBDE)	10 ppm	Switzerland	POP regulation and in Switzerland: ORRChem textiles annex 1.1 (Art.3)	ISO 18219: 2015	EU (see comment)	Limit for EU (POP EU 2019/1021) is Sum of TetraBDE, PentaBDE, HexaBDE, HeptaBDE and DecaBDE < 500 mg/kg
446255-22-7 207122-16-5, 68928-80-3	Heptabromodiphenyl ether (HeptaBDE)	10 ppm	Switzerland	POP regulation and in Switzerland: ORRChem textiles annex 1.1 (Art.3)	ISO 18219: 2015	EU (see comment)	Limit for EU (POP EU 2019/1021) is Sum of TetraBDE, PentaBDE, HexaBDE, HeptaBDE and DecaBDE < 500 mg/kg
1163-19-5	Decabromodiphenyl ether (decaBDE)	10 ppm	USA Switzerland	US (TSCA Section 6h) POP regulation and in Switzerland: ORRChem textiles annex 1.1 (Art.3)	Solvent extraction and analysis by GC-MS or LC-MS (industry practice - not specified by the regulation)	EU (see comment)	European Union REACH Regulation (EC) No. 1907/2006 Candidate List Limit for EU (POP EU 2019/1021) is Sum of TetraBDE, PentaBDE, HexaBDE, HeptaBDE and DecaBDE < 500 mg/kg.
32536-52-0	Octa-bromodiphenyl ether (octaBDE)	≤ 0.1% by weight	EU	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	Solvent extraction and analysis by GC-MS or LC-MS (industry practice - not specified by the regulation)	USA, Switzerland, South Korea (KC Mark, for more information review Appendix II) EU (see comment)	South Korea requirement applicable only to bedclothes and nightclothes among underwear [applicable to textile products for babies, children and adult, and textile bedding]

REMARK: Few US states who restrict entire class of Flame Retardant [FR] chemicals such as Nevada FR bill (AB 97) restrict Organohalogenated Flame retardants in children's products, Maryland FR Bill (SB447) restricts FRs in Juvenile products that are Organohalogenated, FR that contains Phosphorous element, FR that contains Nitrogen element; for such FR laws, since there is no list of FR chemicals provided in the bill, it is recommended to work with your suppliers on identifying active FR chemical with the help of MSDS document and make sure active FR chemical doesn't belong to above restricted class of FRs. Additionally, one can also utilize screening test to identify specific element or group of elements such total halogen screening.

CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comment
126-72-7	Tris (2,3-dibromopropyl) phosphate (TRIS)	Prohibited	EU	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, USA, Egypt, South Korea (KC Mark, for more information review Appendix II)	EU requirement applicable to textiles with direct contact with the skin. South Korea requirement applicable only to bedclothes and nightclothes among underwear [applicable to textile products for babies, children and adult, and textile bedding] US requirement applicable to sleepwear
1309-64-4	Antimony trioxide	≤ 1,000 ppm each	Massachusetts, USA	Massachusetts H.4900			Effective Dec. 2021 Delaware bans above 0.1% of this FR in Children products designed for residential use by infants and children under 12 years old such as booster seats, changing pads, children's nap mats, floor play mats, highchair pads, infant carriers, infant seats, etc. Effective July 1, 2023.
13674-84-5	Tris(1-chloro-2-propyl) phosphate (TCPP)	≤ 1,000 ppm each	Massachusetts, USA	Massachusetts H.4900			Delaware bans above 0.1% of this FR in Children products designed for residential use by infants and children under 12 years old such as booster seats, changing pads, children's nap mats, floor play mats, highchair pads, infant carriers, infant seats, etc. Effective July 1, 2023.

REMARK: Few US states who restrict entire class of Flame Retardant [FR] chemicals such as Nevada FR bill (AB 97) restrict Organohalogenated Flame retardants in children's products, Maryland FR Bill (SB447) restricts FRs in Juvenile products that are Organohalogenated, FR that contains Phosphorous element, FR that contains Nitrogen element; for such FR laws, since there is no list of FR chemicals provided in the bill, it is recommended to work with your suppliers on identifying active FR chemical with the help of MSDS document and make sure active FR chemical doesn't belong to above restricted class of FRs. Additionally, one can also utilize screening test to identify specific element or group of elements such total halogen screening.

CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comment
13674-87-8	Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	0.1% by weight	Vermont, Maryland, and Massachusetts USA	S81	Solvent extraction and analysis by GC-MS or LC-MS (industry practice - not specified by the regulation)		This chemical should not exceed 0.1% for children products(<12 yr) & residential upholstered furniture. Maryland ban above 0.1% in childcare products. Delaware bans above 0.1% of this FR in Children products designed for residential use by infants and children under 12 years old such as booster seats, changing pads, children's nap mats, floor play mats, highchair pads, infant carriers, infant seats, etc. Effective July 1, 2023.
183658-27-7	2-Ethylhexyl-2,3,4,5- tetrabromobenzoate (TBB)	≤ 1,000 ppm each	Massachusetts, USA	Massachusetts H.4900			Delaware bans above 0.1% of this FR in Children products designed for residential use by infants and children under 12 years old such as booster seats, changing pads, children's nap mats, floor play mats, highchair pads, infant carriers, infant seats, etc. Effective July 1, 2023.
25637-99-4, 3194-55-6, 134237-50-6, 134237-51-7, 134237-52-8	Hexabromocyclododecane (HBCDD)	100 ppm	Switzerland	POP regulation and in Switzerland: ORRChem textiles annex 1.1 (Art.3)	ISO 18219: 2015		Delaware bans above 0.1% of this FR in Children products designed for residential use by infants and children under 12 years old such as booster seats, changing pads, children's napmats, floor play mats, highchair pads, infant carriers, infant seats, etc. Effective July 1, 2023.
26040-51-7	Bis(2-ethylhexyl)-3,4,5,6- tetrabromophthalate (TBPH)	≤ 1,000 ppm each	Massachusetts, USA	Massachusetts H.4900			Delaware bans above 0.1% of this FR in Children products designed for residential use by infants and children under 12 years old such as booster seats, changing pads, children's nap mats, floor play mats, highchair pads, infant carriers, infant seats, etc. Effective July 1, 2023.

REMARK: Few US states who restrict entire class of Flame Retardant [FR] chemicals such as Nevada FR bill (AB 97) restrict Organohalogenated Flame retardants in children's products, Maryland FR Bill (SB447) restricts FRs in Juvenile products that are Organohalogenated, FR that contains Phosphorous element, FR that contains Nitrogen element; for such FR laws, since there is no list of FR chemicals provided in the bill, it is recommended to work with your suppliers on identifying active FR chemical with the help of MSDS document and make sure active FR chemical doesn't belong to above restricted class of FRs. Additionally, one can also utilize screening test to identify specific element or group of elements such total halogen screening.

CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comment
5412-25-9	Bis (2,3-dibromopropyl) phosphate	Prohibited	Japan	Japanese 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)	Prohibited	EU	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, South Korea, Egypt	EU requirement applicable to textiles with direct contact with the skin
59536-65-1	Polybrominated biphenyls (PBBs)	Prohibited	EU	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, USA, South Korea, Egypt	EU requirement applicable to textiles with direct skin contact South Korea requirement applicable only to bedclothes and nightclothes among underwear [applicable to textile products for babies, children and adult, and textile bedding]
79-94-7	Tetrabromobisphenol A	≤ 1,000 ppm each	Massachusetts, USA	Massachusetts H.4900			Delaware bans above 0.1% of this FR in Children products designed for residential use by infants and children under 12 years old such as booster seats, changing pads, children's nap mats, floor play mats, highchair pads, infant carriers, infant seats, etc. Effective July 1, 2023.
85535-84-8	Chlorinated paraffins (C10-C13)	0.1% by weight	EU Switzerland	European Union POPs Regulation (EC) No. 2019/1021, Annex I SWITZERLAND: ORRChem annex 1.1 (Art.3)	Solvent extraction and GC-MS or LC-MS (industry practice - not specified by the regulation) ISO 18219: 2015	South Korea, Canada	REACH: Also listed on the SVHC Candidate List POPs: Articles should not contain SCCPs above 0.15% by weight Delaware bans above 0.1% of this FR in Children products designed for residential use by infants and children under 12 years old such as booster seats, changing pads, children's nap mats, floor play mats, highchair pads, infant carriers, infant seats, etc. Effective July 1, 2023.

Formaldehyde							
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
50-00-0	Formaldehyde 0-36 months old	Not Detected (detection limit is 16 mg/kg) (textiles)	Japan	Japanese Law 112	Textile: ISO 14184-1 orJIS L1041 (Law 112) (textiles) China GB/T 2912.1 CNS 15580-1 Leather: ISO 17226-2	China, Russia, Finland, Norway, France, Netherlands, Austria, Lithuania, Germany, New Zealand, South Korea, Vietnam, Taiwan, Egypt, Indonesia, USA	Vietnam, South Korea define baby products as 0-36 months old Japan and-Taiwan, define baby products as 0-24 months
	>36 months old (with direct skin contact) >36 months old (no direct skin contact)	75 ppm (detection limit is 16 mg/kg) (textiles) 300 ppm (detection limit is 16 mg/kg) (textiles)	Japan	Japanese Law 112	CNS 15579 Textile: ISO 14184-1 orJIS L1041 (Law 112) (textiles), China GB/T 2912.1, Leather: ISO 17226-2		South Korea also regulates bed clothes with a limit of 300 ppm Taiwan regulates indoor decorative textile with a limit of 300 ppm China defines baby products based on particular standards in Textile Product (GB 18401) is 0-36 months. Leather Product (GB 20400 is 0-24 months) GB 30585 regulates Formaldehyde in children's shoes (s14 years old), Size of the shoes <250 mm (will apply from 1 Jan 2016) US Minnesota Statutes, chapter 325F regulate formaldehyde in children's products (<8 years old), <500 ppm
	Formaldehyde (leather and fur) Baby products (0-24 months)	20 ppm	China	GB20400-2006	GB/T 19941		
	Leather and fur (with direct skin contact)	75 ppm	China	GB20400-2006	GB/T 19941		
	Leather and fur (without direct skin contact)	300 ppm	China	GB20400-2006	GB/T 19941		
50-00-0	Formaldehyde	75 mg/kg	EU	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII entry 72	ISO 14184-1		

y Metals (Extrac		Destriction (Marris	Carratar	Danulation	Took Mathad	Other Countries II & State of the t	C
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comment
7439-92-1	Lead (Pb)	0.2 ppm (extractable)	Indonesia	Indonesia Regulation, No. 07/M-IND/PER/2/2014 & Ministerial Regulation no.	SNI 7334: 2009	Egypt ES 7322/2018 (leather)	0.2 mg/kg (children) 1 mg/kg (other)
				18 of 2019		European Union REACH Regulation	1 mg/kg
						(EC) No. 1907/2006 Annex XVII	EN 16711-2
7440-43-9	Cadmium (Cd)	0.1 ppm (extractable)	Indonesia	Indonesia Regulation, No. 07/M-	SNI 7334: 2009	Egypt ES 7322/2018 (leather)	0.1 mg/kg
7440-43-3	Caumum (Cu)	o. i ppiii (extractable)	iliuollesia	IND/PER/2/2014 & Ministerial Regulation no. 18 of 2019	SINI 7334. 2003	Egypt E3 7322/2010 (leatilet)	ISO 17072-1
						European Union REACH Regulation	1 mg/kg
						(EC) No. 1907/2006 Annex XVII	i ilig/kg
						(),	EN 16711-2
7440-50-8	Copper	25 ppm (extractable)	Indonesia	Indonesia Regulation, No. 07/M-	SNI 7334: 2009	Egypt ES 7322/2018 (leather)	25 mg/kg (children)
				IND/PER/2/2014 & Ministerial Regulation no. 18 of 2019			50 mg/kg (other)
							ISO 17072-1
7440-02-0	Nickel (Ni)	1.0 ppm (extractable)	Indonesia	Indonesia Regulation, No. 07/M- IND/PER/2/2014 & Ministerial Regulation no.	SNI 7334: 2009	Egypt ES 7322/2018 (leather)	1 mg/kg (children) 4 mg/kg (other)
				18 of 2019			ISO 17072-1
7440-02-0	Nickel (Ni) Release	0.5 μg/cm2/week	EU	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	EN 1811:2011+A1:2015 for non- coated item; EN 12472:2020 and EN 1811:2011+A1:2015 for coated item		Restriction only applicable in cases where th direct and prolonged contact with skin
7440-38-2	Arsenic	1.0 ppm (extractable)	EU	European Union REACH Regulation (EC) No.	EN 16711-2: 2015	Egypt ES 7322/2018 (leather)	0.2 mg/kg (children)
18540-29-9	Chromium (Cr6+)	3 ppm for leather	EU	1907/2006 Annex XVII European Union REACH Regulation (EC) No.		Taiwan CNS 15503	1 mg/kg (other) 10 mg/kg for leather
10340-23-3	hexavalent	1.0 ppm (extractable) for	LO	1907/2006 Annex XVII	EN ISO 17075-2:2017	raiwan cino 13303	(chidlren product) CNS 15503 Annex A
		non-leather			Non-leather: EN 16711-2:2015 with EN ISO 17075-1:2017 if Cr is		
					detected	Egypt ES 7322/2018 (leather)	3 mg/kg
							ISO 17075
7440-36-0	Antimony	30 ppm (leachable)	Egypt	Egypt ES 7322/2018 for leather	ISO 17072-1		
7440-47-3	Chromium	2 mg/kg (children)	Egypt	Egypt ES 7322/2018 for leather	ISO 17072-1		
		200 mg/kg (other)					
7440-48-4	Cobalt	1 mg/kg (children) 4 mg/kg (other)	Egypt	Egypt ES 7322/2018 for leather	ISO 17072-1		
7440-39-3	Barium	1000 mg/kg	Egypt	Egypt ES 7322/2018 for leather	ISO 17072-1		
	1	1		F + FO 7000/0040 f ! #	ISO 17072-1		
7782-49-2	Selenium	500 mg/kg	Egypt	Egypt ES 7322/2018 for leather	100 17072 1		

leavy Metals (Soluble CAS Number	Chemical Name	Restriction /Maximum	Country	Regulation	Test Method	Other Countries, U.S.	Comment
OAO Number	Chemical Name	Limit on Final Product or Tested Component	Country	Regulation	rest method	States that also Regulate this Substance	
7440-36-0	Antimony	30 mg/kg	Taiwan Korea	Taiwan CNS 15503 (children's product) KC Mark (children's product)	CNS 4797-2 KS G ISO 8124-3		
7440-38-2	Arsenic	25 mg/kg	Taiwan Korea	Taiwan CNS 15503 (children's product) KC Mark (children's product)	CNS 4797-2 KS G ISO 8124-3		
7440-39-3	Barium	1000 mg/kg	Taiwan Korea	Taiwan CNS 15503 (children's product) KC Mark (children's product)	CNS 4797-2 KS G ISO 8124-3		
7439-92-1	Lead (Pb)	90 mg/kg	Taiwan Korea	Taiwan CNS 15503 (children's product) KC Mark (children's product)	CNS 4797-2 KS G ISO 8124-3	China PVC artificial leather GB 21550	90 mg/kg Soluble Heavy Metals
7439-97-6	Mercury	60 mg/kg	Taiwan Korea	Taiwan CNS 15503 (children's product) KC Mark (children's product)	CNS 4797-2 KS G ISO 8124-3		
7440-43-9	Cadmium (Cd)	75 mg/kg	Taiwan Korea	Taiwan CNS 15503 (children's product) KC Mark (children's product)	CNS 4797-2 KS G ISO 8124-3	China PVC artificial leather GB 21550	90 mg/kg. Soluble Heavy Metals.
7782-49-2	Selenium	500 mg/kg	Taiwan Korea	Taiwan CNS 15503 (children's product) KC Mark (children's product)	CNS 4797-2 KS G ISO 8124-3		
7439-97-6	Mercury	60 mg/kg	Taiwan Korea	Taiwan CNS 15503 (children's product) KC Mark (children's product)	CNS 4797-2 KS G ISO 8124-3		

Heavy Metals (Total)						
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comment
7439-92-1	Lead (Pb)	90 ppm (total)	Canada	SOR/2018-83 Consumer Products Containing Lead Regulations (For substrate) SOR/2016-193 Surface Coating Materials Regulations (For surface coating)	US: Non-metal: CPSC-CH-E1002-08.3 Metal: CPSC-CH-E1001-08.3 Lead in paint and surface coatings: CPSC-CH-E1003-09.1 Other: All materials except Leather: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2019	Korea Certification Mark (KC Mark, for more information review Appendix II) United States, 16 C.F.R. §1303 – Ban of Lead-Containing Paint and Certain Consumer Products Bearing Lead-Containing Paint Section 101 of the CPSIA China, GB 30585-2014 (Safety technical specification for children's footwear)	90 ppm for coating 100 ppm for substrate Applies to textile products for children (0 - 12 years). 90 ppm CPSC-CH-E1003-09.1 For surface coating, U.S. rules for children 12 and under set at 90 ppm. CPSC determined textiles are exempt from testing since they are unlikely to contain lead in excess of 100 ppm. Determination does not include post-production prints and surface coatings. U.S. federal lead substrate restrictions for each component in children's products (12 years and under). CPSC determined leather is exempt from testing since it is unlikely to contain lead in excess of 100 ppm. 100 mg/kg. Applies to children's footwear (≤14 years old), Size of the shoes <250 mm (exclude children's rubber shoes). QB/T 4340 Footwear - Chemical test method total heavy metal content - Inductively coupled plasma emission spectroscopy Total Lead: 500 ppm. Rate of lead release of Lead: 50.05 pg/cm2/h (0.05 pg/g/h). This restriction is applicable to products which are
7440-38-2	Arsenic (As)	100 mg/kg	China	China, GB 30585-2014 (Safety	QB/T 4340 Footwear - Chemical test method		supplied to the general public and can be placed in the mouth by children. Applies to children's footwear (≤14 years old)
7,440 00 2	, 4301110 (7.63)	100 mg/ng	Offinia	technical specification for children's footwear)	- total heavy metal content - Inductively coupled plasma emission spectroscopy		, Size of the shoes <250 mm (exclude children's rubber shoes) Applies to leather, plastics and film, and metals.
7440-43-9	Cadmium (Cd)	40 mg/kg	Washington, USA	Washington State Children's Product Safety Act	US: Non-metal: CPSC-CH-E1002-08.3 Metal: CPSC-CH-E1001-08.3 Lead in paint and surface coatings: CPSC-CH-E1003-09.1 Other: All materials except Leather: DIN EN 16711-1:2016 Leather: DIN EN ISO 17072-2:2019	Egypt ES 7266-4/2011 for textile apparel China, GB 30585-2014 (Safety technical specification for children's footwear)	100 mg/kg 100 mg/kg Applies to children's footwear (≤14 years old) , Size of the shoes <250 mm (exclude children's rubber shoes) 75mg/kg (Soluble heavy metals)
						European Union, European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	100 ppm Total Digestion (industry practice- not specified by the regulation) This restriction is applicable to jewelry, imitation jewelry and hair accessories. It is applicable to particular plastic materials such as PVC, PU, etc.

Miscellaneous							
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
118685-33-9	Navy Blue	Prohibited; 0.1% by weight for EU	EU	European Union REACH Regulation (EC) No 1907/2006 Annex XVII		Norway, Egypt, and Switzerland: ORRChem textiles annex 1.13 (Art.3)	Restriction of Blue Colorant in EU applies to substances and mixtures only. (Egypt applies to finished textile products)
	pH value	4.0 - 7.5 (0-36 months) 4.0 - 8.5 (direct skin contact) 4.0 - 9.0 (without direct skin contact)	China	GB 18401-2010	GB/T 7573		
		4.0 - 7.5 (infant, children, innerwear, midwear) 4.0-9.0 (outerwear, bedding) 4.0 - 9.0 (outerwear, bedding)	South Korea	KC Mark	KS K ISO 3071 / ISO 3071		
		not less than 3.5	Egypt	ES 6535/2008	ISO 4045		For leather only
75-01-4	Vinyl Chloride Monomer (VCM)	1 mg/kg	Egypt	ES 7322/2011	ISO 6041 / §64 LFGB B80.32- 1:1981-11 / 80/766/EC	Germany - "Bedarfsgegenstände Verordnung" German Consumer Goods Ordinance	
		5 mg/kg	China	GB 21550-2008	GB/T 4615-1984		For polyvinyl chloride artificial leather only

Miscellaneous							
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
N-Nitrosamines							
62-75-9	N-Nitrosodiethylamine	Not detected (detection limit: 0.5 mg/kg)	China	GB 25036-2010 GB 25038-2010	GB/T 24153		Only applicable for rubber component on vulcanized shoes
55-18-5	N-Nitrosodibutylamine	(detection limit: 0.5 mg/kg)		GB 30585-2014			*GB 30585-2014 (only applicable to
621-64-7	N-Nitrosopiperidine						rubber parts of infant shoes)
924-16-3	N-Nitrosopyrrolidine						
100-75-4	N-Nitrosomorpholine						
930-55-2	1-Nitrosopyrrolidine						
59-89-2	Nitrosomorpholine	-					
614-00-6	N-Nitroso-N-methylaniline						
612-64-6	N-Nitroso-N-ethylaniline						

Miscellaneous							
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
Asbestos							
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
12001-28-4	Crocidolite	Not detected	European Union	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII		Switzerland and Norway, and the U.S	
12001-29-5	Chrysotile			Armex Avii	magnification1-250, attached; ratio of fiber length to diameter is at		
12172-73-5	Amosite				polarized light filter least 3:1-(industry practice -		
77536-66-4	Actinolite				not specified by the regulation)		
77536-67-5	Anthrophyllite						
77536-68-6	Tremolite						

Miscellaneous							
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
Fluorinated Greenhouse Gases							
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
2551-62-4	Sulfur hexafluoride - SF ₆	Prohibited	European Union	European Union Regulation (EU) No 517/2014			To comply with due diligence requirement, document verification is the most effective way of supporting
75-46-7	HFC-23 - CHF₃	1					compliance with these legal requirements. Examples include, but are not limited to, declaration of
75-10-5	HFC-32 - CH₂F₂	-					none-use or specific compliance certificates of used chemical.
593-53-3	HFC-41 - CH₃F						
138495-42-8	HFC-43-10mee - C ₅ H ₂ F ₁₀	<u>-</u>					
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 - CH₂FCF₃						
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	-					
	2225. 3	_					

Miscellaneous							
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
406-58-6	HFC-365mfc - CF ₃ CH ₂ CF ₂ CH ₃						
Perfluorocarbons (F	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						

rganotin Con CAS Number	Chemical Name	Restriction /Maximum Limit on	Country	Regulation	Test Method	Other Countries, U.S.	Comments
CAS Number	Chemical Name	Final Product or Tested Component	Country	Regulation	rest Method	States that also Regulate this Substance	comments
1002-53-5	Dibutyltin (DBT)	South Korean: 1 mg/kg EU: 0.1% by weight of tin	South Korea, and the EU	Self Regulatory Confirmation Notice (Notice No. 2007-34) issued by Korean Agency for Technology and Standards European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	KS K 0737 DIN ISO/TS 16179: 2012-08		South Korea: Applies to baby clothing only (less than 36 months).
15231-44-4	Dioctyltin (DOT)	0.1% by weight of tin	EU	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	KS K 0737 DIN ISO/TS 16179: 2012-08	Turkey	EU requirement applicable to some specific products, such as textiles with direct skin contact, childcare articles, etc.
56573-85-4	Tributyltin (TBT)	Prohibited	Canada	Prohibition of Certain Substances Regulation, 2012 (SOR/2012-285)	Taiwan test method: CNS 15853-1 DIN ISO/TS 16179: 2012-08	Japan, South Korea (KC Mark, for more information review Appendix II), Taiwan, and Turkey	South Korea also regulates TBT for baby clothing (less than 24 months), for bedclothes, and products that come into skin contact.
668-34-8	Triphenyltin (TPhT)	1 mg/kg	Taiwan CNS 15290	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII 0.1 % by weight of tin.	Recommended test method CNS 15853-1 EN ISO 17353 (modified)/ EN ISO/TS 16179:2012 for footwear.	Taiwan, Japan, and Turkey	Taiwan: <0.5 mg/kg (infant only) ; <1.0 mg/kg (direct skin contact)
Various	All tri-substituted organotin compounds including TBT and TPhT)	0.1% by weight of tin	EU	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	Recommended test method EN ISO 17353 (modified)/ EN ISO/TS 16179:2012 for footwear.		

Polycyclic aromatic	hydrocarbons (PAH)						
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
91-20-3	Naphthalene (Taiwan only)	Taiwan: Benzo(a)pyrene:	Taiwan, EU	CNS 3478 (Plastic shoes)	CNS 3478 Clause 6.18		
208-96-8	Acenaphthylene (Taiwan only)	1 mg/kg Total of 16 PAH:		CNS 15503 (children			
83-32-9	Acenaphthene (Taiwan only)	10 mg/kg EU: Articles in direct skin contact with:		products) (up to age 14)			
86-73-7	Fluorene (Taiwan only)	1 mg/kg (each) Childcare article:					
85-01-8	Phenanthrene (Taiwan only)	0.5 mg/kg (each)					
120-12-7	Anthracene (Taiwan only)						
206-44-0	Fluoranthene (Taiwan only)						
129-00-0	Pyrene (Taiwan only)						
56-55-3	Benzo(a)anthracene (Taiwan and EU)						
218-01-9	Chrysene (Taiwan and EU)	Taiwan: Benzo(a)pyrene:	EU	European Union REACH Regulation	AfPS GS 2019:01 PAH		
193-39-5	Indeno(1,2,3-cd)pyrene (Taiwan only)	1 mg/kg Total of 16 PAH:		(EC) No. 1907/2006 Annex XVII entry 50			
205-99-2	Benzo(b)fluoranthene (Taiwan and EU)	10 mg/kg					
207-08-9	Benzo(k)fluoranthene (Taiwan and EU)	EU: Articles in direct skin contact with: 1 mg/kg (each) Childcare article:					
50-32-8	Benzo(a)pyrene (Taiwan and EU)	0.5 mg/kg (each)					
53-70-3	Dibenzo(a,h)anthracene (Taiwan and EU)						
191-24-2	Benzo(g,h,i)perylene (Taiwan only)						
192-97-2	Benzo(e)pyrene (EU only)						
205-82-3	Benzo(j)fluoranthene (EU only)						

CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
93-72-1	2-(2,4,5-trichlorophenoxy) propionic acid, its salts and compounds	Not Detected	Switzerland, EU	European Union POPs Regulation (EU) 2019/1021 Annex I	U.S. EPA Method 8081A/ 8151A - (industry practice - not specified by	Japan, South Korea	For Dieldrin, PCP, and TeCP, South Korea restrictions apply at
93-76-5	2,4,5-trichlorophenoxyacetic acid, its salts and compounds			Switzerland: ChemRRV	the regulation)		different levels for underwear, baby clothin
309-00-2	Aldrin (Switzerland and EU POPs)			(Chemikalien- Risikoreduktions-Verordnung)			(<24 months) and bedclothes
57-74-9	Chlordane (Switzerland and EU POPs)			Art. 3 Appendix 1.1			
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)						
60-57-1	Dieldrin						
72-20-8	Endrine						
76-44-8	Heptachlorine (Switzerland and EU POPs)						
1024-57-3	Epoxy-heptachlorine						
115-29-7 959-98-8 33213-65-9	Endosulfan and its isomers	Prohibited	EU	European Union POPs Regulation (EU) 2019/1021			
36355-01-8	Hexabromobiphenyl						
608-93-5	Pentachlorobenzene	10 ppm	Switzerland	Switzerland: ORRChem textiles annex 1.1 (Art.3)	ISO 18219: 2015		
608-90-2	Pentabromobenzene	Prohibited	EU	European Union POPs Regulation (EU) 2019/1021 Annex I			
63405-99-2	4,6-Dichloro-7 (2,4,5-trichloro-phenoxy) 0-2-trifluoro methyl benz-imidazole (DTTB)	≤ 30 ppm	Japan	Japan Law for the Control of Household Products			Textile Products Only

esticides							
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
118-74-1	Hexachlorobenzene (Switzerland and EU POPs)	Prohibited	Canada, Switzerland, EU	Canada: Prohibition of Certain Toxic Substances Regulations 2012 (SOR/2012- 285)			
608-73-1	Hexachlorocyclohexane (HCH, all isomers) except gamma-hexachlorocyclohexane (except linande [58-89-9] in medical products) (Switzerland and EU POPs)			Switzerland: ChemRRV (Chemikalien- Risikoreduktions-Verordnung) Art. 3 Appendix 1.1			
465-73-6	Isodrin			European Union POPs			
4234-79-1	Kelevane			Regulation (EU) 2019/1021 Annex I			
143-50-0	Kepone (Chlordecone) (Switzerland and EU POPs)			Ailliex I			
87-86-5	Pentachlorophenol (PCP), its salts and compounds	Not used (textiles and leather) ≤ 5 mg/kg (wood based materials) Pentachlorophenol (PCP) and its salts and esters equal to or below 5 mg/kg	Switzerland, EU	POP Regulation (EU) 2019/1021 Switzerland: ChemRRV (Chemikalien- Risikoreduktions-Verordnung) Art. 3 Appendix 1.1 and Appendix 2.17		Spain, Egypt, Denmark, Germany, the Netherlands, Austria, Norway, and South Korea, banned in GB 25036 and GB 25038	
25167-83-3 935-95-5	Tetrachlorophenol (TeCP), its salts and compounds 2,3,5,6-TeCP	Not detected (0.5 mg/kg)	China	GB 25036/ GB 25038	GB/T 184141.1 or GB/T 18414.2	Switzerland	2,3,5,6-TeCP is banne in China GB 25036 and GB 25038 for textile and synthetic leather materials. limit: Not detected (0.5 mg/kg)
624-49-7	Dimethyl Fumarate	Prohibited	EU	European Union REACH regulation (EC) No. 1907/2006 Annex XVII, limit 0.1 mg/kg	CNS 15331 Annex C	South Korea (KC Mark, for more information review Appendix II), Norway, and Taiwan	0.1 mg/kg - China (GB 30585-2014) will apply on 1 Jan 2016)
115-32-2	Dicofol	None	EU	European Union POPs Regulation (EU) 2019/1021 Annex I			

CAS Number	Chemical Name	Restriction /Maximum Limit on	Country	Regulation	Test Method	Other Countries, U.S.	Comments
	C. C	Final Product or Tested Component	,			States that also Regulate this Substance	
72-43-5	Methoxychlor	Prohibited	Canada, Switzerland, EU	Canada: Prohibition of Certain Toxic Substances			
2385-85-5	Mirex (Switzerland and EU POPs)		20	Regulations 2012 (SOR/2012- 285)			
72-56-0	Perthane			200)			
82-68-8	Quintozene			Switzerland: ChemRRV			
8001-50-1	Strobane			(Chemikalien- Risikoreduktions-Verordnung)			
297-78-9	Telodrin			Art. 3 Appendix 1.1			
8001-35-2	Toxaphene (Switzerland and EU POPs)			European Union POPs Regulation (EU) 2019/1021 Annex I			
1336-36-3	Halogenated biphenyls, including						
53469-21-9 and Various	Polycholorinated biphenyl (PCB) (both Switzerland)						
Various	Halogenated terphenols, including Polychlorinated terphenyl (PCT)	-					
Various	Halogenated naphthalenes						
Various	Halogenated diarylalkanes	-					
Various	Halogenated diphenyl methanes	-					
99688-47-8	Monomethyl-dibromo-diphenyl methane						
81161-70-8	Monomethyl-dichloro-diphenyl methane						
76253-60-6	Monomethyl-tetrachloro-diphenyl methane						

PFAS

AAFA has released a state by state side by side of the various state level existing and draft PFAS regulations and requirements. Different states are exploring a variety of restrictions, labeling, and reporting requirements for a variety of products. The most recent version can always be found here: https://www.aafaglobal.org/AAFA/Solutions_Pages/US_PFAS_Regulations.aspx

CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
U.S. State Requirements: Various, defined as a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom.	Perfluoroalkyl and polyfluoroalkyl substances	< 100 ppm Total Organic Fluorine	California	A.B. 1817		Maine, Colorado, New York	CA effective date is January 1, 2025. Limit drops to 50 ppm on January 1, 2027. Apparel definition includes footwear. Limited exceptions for PPE, clothing for exclusive use of U.S. military, and other non-apparel specified items, including carpets and rugs. Extreme apparel also subject to labeling as well as limitations but on different timeline. Note: Colorado take effect Jan 1 2024, clarify product scope. Note: Maine reporting requirement takes effect during 2023 for all products. New content restrictions phase in 2030. Note: Pending New York PFAS requirements will closely track California requirements, but may be subject to different scope, timelines, and threshholds as a function of the regulatory process.
International Requirements							
Various	Perfluorooctane sulfonic acid and its derivatives (PFOS)	1 μg/m² (textiles or other coated materials) <0.1% for articles	EU	European Union POPs Regulation (EU) 2019/1021 Annex I	Solvent Extraction LC-MS (industry practice-not specified by the regulation)	Canada and Norway, Egypt, Switzerland, Turkey, Taiwan	POPs under the Stockholm Convention. 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.
Various	Perfluorooctanoic acid (PFOA), its salts and PFOA-related substance	EU-PFOA: 0.025 mg/kg; ∑ of PFOA-related substance: 1 mg/kg	EU	European Union POPs Regulation (EU) 2019/1021 Annex I	CEN/TS 15968:2010	Japan	POPs under the Stockholm Convention EU- Allowed for textiles for oil- and water- repellency for the protection of workers from dangerous liquids that comprise risks to their health and safety, until 4 July 2023
Various	C9-C14 Linear and branched perfluorocarboxylic acids (PFCA), including their salts an related substances	25 ppb (∑ of C9-C14 PFCA and their salts) 260 ppb (∑ of C9-C14 PFCA-related substances)	EU	European Union REACH Regulation (EC) No 1907/2006 Annex XVII			New restriction (entry 68) to EU REACH Annex XVII. Effective from Feb 25, 2023
Various	Perfluorohexanesulfonic acid (PFHxS) and related compounds.	≤ 25 µg/kg, ∑ ≤ 1000 µg/kg	Switzerland	Chemikalien- Risikoreduktions- Verordnung (ChemRRV)			

Phthalates							
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
117-81-7 85-68-7	Di (2-ethylhexyl) phthalate (DEHP)# Benzyl Butyl phthalate (BBP)#	EU - REACH Annex XVII entry 51: DEHP, DBP, BBP, DIBP (individually or in any combination): < 0.1% by weight of the plasticised material in: EU - REACH Annex XVII entry 52: DINP, DIDP, DNOP (individually or in any	EU, USA, Canada	EU - REACH Annex XVII entry 51, 72, SVHC Candidate List USA - CPSIA Canada - CCPSA	CPSC-CH-C1001-09.3 or GB/T 22048-2008 or ISO14389: 2014 Taiwan: CNS 15138	USA Washington CSPA, California Proposition 65, California Health and Safety Code, Division 104, Part 3, Chapter 11, Vermont Statute 18 V.S.A. § 1511, Vermont CHCC, Oregon HPCCCH, Maine Regulated Priority Chemicals	EU - REACH Annex XVII entry 51 - Toys and childcare articles; - Articles containing plasticised materials including: • used in indoor environments or • used in the open air which come into contact
		combination): < 0.1% by weight EU - REACH Annex XVII entry 72: Phthalates marked with # in previous column: < 0.1% by weight (individually or in any combination)				South Korea - Special Act on the Safety Control of Children's Products, Common safety standards for children's products, Electrical Appliances & Consumer Product	with human mucous membranes or prolonged contact with human skin REACH Annex XVII Entry 52 The plasticised material in toys and childcare
84-74-2	Di-n-butyl phthalate (DBP)#	USA - CPSIA: DEHP, DBP, BBP, DINP, DIBP, DPP, DHEXP and DCHP: < 0.1% by weight (each) Canada -CCPSA: The vinyl in a toy or child care article: DEHP, DBP, BBP: < 1000 mg/kg				Safety Management Law China - GB 30585, GB 31701 Taiwan - CNS 15503	articles which can be placed in the mouth by children REACH Annex XVII Entry 72 Clothing or related accessories; Textiles other
68515-48-0 28553-12-0	Di-isononyl phthalate (DINP)	(each); The vinyl in any part of a toy or child care article that can, in a reasonably foreseeable manner, be placed in the mouth of a child under four years: DINP, DIDP, DNOP: < 1000 mg/kg (each)		EU - REACH Annex XVII entry 52 USA - CPSIA Canada - CCPSA			than clothing which, under normal or reasonably foreseeable conditions of use, come into contact with human skin to an extent similar to clothing; Footwear USA: CPSIA - Toys and childcare articles
68515-49-1 26761-40-0	Di-isodecyl phthalate (DIDP)		EU, Canada	EU - REACH Annex XVII entry 52 Canada - CCPSA			Washington - CSPA/ RCW 70.240.020: Toys and children's products under 12 years: DEHP, DBP,BBP, DINP, DIDP, DNOP: ≤ 1000 ppm (sum)
117-84-0	Di-n-octyl phthalate (DNOP)						Washington, Orgeon, Vermont, Maine (Reporting obligation): Children's products California HSC, Vermont: Toys and child articles
117-04-0	Di-ti-octyl pilitialate (DNOP)						South Korea: Children's products: sum of DEHP, DBP,BBP, DINP, DIDP, DNOP, DIBP: 0.1% by weight; Adult products: sum of DEHP, DBP,BBP: 0.1% by weight
84-69-5	Diisobutyl phthalate (DIBP)#		EU, USA	EU - REACH Annex XVII		USA - Washington CSPA, Vermont CHCC,	China - GB 30585-2014 regulate Infant's footwear (0-36 months, footwear ≤170 mm):
04-09-3	Disoutify pittialate (DISF)#		EU, USA	entry 51, 72, SVHC Candidate List USA - CPSIA		Oregon HPCCCH South Korea - Special Act on the Safety Control of Children's Products, Common safety standards for children's products	
84-75-3	Di-n-hexyl phthalate (DnHP/DHEXP)#			EU - REACH Annex XVII entry 72, SVHC Candidate		USA - Washington CSPA, California Proposition 65 (DnHP), Vermont CHCC	Denmark: Toys and childcare articles for children 0-3 years old: Phthalates (Except
131-18-0	Dipentyl phthalate (DPP)#			List USA - CPSIA		(DnHP), Oregon HPCCCH Denmark - Statutory Order 947 of 20/06/2020	DEHP, DNOP, BBP, DBP, DIBP, DINP, DIDP): 0.05% by weight (each)
84-61-7	Dicyclohexyl phthalate (DCHP)#						
27554-26-3	Di-iso-octylphthalate (DIOP)#		EU	EU - REACH Annex XVII entry 72		Denmark - Statutory Order 947 of 20/06/2020	
605-50-5	Diisopentylphthalate (DiPP)#		EU	EU - REACH Annex XVII entry 72, SVHC Candidate List			
71888-89-6	1,2-benzenedicarboxylic acid; di-C 6-8-branched alkylesters, C 7-rich (DIHP)#		EU	EU - REACH Annex XVII entry 72, SVHC Candidate List			

Phthalates										
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments			
117-82-8	Bis(2-methoxyethyl) phthalate (DMEP)#		EU, USA	EU - REACH Annex XVII entry 72, SVHC Candidate List		USA - Washington CSPA, Vermont CHCC Denmark - Statutory Order 947 of 20/06/2020				
68515-42-4	1,2-Benzenedicarboxylic acid,di-C7- 11-branched and linear alkyl esters (DNHUP)#		EU	EU - REACH Annex XVII entry 72, SVHC Candidate List		Denmark - Statutory Order 947 of 20/06/2020				
84777-06-0	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear#		EU	EU - REACH Annex XVII entry 72, SVHC Candidate List						
776297-69-9	N-pentyl-isopentylphthalate#		EU	EU - REACH Annex XVII entry 72, SVHC Candidate List						
68515-50-4	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear#		EU	EU - REACH Annex XVII entry 72, SVHC Candidate List						
71850-09-4	Di-iso-hexylphthalate (DIHxP)#		EU	EU - REACH Annex XVII entry 72, SVHC Candidate List						
68515-51-5, 68648-93-1	1,2-benzenedicarboxylic acid, di-C6- 10-alkyl esters; 1,2- benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	Denmark - Statutory Order 947 of 20/06/2020: Toys and childcare articles for children 0-3 years old: Phthalates (Except DEHP, DNOP, BBP, DBP, DIBP, DINP, DIDP): 0.05% by weight (each)	EU, Denmark	EU - SVHC Candidate List Denmark - Statutory Order 947 of 20/06/2020						
131-11-3	Dimethyl phthalate (DMP)		USA, Denmark	Denmark - Statutory Order 947 of 20/06/2020						
84-66-2	Diethyl phthalate (DEP)		USA, Denmark	Denmark - Statutory Order 947 of 20/06/2020		USA - Washington CSPA, Maine Regulated Priority Chemicals				
26040-51-7	Bis(2-ethylhexyl) tetrabromophthalate (TBPH)		USA	Denmark - Statutory Order 947 of 20/06/2020		USA - Washington CSPA, Vermont CHCC				

olvents							
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments
127-19-5	N,N-dimethylacetamide (DMAC)	3 000 mg/kg	EU	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII	CEN ISO/TS 16189		Both are SVHC limit of 1000 mg/kg
68-12-2	N,N-dimethylformamide; dimethyl formamide (DMF)	3 000 mg/kg	EU				
872-50-4	N-methyl-2-pyrrolidone (NMP)	3 000 mg/kg	EU				New add to CMR restriction in Textile undo REACH Annex XVII
71-43-2	Benzene	5 mg/kg	EU				
5216-25-1	α, α,α,4-tetrachlorotoluene; p- chlorobenzotrichloride	1 mg/kg	EU		EN 17137:2018		
98-07-7	α, α,α-trichlorotoluene; benzotrichloride	1 mg/kg	EU				
100-44-7	α-chlorotoluene; benzyl chloride	1 mg/kg	EU				
56-23-5	Carbon Tetrachloride	0.1% (mass)- Each	Switzerland, EU, Japan	Germany: Chemikalienverbots- verordnung (Prohibition of Chemicals Ordinance), section 16 Japan Law for the Control of Household Products Containing Harmful	Headspace for components (industry practice - not specified by the regulation)	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII (Restriction applies to substances and mixtures) only for Pentachloroethane, 1,1,1,2- Tetrachloroethane, 1,1,2,2- Tetrachloroethane, Chloroform, 1,1,2-Trichloroethane, 1,1- Dichloroethylene, and	
71-55-6	1,1,1-Trichloroethane			Substances		Trichloroethylene Regulation (EC) No. 1005/2009 Denmark	

olvents								
CAS Number	Chemical Name	Restriction /Maximum Limit on Final Product or Tested Component	Country	Regulation	Test Method	Other Countries, U.S. States that also Regulate this Substance	Comments	
76-01-7	Pentachloroethane	0.1% (mass) - Each	0.1% (mass) - Each	EU, Japan	Germany: Chemikalienverbots- verordnung	Headspace for components (industry practice - not	European Union REACH Regulation (EC) No. 1907/2006 Annex XVII (Restriction applies to	
630-20-6	1,1,1,2-Tetrachloroethane			(Prohibition of Chemicals Ordinance), section 16 Japan Law for the Control of Household Products Containing Harmful Substances	specified by the regulation)	substances and mixtures) only for Pentachloroethane, 1,1,1,2- Tetrachloroethane, 1,1,2,2- Tetrachloroethane, Chloroform, 1,1,2-Trichloroethane, 1,1- Dichloroethylene, and Trichloroethylene Regulation (EC) No. 1005/2009 Denmark		
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							
79-01-6	Trichloroethylene							
127-18-4	Tetrachloroethylene (Japan only)							
	Volatile organics	≤20 g/m²	China	GB 21550-2008 (PVC artificial leather)	GB 21550 Clause 5.5		For GB 21550, it is not banned for chlorinate solvents, but all Volatic Organic, by measuring the weight difference of PVC leather in an over 100°C for 6 hours. This regulation applies all textiles and footwe products containing Polymore.	

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

CPSC - Consumer Product Safety Commission. Main U.S. government agency responsible for product safety and for enforcement of CPSIA.

CPSIA - Consumer Product Safety Improvement Act

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 Institute for Standardization (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 Standard

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 Organization for Standardization

JIS—Japanese Industrial Standard

KOH—Potassium Hydroxide

LFGB— German Food, Commodities and Feed Code (Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuch)

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

PFAS - Per- and polyfluoroalkyl substances

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 (µg/g).

ppb—Parts per Billion. A unit describing concentrations of chemical substances. 1 ppb can also be notated as 1 microgram per kilogram (μg/kg).

REACH - Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals. It entered into force on 1st June 2007. It streamlines and improves the former legislative framework on chemicals of the European Union (EU).

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

SVHC – Substances of very high concern, (Candidate List of substances of very high concern for Authorization)

Test method – A definitive procedure that produces a test result.

UK—United Kingdom

Reporting: Appendix IA lists SVHC reporting and registration requirements for the European market that are not necessarily otherwise listed in the RSL.

This list is current as of January 2023. For current SVHC reporting and registration requirements, please visit the following site: https://echa.europa.eu/candidate-list-table

EU REACH Substances o	f Very High Conc	ern (SVHC):
-----------------------	------------------	-------------

No.	Chemical Name	CAS Number	Restriction / Limit Triggering Reporting in Article
1	Triethyl arsenate	15606-95-8	over 0.1%
2	Anthracene	120-12-7	over 0.1%
3	4,4'-Diaminodiphenyl methane (MDA)	101-77-9	over 0.1%
4	Dibutyl phthalate (DBP)	84-74-2	over 0.1%
5	Cobalt dichloride	7646-79-9	over 0.1%
6	Diarsenic pentaoxide	1303-28-2	over 0.1%
7	Diarsenic trioxide	1327-53-3	over 0.1%
8	Sodium dichromate	7789-12-0(1), 10588-01-9(2)	over 0.1%
9	5-tert-butyl-2,4,6-trinitrom-xylene (musk xylene)	81-15-2	over 0.1%
10	Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	over 0.1%
11	Hexabromo cyclododecane (HBCDD) and all major diastereoisomers identified:a - HBCDD b - HBCDD g - HBCDD	3194-55-6(3), 25637-99-4(4), 134237-50-6, 134237-51-7, 134237-52-8	over 0.1%
12	Alkanes, C10-13, chloro (Short ChainChlorinated Paraffins) (SCCP)	85535-84-8	over 0.1%
13	Bis(tributyltin)oxide (TBTO)	56-35-9	over 0.1%
14	Lead hydrogen arsenate	7784-40-9	over 0.1%
15	Benzyl butyl phthalate (BBP)	85-68-7	over 0.1%
16	2,4-Dinitrotoluene	121-14-2	over 0.1%
17	Anthracene oil	90640-80-5	over 0.1%
18	Anthracene oil, anthracene paste, distn. Lights	91995-17-4	over 0.1%
19	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	over 0.1%
20	Anthracene oil, anthracene-low	90640-82-7	over 0.1%
21	Anthracene oil, anthracene paste	90640-81-6	over 0.1%
22	Diisobutyl phthalate (DiBP)	84-69-5	over 0.1%
23	Aluminosilicate, Refractory Ceramic Fibres	650-017-00-8(Index no.)	over 0.1%
24	Zirconia Aluminosilicate, Refractory Ceramic Fibres	650-017-00-8(Index no.)	over 0.1%
25	Lead chromate	7758-97-6	over 0.1%
26	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	12656-85-8	over 0.1%
27	Lead sulfochromate yellow (C.I. PigmentYellow 34)	1344-37-2	over 0.1%
28	Acrylamide	79-06-1	over 0.1%
29	Tris(2-chloroethyl) phosphate	115-96-8	over 0.1%

Reporting: Appendix IA lists SVHC reporting and registration requirements for the European market that are not necessarily otherwise listed in the RSL.

This list is current as of January 2023. For current SVHC reporting and registration requirements, please visit the following site: https://echa.europa.eu/candidate-list-table

ı		
	EU REACH Substances of \	Very High Concern (SVHC):
	Chemical Name	CAS Number

No.	Chemical Name	CAS Number	Restriction / Limit Triggering Reporting in Article
30	Coal tar pitch, high temperature	65996-93-2	over 0.1%
31	Trichloroethylene	79-01-6	over 0.1%
32	Boric acid	10043-35-3 /11113-50-1	over 0.1%
33	Disodium,tetraborate,anhydrous	1330-43-4, 12179-04-3, 1303-96-4	over 0.1%
34	Tetraboron disodium heptaoxide, hydrate	12267-73-1	over 0.1%
35	Sodium chromate	7775-11-3	over 0.1%
36	Potassium chromate	7789-00-6	over 0.1%
37	Ammonium dichromate	7789-09-5	over 0.1%
38	Potassium dichromate	7778-50-9	over 0.1%
39	Cobalt(II) diacetate	71-48-7	over 0.1%
40	Cobalt(II) carbonate	513-79-1	over 0.1%
41	Cobalt(II) dinitrate	10141-05-6	over 0.1%
42	Cobalt(II) sulphate	10124-43-3	over 0.1%
43	2-Ethoxyethanol	110-80-5	over 0.1%
44	2-Methoxyethanol	109-86-4	over 0.1%
45	Chromium trioxide	1333-82-0	over 0.1%
46	Acids generated from chromium trioxide and their oligomers: Chromic acid and Dichromic acid	7738-94-5 13530-68-2	over 0.1%
47	2-ethoxyethyl acetate	111-15-9	over 0.1%
48	Strontium chromate	7789-06-2	over 0.1%
49	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	over 0.1%
50	Hydrazine	7803-57-8, 302-01-2	over 0.1%
51	1-methyl-2-pyrrolidone	872-50-4	over 0.1%
52	1,2,3-trichloropropane	96-18-4	over 0.1%
53	1,2-Benzenedicarboxylic acid,di-C6-8-branched alkyl esters, C7-rich (DIHP)	7188-89-6	over 0.1%
54	Lead styphnate	15245-44-0	over 0.1%
55	Lead diazide, Lead azide	13424-46-9	over 0.1%
56	Lead dipicrate	6477-64-1	over 0.1%
57	Phenolphthalein	77-09-8	over 0.1%
58	2,2'-Dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	over 0.1%

Reporting: Appendix IA lists SVHC reporting and registration requirements for the European market that are not necessarily otherwise listed in the RSL.

This list is current as of January 2023. For current SVHC reporting and registration requirements, please visit the following site: https://echa.europa.eu/candidate-list-table

EU REACH Substances of Very High Concern (SV
--

No.	Chemical Name	CAS Number	Restriction / Limit Triggering Reporting in Article
59	N,N-dimethylacetamide (DMAC)	127-19-5	over 0.1%
60	Trilead diarsenate	3687-31-8	over 0.1%
61	Calcium arsenate	7778-44-1	over 0.1%
62	Arsenic acid	7778-39-4	over 0.1%
63	Bis(2-methoxyethyl) ether	111-96-6	over 0.1%
64	1,2-Dichloroethane	107-06-2	over 0.1%
65	4-(1,1,3,3-Tetramethylbutyl)phenol; 4-tert-octyl phenol	140-66-9	over 0.1%
66	2-Methoxyaniline; o-Anisidine	90-04-0	over 0.1%
67	Bis(2-methoxyethyl) phthalate	117-82-8	over 0.1%
68	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	over 0.1%
69	Pentazinc chromate octahydroxide	49663-84-5	over 0.1%
70	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	over 0.1%
71	Dichromium tris(chromate)	24613-89-6	over 0.1%
72	1,2-bis(2methoxy-ethoxy) ethane (TEGDME;triglyme)	112-49-2	over 0.1%
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	over 0.1%
74	4,4'-bis(dimethylamino)-4'(methyl-amino)trityl alcohol (C.I. Solvent Violet 8)	561-41-1	over 0.1%
75	4,4'-bis(dimethylamino) benzophenone(Michler's ketone)	90-94-8	over 0.1%
76	[4-[[4-anilino-1-naphthyl]][4- (dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1- ylidene] dimethylammonium chloride (C.I. Basic Blue 26)	2580-56-5	over 0.1%
77	N,N,N',N'-tetramethyl-4,4'methylenedianiline(Michler's base)	101-61-1	over 0.1%
78	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	6786-83-0	over 0.1%
79	Diboron trioxide	1303-86-2	over 0.1%
80	Formamide	75-12-7	over 0.1%
81	Lead(II) bis(methanesulfonate)	17570-76-2	over 0.1%
82	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	over 0.1%
83	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5- triazine- 2,4,6(1H,3H,5H)trione) (β-TGIC)	59653-74-6	over 0.1%

Reporting: Appendix IA lists SVHC reporting and registration requirements for the European market that are not necessarily otherwise listed in the RSL.

This list is current as of January 2023. For current SVHC reporting and registration requirements, please visit the following site: https://echa.europa.eu/candidate-list-table

EU REACH Substances of Very High Concern (SVHC):					
No.	Chemical Name	CAS Number	Restriction / Limit Triggering Reporting in Article		
84	[4-[4,4'-bis(dimethyl- amino)benzhydylidene]cyclohexa-2,5-dien-1- ylidene]dimethyl ammonium chloride (C.I. Basic Violet 3)	548-62-9	over 0.1%		
85	Bis(pentabromophenyl) ether (deca-BDE)	1163-19-5	over 0.1%		
86	Pentacosafluorotridecanoic acid	72629-94-8	over 0.1%		
87	Henicosafluoroundecanoic acid	2058-94-8	over 0.1%		
88	Tricosafluorododecanoic acid	307-55-1	over 0.1%		
89	Heptacosafluorotetradecanoic acid	376-06-7	over 0.1%		
90	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated – covering well defined substances and UVCB substances, polymers and homologues	-	over 0.1%		
91	4-nonylphenol, branched and linear – substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bonded in position 4 to phenol, covering also UVCB and well-defined substances which include any of the individual isomers or a combination thereof	-	over 0.1%		
92	Diazene-1,2-dicarboxamide (C,C'- azodi(formamide)	123-77-3	over 0.1%		
93	Cyclohexane-1,2-dicarboxylic anhydride(Hexahydrophthalic anhydride- HHPA)cis-cyclohexane-1,2-dicarboxylic anhydride trans-cyclohexane-1,2-dicarboxylic anhydride(The individual cis- and trans- isomer and all possible combinations of the cis- and trans-)	85-42-7, 13149-00-3, 14166-21-3	over 0.1%		
94	Hexahydromethylphthalic anhydride, Hexahydro-4- methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	over 0.1%		
95	Methoxy acetic acid	625-45-6	over 0.1%		
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	over 0.1%		
97	Diisopentylphthalate (DIPP)	605-50-5	over 0.1%		
98	N-pentyl-isopentylphthalate	776297-69-9	over 0.1%		
99	1,2-Diethoxyethane	629-14-1	over 0.1%		
100	N,N-dimethylformamide; dimethyl formamide	68-12-2	over 0.1%		
101	Dibutyltin dichloride (DBT)	683-18-1	over 0.1%		
102	Acetic acid, lead salt, basic	51404-69-4	over 0.1%		

137

138

Reporting: Appendix IA lists SVHC reporting and registration requirements for the European market that are not necessarily otherwise listed in the RSL.

This list is current as of January 2023. For current SVHC reporting and registration requirements, please visit the following site: https://echa.europa.eu/candidate-list-table

	EU REACH Substances of Very High Concern (SVHC):					
No.	Chemical Name	CAS Number	Restriction / Limit Triggering Reporting in Article			
103	Basic lead carbonate (trilead bis(carbonate)dihydroxide)	1319-46-6	over 0.1%			
104	Lead oxide sulfate (basic lead sulfate)	12036-76-9	over 0.1%			
105	[Phthalato(2-)]dioxotrilead (dibasic lead phthalate)	69011-06-9	over 0.1%			
106	Dioxobis(stearato)trilead	12578-12-0	over 0.1%			
107	Fatty acids, C16-18, lead salts	91031-62-8	over 0.1%			
108	Lead bis(tetrafluoroborate)	13814-96-5	over 0.1%			
109	Lead cynamidate	20837-86-9	over 0.1%			
110	Lead dinitrate	10099-74-8	over 0.1%			
111	Lead oxide (lead monoxide)	1317-36-8	over 0.1%			
112	Lead tetroxide (orange lead)	1314-41-6	over 0.1%			
113	Lead titanium trioxide	12060-00-3	over 0.1%			
114	Lead titanium zirconium oxide	12626-81-2	over 0.1%			
115	Pentalead tetraoxide sulphate	12065-90-6	over 0.1%			
116	Pyrochlore, antimony lead yellow	8012-00-8	over 0.1%			
117	Silicic acid, barium salt, lead -doped	68784-75-8	over 0.1%			
118	Silicic acid, lead salt	11120-22-2	over 0.1%			
119	Sulfurous acid, lead salt, dibasic	62229-08-7	over 0.1%			
120	Tetraethyllead	78-00-2	over 0.1%			
121	Tetralead trioxide sulphate	12202-17-4	over 0.1%			
122	Trilead dioxide phosphonate	12141-20-7	over 0.1%			
123	Furan	110-00-9	over 0.1%			
124	Propylene oxide; 1,2-epoxypropane;methyloxirane	75-56-9	over 0.1%			
125	Diethyl sulphate	64-67-5	over 0.1%			
126	Dimethyl sulphate	77-78-1	over 0.1%			
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3- oxazolidine	143860-04-2	over 0.1%			
128	Dinoseb	88-85-7	over 0.1%			
129	4,4'-methylenedi-o-toluidine	838-88-0	over 0.1%			
130	4,4'-oxydianiline and its salts	101-80-4	over 0.1%			
131	4-Aminoazobenzene; 4-Phenylazoaniline	60-09-3	over 0.1%			
132	4-methyl-m-phenylenediamine (2,4-toluene- diamine)	95-80-7	over 0.1%			
133	6-methoxy-m-toluidine (p-cresidine)	120-71-8	over 0.1%			
134	Biphenyl-4-ylamine	92-67-1	over 0.1%			
135	o-aminoazotoluene	97-56-3	over 0.1%			
136	o-Toluidine; 2-Aminotoluene	95-53-4	over 0.1%			

N-methylacetamide

1-bromopropane; n-propyl bromide

over 0.1%

over 0.1%

Version date: February 6, 2023

79-16-3

106-94-5

161

Reporting: Appendix IA lists SVHC reporting and registration requirements for the European market that are not necessarily otherwise listed in the RSL.

This list is current as of January 2023. For current SVHC reporting and registration requirements, please visit the following site: https://echa.europa.eu/candidate-list-table

NI -	EU REACH Substances of Very H		Destable (11 MT)
No.	Chemical Name	CAS Number	Restriction / Limit Triggering Reporting in Article
139	Pentadecafluorooctanoic acid (PFOA)	335-67-1	over 0.1%
140	Dipentyl phthalate (DPP)	131-18-0	over 0.1%
141	Cadmium oxide	1306-19-0	over 0.1%
142	Cadmium	7440-43-9	over 0.1%
143	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	over 0.1%
144	4-Nonylphenol, branched and linear, ethoxylated	-	over 0.1%
145	Trixylyl phosphate	25155-23-1	over 0.1%
146	Lead di(acetate)	301-04-2	over 0.1%
147	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	over 0.1%
148	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7	over 0.1%
149	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	over 0.1%
150	Dihexyl phthalate	84-75-3	over 0.1%
151	Cadmium sulphide	1306-23-6	over 0.1%
152	Sodium peroxometaborate	7632-04-4	over 0.1%
153	Sodium perborate, perboric acid, sodium salt	15120-21-5,	over 0.1%
		11138-47-9	
154	Cadmium chloride	10108-64-2	over 0.1%
155	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	over 0.1%
156	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	-	over 0.1%
157	Cadmium sulphate	10124-36-4, 31119-53-6	over 0.1%
158	Cadmium fluoride	7790-79-6	over 0.1%
159	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4- stannatetradecanoate (DOTE)	15571-58-1	over 0.1%
160	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	over 0.1%

2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)

over 0.1%

Version date: February 6, 2023

25973-55-1

Reporting: Appendix IA lists SVHC reporting and registration requirements for the European market that are not necessarily otherwise listed in the RSL.

This list is current as of January 2023. For current SVHC reporting and registration requirements, please visit the following site: https://echa.europa.eu/candidate-list-table

No.	Chemical Name	CAS Number	Restriction / Limit Triggering Reporting in Article
162	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2]covering any of the individual stereoisomers of [1] and [2] or any combination thereof	-	over 0.1%
163	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	68515-51-5, 68648-93-1	over 0.1%
164	Perfluorononan-1-oic-acid and its sodium and ammonium salts	4149-60-4, 375-95-1, 21049-39-8	over 0.1%
165	Nitrobenzene	98-95-3	over 0.1%
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	over 0.1%
167	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	over 0.1%
168	1,3-propanesultone	1120-71-4	over 0.1%
169	Benzo[def]chrysene (benzo[a]pyrene)	50-32-8	over 0.1%
170	4,4'-isopropylidenediphenol (bisphenol A; BPA)	80-05-7	over 0.1%
171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2, 3830-45-3, 3108-42-7	over 0.1%
172	p-(1,1-dimethylpropyl) phenol	80-46-6	over 0.1%
173	4-heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	-	over 0.1%
174	Perfluorohexane-1-sulphonic acid and its salts	355-46-4	over 0.1%
175	1,6,7,8,9,14,15,16,17,17,18,18- Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10] octadeca- 7,15-diene ("Dechlorane Plus"TM) [covering any of its individual anti- and syn-isomers or any combination thereof]	-	over 0.1%
176	Benz[a]anthracene	56-55-3	over 0.1%

Reporting: Appendix IA lists SVHC reporting and registration requirements for the European market that are not necessarily otherwise listed in the RSL.

This list is current as of January 2023. For current SVHC reporting and registration requirements, please visit the following site: https://echa.europa.eu/candidate-list-table

EU REACH Substances of very High Concern (SVHC):				
No.	Chemical Name	CAS Number	Restriction / Limit Trig Reporting in Artic	
177	Cadmium nitrate	10325-94-7	over 0.1%	
178	Cadmium carbonate	513-78-0	over 0.1%	
179	Cadmium hydroxide	21041-95-2	over 0.1%	
180	Chrysene	218-01-9	over 0.1%	

No.	Chemical Name	CAS Number	Restriction / Limit Triggering Reporting in Article
177	Cadmium nitrate	10325-94-7	over 0.1%
178	Cadmium carbonate	513-78-0	over 0.1%
179	Cadmium hydroxide	21041-95-2	over 0.1%
180	Chrysene	218-01-9	over 0.1%
181	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear]	-	over 0.1%
182	Benzene-1,2,4-tricarboxylic acid 1,2-anhydride (trimellitic anhydride; TMA))	552-30-7	over 0.1%
183	Benzo[ghi]perylene	191-24-2	over 0.1%
184	Decamethylcyclopentasiloxane (D5)	541-02-6	over 0.1%
185	Dicyclohexyl phthalate (DCHP)	84-61-7	over 0.1%
186	Disodium octaborate	12008-41-2	over 0.1%
187	Dodecamethylcyclohexasiloxane (D6)	540-97-6	over 0.1%
188	Ethylenediamine	107-15-3	over 0.1%
189	Lead	7439-92-1	over 0.1%
190	Octamethylcyclotetrasiloxane (D4)	556-67-2	over 0.1%
191	Terphenyl hydrogenated	61788-32-7	over 0.1%
192	1,7,7-trimethyl-3-(phenylmethylene) bicyclo[2.2.1]heptan-2- one (3-Benzylidenecamphor)	15087-24-8	over 0.1%
193	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	over 0.1%
194	Benzo[k]fluoranthene	207-08-9	over 0.1%
195	Fluoranthene	206-44-0	over 0.1%
196	Phenanthrene	85-01-8	over 0.1%
197	Pyrene	129-00-0	over 0.1%
198	2-methoxyethyl acetate	110-49-6	over 0.1%
199	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)		over 0.1%
200	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)		over 0.1%
201	4-tert-butylphenol	98-54-4	over 0.1%
202	2-Benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	over 0.1%

Reporting: Appendix IA lists SVHC reporting and registration requirements for the European market that are not necessarily otherwise listed in the RSL.

This list is current as of January 2023. For current SVHC reporting and registration requirements, please visit the following site: https://echa.europa.eu/candidate-list-table

No.	EU REACH Substances of Very Chemical Name	CAS Number	Restriction / Limit Triggering
NO.	Chemical Name	CAS Number	Reporting in Article
203	2-Methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	over 0.1%
204	Diisohexyl phthalate	71850-09-4	over 0.1%
205	Perfluorobutane sulfonic acid (PFBS) and its salts		over 0.1%
206	1-vinylimidazole	1072-63-5	over 0.1%
207	2-methylimidazole	693-98-1	over 0.1%
208	Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	over 0.1%
209	Butyl 4-hydroxybenzoate (Butylparaben)	94-26-8	over 0.1%
210	Bis(2-(2-methoxyethoxy)ethyl)ether	143-24-8	over 0.1%
211	Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety		over 0.1%
212	1,4-dioxane	123-91-1	over 0.1%
213	2,2-bis(bromomethyl)propane1,3-diol (BMP) 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA) 2,3-dibromo-1-propanol (2,3-DBPA)	3296-90-0 36483-57-5, 1522-92-5 96-13-9	over 0.1%
214	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	-	over 0.1%
215	4,4'-(1-methylpropylidene)bisphenol; (bisphenol B)	77-40-7	over 0.1%
216	Orthoboric acid, sodium salt	13840-56-7	over 0.1%
217	Glutaral	111-30-8	over 0.1%
218	Medium-chain chlorinated paraffins (MCCP) (C14 to C17)	-	over 0.1%
219	Phenol, alkylation products (mainly in para position) with C12- rich branched or linear alkyl chains from oligomerization, covering any individual isomers and/ or combinations thereof (PDDP)	-	over 0.1%
220	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1	over 0.1%
221	tris(2-methoxyethoxy)vinylsilane	1067-53-4	over 0.1%
222	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	-	over 0.1%

Reporting: Appendix IA lists SVHC reporting and registration requirements for the European market that are not necessarily otherwise listed in the RSL. Appendix IA This list is current as of January 2023. For current SVHC reporting and registration requirements, please visit the following site: https://echa.europa.eu/candidate-list-table EU REACH Substances of Very High Concern (SVHC): **CAS Number** Restriction / Limit Triggering No. **Chemical Name** Reporting in Article 223 S-(tricyclo(5.2.1.02,6)deca-3-en-8(or 9)-yl O-(isopropyl or 255881-94-8 over 0.1% isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2ethylhexyl) phosphorodithioate 224 N-(hydroxymethyl)acrylamide 924-42-5 over 0.1% 1,1'-[ethane-1,2-diylbisoxy]bis[2,4,6-tribromobenzene] -225 37853-59-1 0.01% BTBPE 226 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol 79-94-7 0.01% 227 4,4'-sulphonyldiphenol 80-09-1 0.01% 228 Barium diboron tetraoxide 13701-59-2 0.01% Bis(2-ethylhexyl) tetrabromophthalate covering any of the 229 0.01% individual isomers and/or combinations thereof 230 Isobutyl 4-hydroxybenzoate 2/3/47 0.01% 231 Melamine 108-78-1 0.01% 231 Perfluoroheptanoic acid (PFHxA) and its salts 0.01% Reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-233 heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-0.01% octafluoro-4-(heptafluoropropyl)morpholine

Аp	pendix 1B	Side by S	ide of V	arious State Report	ing Requirements (v	vith links to state re	source pages)				
	Children's Product Reporting Requirement-Chemical of High Concern List										
No.	Chemical	Abbreviati on (If any)	CAS	Vermont (Annual Reporting) Link: https://www.healthvermont .gov/environment/children/ chemical-disclosure- program-childrens- products-manufacturers	Washington (Annual Reporting) Link: https://ecology.wa.gov/ Regulations- Permits/Reporting- requirements/Reporting- for-Childrens-Safe- Products-Act	Oregon (Biennial Reporting) Link: https://www.oregon.gov /oha/PH/HEALTHYENVIR ONMENTS/HEALTHYNEI GHBORHOODS/TOXICS UBSTANCES/Pages/Toxi c-Free-Kids- Reporting.aspx	Maine (Report within 30 days of Product Availability) Link: https://www.maine.gov/ dep/safechem/childrens- products/index.html	For comparison, chemical is also included in EU REACH SVHC/ Candidate List. (Please consult Appendix 1A for more SVHC details) Link: https://echa.europa.eu/candidate-list-table			
1	Formaldehyde and substances that are intentionally added to release formaldehyde, including 5-Bromo-5-nitro-1,3-dioxane (30007-47-7), Bronopol (52-51-7), Diazolidinyl urea (78491-02-8), DMDM hydantoin (6440-58-0), Imidazolidinyl urea (39236-46-9), Methanol, (phenylmethoxy) (14548-60-8), Methenamine (100-97-0), Quaternium-15 (4080-31-3), and Sodium N-(hydroxymethyl)glycinate (70161-44-3)		50-00-0	√	√	√	√				
2	Aniline		62-53-3	✓	✓	✓					
3	N-Nitrosodimethylamine	NDMA	62-75-9	✓	✓	✓					
4	Benzene		71-43-2	√	✓	✓					
5	Vinyl chloride		75-01-4	✓	✓	✓					
6	Acetaldehyde		75-07-0	✓	✓	✓					
7	Methylene chloride		75-09-2	✓	✓	✓					
8	Carbon disulfide		75-15-0	✓	✓	✓					
9	Methyl ethyl ketone		78-93-3	✓	✓	✓					
10	1,1,2,2-Tetrachloroethane		79-34-5	✓	✓	✓					
11	Tetrabromobisphenol A	TBBP A	79-94-7	√	✓	✓					
12	Bisphenol A	BPA	80-05-7	✓	✓	✓	✓	✓			
13	Bisphenol S	BPS	80-09-1	✓	✓	✓					
14	Dicyclohexyl phthalate	DCHP	84-61-7	✓	✓	✓		✓			
15	Diethyl phthalate	DEP	84-66-2	✓	✓	✓	✓				
16	Diisobutyl phthalate	DIBP	84-69-5	✓	✓	✓		✓			
17	Dibutyl phthalate	DBP	84-74-2	✓	✓	✓	✓	✓			
18	Di-n-hexyl Phthalate	DnHP	84-75-3	✓	✓			✓			
19	Phthalic anhydride		85-44-9	✓							
20	Butyl benzyl phthalate	BBP	85-68-7	√	√	√	√	✓			
21	N-Nitrosodiphenylamine		86-30-6	√	√	√					
22	Hexachlorobutadiene		87-68-3	✓	√	√					
23	Propyl paraben		94-13-3	✓	√	√					
24	Butyl paraben		94-26-8	✓	√	✓		√			
25	2-Aminotoluene		95-53-4	✓	√	√		√			
26	2,4-Diaminotoluene		95-80-7	√	√	√ .					
27	Methyl paraben		99-76-3	√	√ .	√ .					
28	p-Hydroxybenzoic acid		99-96-7	√	√ ,	√ ,	√				
29	Ethylbenzene		100-41-4	√ ′	√	√					
30	Styrene		100-42-5	√ √	√ √	√		,			
31	4-Nonylphenol; 4-NP and its isomer mixtures including CAS 84852-15-3 and CAS 25154-52-3		104-40-5 84852-15- 3 25154-52- 3	*	V	√		√ 			
32	para-Chloroaniline		106-47-8	✓	✓	✓					
33	Acrylonitrile		107-13-1	√	✓	✓					
34	Ethylene glycol		107-21-1	√	√ ·	√ ·					
35	Toluene		108-88-3	✓	✓	✓					

Ap	Appendix 1B Side by Side of Various State Reporting Requirements (with links to state resource pages)										
	Children's Product Reporting Requirement-Chemical of High Concern List										
No.	Chemical	Abbreviati on (If any)	CAS	Vermont (Annual Reporting) Link: https://www.healthvermont .gov/environment/children/ chemical-disclosure- program-childrens- products-manufacturers	Washington (Annual Reporting) Link: https://ecology.wa.gov/ Regulations- Permits/Reporting- requirements/Reporting- for-Childrens-Safe- Products-Act	Oregon (Biennial Reporting) Link: https://www.oregon.gov /oha/PH/HEALTHYENVIR ONMENTS/HEALTHYNEI GHBORHOODS/TOXICS UBSTANCES/Pages/Toxi c-Free-Kids- Reporting.aspx	Maine (Report within 30 days of Product Availability) Link: https://www.maine.gov/ dep/safechem/childrens- products/index.html	For comparison, chemical is also included in EU REACH SVHC/ Candidate List. (Please consult Appendix 1A for more SVHC details) Link: https://echa.europa.eu/c andidate-list-table			
36	Phenol		108-95-2	✓	√	√					
37	2-Methoxyethanol		109-86-4	✓	√	√		✓			
38	Ethylene glycol monoethyl ether		110-80-5	✓	√	√		√			
39	Triphenyl phosphate	TPP	115-86-6	·	·	·		-			
40	Tris(2-chloroethyl) phosphate	TCEP	115-96-8	√	√	√		✓			
41	Di-2-ethylhexyl phthalate	DEHP	117-81-7	√	√	√	✓	✓			
42	Di-(2-methoxyethyl) phthalate	DMEP	117-82-8			·		<u> </u>			
43	Di-n-octyl phthalate	DnOP	117-84-0	·	<i>,</i>	/		·			
44	Hexachlorobenzene	Biloi	118-74-1	<i>\</i>	<i>\</i>	<i>\</i>					
45	3,3'-Dimethylbenzidine and Dyes Metabolized to 3,3'-Dimethylbenzidine		119-93-7	· √	·	·					
46	Ethyl paraben		120-47-8	, /	<i>\</i>	<i>\</i>					
47	1,4-Dioxane		123-91-1	<i>\</i>	<i></i>	<i></i>		√			
48	Tris (2,3-dibromopropyl) phosphate	TDBPP	126-72-7	<i></i>	√	v		·			
49	Tri-n-butyl phosphate	TNBP	126-73-8	√	√						
50	Perchloroethylene (Tetrachloroethene)	PERC	127-18-4	√	√	√					
51	Dipentyl phthalate	DPP	131-18-0	√ √	√ √	V		<i></i>			
		DPP	131-16-0	√ √	√ √	,		V			
52	Benzophenone-2 (Bp-2); 2,2',4,4'-Tetrahydroxybenzophenone					√ ,		,			
53	4-tert-Octylphenol; 1,1,3,3-Tetramethyl-4-butylphenol		140-66-9	√ ,	√	√		✓			
54	Estragole		140-67-0	√	√	√					
55	2-Ethylhexanoic Acid		149-57-5	√	√	√					
56	Perfluorohexane sulfonic acid	PFHxS	355-46-4	√				√			
57	Perfluoroheptanoic acid	PFHpA	375-85-9	√							
58	Perfluorononanoic acid	PFNA	375-95-1	✓				√			
59	Perfluorooctanoic acid	PFOA	335-67-1	√	√ [PFOA and related substances]			√			
60	Octamethylcyclotetrasiloxane		556-67-2	√				√			
61	Benzene, pentachloro		608-93-5	✓	√	√					
62	Bisphenol F	BPF	620-92-8	✓	✓	√					
63	C.I. Solvent Yellow 14		842-07-9	✓	√	√					
64	N-Methylpyrrolidone		872-50-4	√	√	√		✓			
65	2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether; BDE-209	Deca-BDE	1163-19- 5	✓	✓	✓	✓	✓			
66	Ethylhexyl diphenyl phosphate	EHDPP	1241-94- 7	√	✓	✓					
67	Tricresyl phosphate	TCP	1330-78- 5	√	✓						
68	Perfluorooctanyl sulphonic acid and its salts	PFOS	1763-23- 1	√	✓	✓	✓				
69	Phenol, 4-octyl-		1806-26- 4	√	✓	✓					
70	2-Ethyl-hexyl-4-methoxycinnamate		5466-77- 3	✓	✓	✓					
71	Lead & lead compounds		7439-92- 1	√				✓			

Ap	oendix 1B	Side by S	ide of V	arious State Report	ing Requirements (v	vith links to state re	source pages)	
	Children'	s Product	t Report	ing Requirement-Ch	emical of High Con	cern List		
No.	Chemical	Abbreviati on (If any)	CAS	Vermont (Annual Reporting) Link: https://www.healthvermont .gov/environment/children/ chemical-disclosure- program-childrens- products-manufacturers	Washington (Annual Reporting) Link: https://ecology.wa.gov/ Regulations- Permits/Reporting- requirements/Reporting- for-Childrens-Safe- Products-Act	Oregon (Biennial Reporting) Link: https://www.oregon.gov /oha/PH/HEALTHYENVIR ONMENTS/HEALTHYNEI GHBORHOODS/TOXICS UBSTANCES/Pages/Toxi c-Free-Kids- Reporting.aspx	Maine (Report within 30 days of Product Availability) Link: https://www.maine.gov/ dep/safechem/childrens- products/index.html	For comparison, chemical is also included in EU REACH SVHC/ Candidate List. (Please consult Appendix 1A for more SVHC details) Link: https://echa.europa.eu/candidate-list-table
72	Mercury & mercury compounds including methyl mercury (22967-92-6)		7439-97- 6	√	√	√	√	
73	Molybdenum & molybdenum compounds		7439-98- 7	√				
74	Antimony & Antimony compounds		7440-36- 0	√	√	√		
75	Arsenic & Arsenic compounds including arsenic trioxide (1327-53-3) & dimethyl arsenic (75-60-5)		7440-38- 2 1327-53- 3 75-60-5	✓	√ 	√	√	√
76	Cadmium & cadmium compounds		7440-43- 9	√	√	√	√	✓
77	Cobalt & cobalt compounds		7440-48- 4	√	√	√		
78	Tris(1-chloro-2-propyl) phosphate	TCPP	13674-84- 5	√	√	√		
79	Tris(1,3-dichloro-2-propyl)phosphate	TDCPP	13674-87- 8	√	√	√		
80	Butylated hydroxyanisole	BHA	25013-16- 5	√	√	√		
81	Hexabromocyclododecane	HBCD	25637-99- 4	√	√	√	√	√
82	Bis (2-ethylhexyl) tetrabromophthalate	TBPH	26040-51- 7	√	√			
83	Diisodecyl phthalate	DIDP	26761-40- 0	√	√	√		
84	Diisononyl phthalate	DINP	28553-12- 0	√	✓	√		
85	Bis(chloromethyl)propane-1,3-diyl tetrakis-(2-chloroethyl) bis(phosphate)	V6	38051-10- 4	√	√			
86	Isopropylated triphenyl phosphate	IPTPP	68937-41- 7	√	√			
87	Decabromodiphenyl ethane	DBDPE	84852-53- 9	✓	√			
88	Short-chain chlorinated paraffins; Chlorinated paraffins		85535-84- 8 108171- 26-2	√	√	√		√
89	2-ethylhexyl-2,3,4,5-tetrabromobenzoate	TBB	183658- 27-7	√	✓	√		

Appendix II	Labeling: Appendix II lists reg	ulations which have a labeling re	quirement that a	re not necessaril	y otherwise listed in the RSL	<u>.</u> .	
CAS Number	Chemical Name Name	Restriction / Limit Triggering Labeling in Component	Country	Regulation	Test Method [detection limit] if any	Other Countries/States Which Also Require Labeling	Comment
50-00-0	Formaldehyde (0 - 36 months) Formaldehyde (3 - 12 years)	20 ppm 75 ppm (innerwear), 300 ppm (outerwear); All Children's' products: Max 75 ppm	Korea	Safety Quality Mark Act (KC Mark)			Age range off children's products in KC mark has been revised to: 3-14 years old Formaldehyde for children products (3-14 years): 75 mg/kg Innerwear and midwear (other than infant and children product): 75 mg/kg;
various	Azo Dyes	30 ppm					outerwear (other than infant and children products): 300 mg/kg TBT for KC Mark infant product (0-36 months): 0.5 mg/kg;
56573-85-4	Tributyltin (TBT)	0.5ppm for infant's 1.0 ppm for Children's					Others: 1.0 mg/kg
1002-53-5	Dibutyltin (DBT) (0 - 36 months)	1 ppm					
624-49-7	Dimethyl Fumarate	0.1 ppm					
117-84-0	Di-n-octyl phthalate (DNOP)	0.10%	Korea	Safety Quality			Phthalates requirement in KC Mark:
117-81-7	Di (2-ethylhexyl) phthalate (DEHP)			Mark Act (KC Mark)			Baby products (0-36 months): 0.1% (sum of DEHP, DBP, BBP, DIBP, DIDP,
85-68-7	Benzyl Butyl phthalate (BBP)						DINP, DNOP)
84-74-2	Di-n-butyl phthalate (DBP)						Children product (3-14 years):
84-69-5	Di-isobutyl phthalate (DIBP)						0.1% (sum of DEHP, DBP, BBP, DIBP)
68515-48-0	Di-isononyl phthalate (DINP)						
68515-49-1	Di-isodecyl phthalate (DIDP)						
32534-81-9	Penta-bromodiphenyl ether (pentaBDE) (0 - 12 years)						
32536-52-0	Octa-bromodiphenyl ether (octaBDE) (0 - 12 years)						
68112-30-1	TDBPP (0 - 12 years)						
various	Disperse Dyes	Not Detected Max. 50 ppm Polyester, Nylon, Acrylic, Acetate, Triacetate, Vinyl chloride	Korea	Safety Quality Mark Act (KC Mark)			Disperse dyes only applies to baby product, children and innerwear
7439-92-1	Lead (Pb) (0 - 12 years)	40 ppm- 100ppm (lead in substrate) 40 ppm- 90ppm (lead in coating)	Illinois, USA	Lead Poisoning Prevention Act			Toys with paints, child care articles, children's jewelry
	Lead (Pb) (above 16 years)	600 ppm	1				
	NP/NPEO	100ppm	Korea	Safety Quality Mark Act (KC Mark)			apply to fabric, leather & fur product in childrens product
Various	PFAS Chemicals	intentionally added	Colorado, USA	Colorado Revised Statutes 24-33.5- 1234			Notification of customer required for firefighting personal protective equipment

Change Log from RSL 22 to RSL 2	3						
APEO AP	All isomers of NP, OP, NPEO, OPEO added for China. Added requirements for South Korea, Switzerland, Turkey and Taiwan. Clarified NP/NPEO.						
Arylamines	Add 4 Arylamines subject to European Union REACH Regulation (EC) No. 1907/2006 Annex XVII entry 72 (including two previously grouped under Disperse Dyes chapter). Moved quinoline to disperse dyes tab (see change log notes for disperse dyes). Clarified tests can be performed with Arylamine salts.						
Asbestos	Deleted tab. Moved contents to Misc.						
Disperse Dyes	Quinoline moved to this tab as it is an impurity in disperse dyes. Moved 2 substances subject to EU Reach regulations to Arylamine tab (see Arylamine change log notes). Made multiple additions of substances and test method (DIN 54231) as a result of European Union REACH Regulation (EC) No. 1907/2006 Annex XVII entry 72.						
Flame Retardants	Added and updated multiple bromodiphenyl ethers. Added comment for forthcoming Delaware requirements, and additional notes for other state-based restrictions.						
Fluorinated Greenhouse Gases	Deleted tab. Moved contents to Misc.						
Formaldehyde	Several requirements removed since QB/T is voluntary in China. Added EU requirements.						
Heavy metals	Revised to create three new tabs, divided between extractable, soluble, and total. Several requirements for lead and cadmium on total were updated.						
Misc.	Added contents from flourinated greenhouse gases and asbestos. Added comment to clarify that Egypt ph value is for leather.						
PAH	Added EU regulation and test method for multiple substances.						
PFAS	Reformatted. Added U.S. State Level requirements and side by side up top.						
Phthalates	Completely revised to make more readable. Added Bis(2-ethylhexyl) tetrabromophthalate (TBPH). Clarified several state requirements.						
Solvents	Moved Benzene to the Solvents tab. Added several substances such as N-methyl-2-pyrrolidone (NMP). Removed HCBD limit, which applies to waste. Clarified EU regulatory references.						
Appendix I: Reporting	Divided into tabs (1A) SVHC and (1B) U.S. States. Updated SVHC list through January 2023.						
Appendix II: Labeling	Several updates for various Korea labeling for Di-isobutyl phthalate (DIBP) and NP/NPEO						

Disclaimer

NOTE: This Restricted Substance 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. No part of this document constitutes legal advice. 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.