LEVI STRAUSS & CO.

- Levi's®
- Dockers®
- DENIZEN®
- Signature by Levi Strauss & CO.™

Restricted Substances List ("RSL")

2017

This Restricted Substances List States Requirements for Materials, Parts, Chemicals, Components, Packaging and Other Goods (including Sundries).

For any questions, please e-mail: rsl@levi.com

Issue: November 2017

Supersedes all previous versions for products distributed during S1:2019 Season and thereafter.

Introduction

LS&CO. is committed to conducting its business in a sustainable manner designed to protect consumers, workers, the environment and the LS&CO. brands. We do so by building principally upon three pillars: (1) the Restricted Substances List (RSL) system of chemical substance controls; (2) LS&CO. guidance documents relating to environmental sustainability; and (3) LS&CO.'s worker health and safety requirements. These pillars, and all other LS&CO. environmental, health, and safety requirements set out on LS&CO.'s website www.levistrauss.com, apply to all Suppliers and Sources in LS&CO.'s global supply chain. These terms are explained below and in Appendix 2: Definitions. The balance of this document addresses LS&CO.'s RSL.

Please note that the RSL applies to all materials, parts, chemicals, components, packaging and other goods (including sundries), that are sourced or supplied for direct or eventual use in products to be labeled and/or distributed by LS&CO. This listing includes but is not limited to finished products, including apparel, non-apparel, footwear, accessories, packaging and other products[1]. Throughout the remainder of this RSL, all such materials, parts, chemicals, components, packaging and other goods (including sundries), will be referred to, collectively, as "Materials, Chemicals and Other Goods".

Restricted Substances List

The objectives of the LS&CO. RSL (2017) are intended to:

(a) Ensure that Materials, Chemicals and Other Goods comply with the applicable chemical content and chemical exposure laws of every governmental jurisdiction in which those products are fabricated, manufactured, processed or distributed; and

(b) Protect the health and safety of consumers handling LS&CO. labeled and/or distributed finished products.

Application

LS&CO. requires that all Materials, Chemicals and Other Goods provided by Suppliers and Sources (as defined on page 4) comply with the "Limit Value Final Product" (LVFP) levels specified in this RSL. Each asterisk mark (" * ") denotes a specific RSL substance ban, limitation, or test method adopted from the recommendations of the Apparel and Footwear International RSL Management (AFIRM) Working Group www.afirm-group.com and its technical consultants. To ensure finished products meet the LVFP concentrations set out in Sections 1–3 of this RSL, Suppliers and Sources must implement an appropriate program of testing and quality assurance.

In addition, Suppliers and Sources must ensure that the chemicals used or supplied in the manufacture of LS&CO. labeled/or and distributed products are used in a manner consistent with any Safety Data Sheet (SDS), Technical Data Sheet (TDS) and any other specifications and warnings provided by any Supplier or Source.

Moreover, by agreeing to furnish any Materials, Chemicals and Other Goods to LS&CO. or by agreeing to comply with this RSL, each Supplier and Source must ensure that each Material, Chemical and Other Good, supplied for use in the manufacture and distribution of any LS&CO.-labelled and LS&CO.-distributed product does not contain any substance in any manner which would violate (a) this RSL or (b) the applicable law of any country and jurisdiction in which the Supplier, Source or LS&CO. conducts business and in any jurisdiction in which it ships Materials, Chemicals and Other Goods. In addition, each Supplier is similarly responsible and also liable to LS&CO. for ensuring that each of its Sources similarly complies with this RSL and the aforesaid applicable laws. Any violation of the RSL or of the aforesaid applicable laws is a violation of all contracts to supply Materials, Chemicals and Other Goods to LS&CO.

Using the RSL

The RSL contains four core sections: Restricted Substances List requirements (Sections 1 & 2), Obligation to comply with REACh and All Other Governmental Requirements (Section 3), and Chemical Information Log (Section 4). The appendices to the RSL (beginning at page 35) provide supplementary guidance to assist our Suppliers, Sources and other business partners in understanding and complying with the RSL requirements. We require our Suppliers, Sources and other business partners to study this document carefully, implement management processes in their operations to comply with the RSL, and comply with the applicable legal requirements of every country and other jurisdiction in which their Materials, Chemicals and Other Goods are to be fabricated, manufactured, processed or distributed, as well as comply with all relevant contracts with LS&CO. and its affiliates. We also obligate our Suppliers and Sources to communicate these requirements to their relevant internal teams. This RSL 2017 supersedes all prior versions of the RSL with respect to products distributed during Season S1:2019 and thereafter.

Throughout this document, references are made to Supplier(s) and Source(s). LS&CO. defines them for the purposes of the RSL as follows:

Supplier(s) are defined as factories and other businesses, including licensees, that contract with LS&CO. to produce finished products, apparel, accessories and other products for LS&CO. Suppliers may also contract with Sources for Materials, Chemicals and Other Goods for direct or eventual use in fabricating, manufacturing or other processing of LS&CO. labeled and/or distributed apparel, accessories and other products.

Source(s) are defined as business partners of Suppliers that provide Materials, Chemicals and Other Goods for direct or eventual use in fabricating, manufacturing or other processing of LS&CO. labeled and/or distributed apparel, accessories, and other products.

For a glossary of other terms found in this RSL 2017, please see Appendix 2: Definitions on page 36.

Suppliers' and Sources' Commitment

Each Supplier or Source of Materials, Chemicals and Other Goods (a) to LS&CO., and (b) to any LS&CO. Supplier or Source when the Materials, Chemicals and Other Goods will be used during the fabrication, manufacture or other processing of a LS&CO. labeled and/or distributed product represents and warrants that each of its Materials, Chemicals and Other Goods complies with all provisions of the RSL (including, but not limited to, the RSL's prohibitions, restrictions, other requirements and all applicable national and other legal requirements). Supplier will defend, indemnify and hold LS&CO. harmless, against any allegation, claim, loss, damage, or other detriment resulting from any such Supplier's or Source's non-compliance.

As a Supplier or Source of LS&CO. products or raw materials for LS&CO. products, you are required to understand the RSL product requirements and deliver only compliant products. You are also responsible for seeking guidance from LS&CO. in any situation where you may have doubts or uncertainties about your product's compliance with LS&CO.'s RSL. Compliance with LS&CO.'s RSL is a mandatory condition necessary for satisfying each and every order placed by LS&CO.

LS&CO. Suppliers' and Sources' Management System Requirements
Supporting LS&CO. RSL Compliance at the Factory

PLAN

- Appoint a liaison (designated as the Point Person under RSL or Technical Representative under RSSP—Restricted Substances Stewardship Program) in the Suppliers and Sources.
- Contact LS&CO.'s RSL team with any questions or to request training.
- Communicate with and educate all personnel concerning the RSL whose acts or omissions could affect compliance with the RSL.
- Communicate copies of all appropriate information concerning the applicable RSL to all of your Suppliers and Sources whose acts or omissions could affect compliance with the LS&CO. RSL.
- Ensure that you and your Suppliers and Sources comply with all applicable legal requirements of the countries and other jurisdictions in which you or they do business, as well as all countries to which they ship any Materials, Chemicals and Other Goods which may be used with respect to LS&CO. labeled and/or distributed products.

DO

- Purchase only Materials, Chemicals and Other Goods which comply with LS&CO.'s RSL requirements.
- Request updated Safety Data Sheets (SDSs) and Technical Data Sheets (TDSs) for every chemical used by or purchased from any Source.
- Be sure that employees are familiar with the precautions set out in the SDSs or TDSs.
- Understand all the chemical inputs to your production by requesting fully completed Chemical Information Logs (see Section 4 of this RSL) from your chemical Sources.
- Contact all your Materials, Chemicals and Other Goods Suppliers and Sources to ensure their understanding of LS&CO.'s RSL and their commitment to supplying only RSL-compliant chemicals and materials.
- Conduct internal staff training.
- Document and retain all dyeing, coating, finishing, and printing formulations.
- Follow the parameters as listed on the latest TDSs and document all chemicals used and process control variables (e.g., pH, curing temperatures, durations, liquor quantities and ratios) as actually used in production, with retention of the documentation.
- Assess the chemical product safety risk that may be encountered.
- Implement the processes as defined in the chemical recipes or their equivalents.

CHECK

- Ensure that only materials and chemicals meeting the RSL requirements are used in the production of LS&CO.-labeled and LS&CO.-distributed products.
- Conduct inspections, audits and other control practices, to ensure compliance with your obligations under the applicable RSL.
- Regularly check process control variables (e.g. pH, curing temperatures, duration, liquor quantities and ratios as per recipes) to validate proper chemical application.
- Perform analytical testing at LS&CO.-approved laboratories with random sampling as a routine and random RSL compliance verification processes.

ACT

- Replace Materials, Chemicals and Other Goods of unknown chemical constituents with Materials, Chemicals and Other Goods that meet LS&CO.'s RSL.
- Do not ship Materials, Chemicals and Other Goods if you are in doubt about compliance. Verify RSL compliance through laboratory testing and other appropriate quality control/quality assurance procedures and consult LS&CO. RSL team at the same time.
- Investigate the root causes of any actual or potential RSL non-compliance situation and act timely, effectively and efficiently to both notify LS&CO. and restore full compliance.

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Section 1: **Substances Which May Be Found in Materials, Chemicals and Other Goods**

Application

The prohibitions and restrictions listed in this section apply to all Materials, Chemicals and Other Goods supplied for use in LS&CO. labeled and/or distributed products. Each Supplier and Source of Materials, Chemicals and Other Goods—(a) to LS&CO. and (b) to any LS&CO. contractor when the Materials, Chemicals and Other Goods will be used during the fabrication, manufacture, processing or distribution of a LS&CO. labeled and/or distributed products—represents and warrants that each of its Materials, Chemicals and Other Goods complies with all provisions of the RSL (including, but not limited to, the RSL's prohibitions, restrictions, other requirements and all applicable legal requirements) and that the Supplier and Source will defend, indemnify and hold LS&CO. harmless from any allegation, claim, liability, loss, damage, or other detriment, resulting from any such Supplier's non-compliance.

Purpose

LS&CO. is committed to upholding consumers' health and safety by producing safe products. This section identifies the substances restricted in this document because of potentially applicable legal requirements, the need to ensure consumer safety and/or LS&CO. independent judgment as a responsible business. In addition, analytical test methods for use by the laboratory are given for each substance. Testing for compliance with any edition of the RSL must be conducted by a laboratory approved in advance by LS&CO.

LS&CO. may test Materials, Chemicals and Other Goods for the RSL listed substances. LS&CO. Suppliers and Sources have a non-delegable duty to comply with the prohibitions, limitations, and other requirements of the RSL. The presence of a substance on the RSL or on any previous RSL should not be interpreted as suggesting that the substance is, or ever was, present in any LS&CO. labeled and/or distributed apparel, non-apparel, footwear, accessories, packaging and other products or that the presence of a listed substance in at any particular level above the RSL constitutes an unacceptable risk to human health or the environment.

Outline of LS&CO. RSL Prohibitions, Limitations, and Requirements

The prohibitions, restrictions and other requirements in the RSL are based, in part, on global laws concerning chemicals usage in the manufacturing and/or distribution of the types of products distributed by LS&CO. The European Union has developed the "Regulation Concerning the Registration, Evaluation, Authorization and Restriction of Chemicals" or REACh which is aimed at ensuring the protection of human health and the environment from risks that might be posed by certain exposures to certain doses of specific chemicals. Other countries have developed or are developing similar laws, such as, but not limited to, the United States, China, Canada, Mexico, Indonesia, Serbia, Vietnam and South Korea. Moreover, within the United States, many states, including but not limited to California, Illinois, Maine and Washington have adopted laws concerning chemicals in consumer products. These and other legal requirements were considered in preparing this edition of the RSL.

Laws and regulations concerning substances are periodically changing as more scientific and other technical information becomes generally accepted, leading to an enhanced understanding of chemicals and any potential effects they might have at certain doses by certain routes of exposure on human health and the environment. Accordingly, LS&CO. will endeavor to publish an updated RSL on a regular basis.

By agreeing to furnish any Materials, Chemicals and Other Goods to LS&CO. or by agreeing to comply with this RSL, each Supplier and Source must ensure that each Material, Chemical and Other Good, supplied for use in the manufacture and distribution of any LS&CO.-labelled and LS&CO.-distributed product does not contain any substance to the extent that the substance is banned or limited (a) under this RSL or (b) under the applicable law of any country and jurisdiction in which the Supplier or Source conducts business and in any jurisdiction in which it ships Materials, Chemicals and Other Goods. In addition, each Supplier is similarly responsible and also liable to LS&CO. for ensuring that each of its Sources similarly complies with this RSL and the aforesaid applicable laws. Any violation of the RSL or of the aforesaid applicable laws is a violation of all contracts to supply Materials, Chemicals and Other Goods to LS&CO.

A. Aromatic Amines from Azo Colorants[2]

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method[3]
4-Aminoazobenzene[4]	60-09-3	20	**Products for all markets except China:** Textiles (natural & synthetic): EN ISO 14362-1: 2017* Natural leather: ISO 17234-1 **Products for China market:** China Standard: GB18401 Textiles: GB/T 17592 China Standard: GB20400 Natural leather: GB/T 19942
o-Aminoazotoluene	97-56-3		
4-Aminodiphenyl	92-67-1		
2-Amino-4-nitrotoluene	99-55-8		
o-Anisidine	90-04-0		
Benzidine	92-87-5		
p-Chloroaniline	106-47-8		
4-Chloro-*o*-toluidine	95-69-2		
p-Cresidine	120-71-8		
2,4-Diaminoanisole	615-05-4		
4,4´-Diamino-diphenylmethane	101-77-9		
3,3´-Dichlorobenzidine	91-94-1		
3,3´-Dimethoxybenzidine[5]	119-90-4		
3,3´-Dimethylbenzidine	119-93-7		
3,3´-Dimethyl-4,4´- diamino-diphenylmethane	838-88-0		
4,4´-Methylene-bis-(2-chloraniline)	101-14-4		
2-Naphthylamine	91-59-8		
4,4´-Oxydianiline	101-80-4		
4,4´-Thiodianiline	139-65-1		
2,4-Toluenediamine	95-80-7		
o-Toluidine	95-53-4		
2,4,5-Trimethylaniline	137-17-7		
2,4-Xylidine	95-68-1		
2,6-Xylidine	87-62-7		

B. Disperse Dyes and Other Colorants

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method[6]
Disperse Dyes			
Disperse Blue 1	2475-45-8		
Disperse Blue 3	2475-46-9		
Disperse Blue 7	3179-90-6		
Disperse Blue 26	3860-63-7		
Disperse Blue 35	12222-75-2		
	56524-77-7		
	56524-76-6		
Disperse Blue 102	12222-97-8		
Disperse Blue 106	12223-01-7		
Disperse Blue 124	61951-51-7		
Disperse Brown 1	23355-64-8		
Disperse Orange 1	2581-69-3		
Disperse Orange 3	730-40-5		
Disperse Orange 11	82-28-0		
Disperse Orange 37/59/76	13301-61-6		
Disperse Orange 149	85136-74-9		
Disperse Red 1	2872-52-8		
Disperse Red 11	2872-48-2	50*	DIN 54231
Disperse Red 17	3179-89-3		
Disperse Yellow 1	119-15-3		
Disperse Yellow 3	2832-40-8		
Disperse Yellow 9	6373-73-5		
Disperse Yellow 23	6250-23-3		
Disperse Yellow 39	12236-29-2		
Disperse Yellow 49	54824-37-2		
Other Colorants			
Acid Red 26	3761-53-3		
Basic Red 9	569-61-9		
Basic Violet 14	632-99-5		
Basic Green 4*	569-64-2		
	2437-29-8		
	10309-95-2		
Basic Violet 3*	548-62-9		
Basic Blue 26*	2580-56-5		
Direct Black 38	1937-37-7		
Direct Blue 6	2602-46-2		
Direct Red 28	573-58-0		

B. Disperse Dyes and Other Colorants (continued)

Pigment Yellow 34	1344-37-2	50*	DIN 54231
Pigment Red 104	12656-85-8		
Solvent Blue 4*	6786-83-0		
4-Dimethylaminoazobenzene (Solvent Yellow 2)	60-11-7		
4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol*	561-41-1		
Blue Colorant[7]	Not Allocated[8]	Usage Ban 50*	

C. Biocides (Chlorophenols and Others)[9]

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Chorophenols			
Pentachlorophenol (PCP)	87-86-5	0.5	1 M KOH extraction, 12-15 hours at 90 °C, derivatization and analysis according § 64 LFGB B 82.02-08 or DIN EN ISO 17070:2015*
Mono-, Di-, Trichlorophenols (TriCP) and Tetrachorophenol (TeCP)	Various	0.5 (each)*	
4-Chloro-3-methyl phenol	59-50-7	1000	EN ISO 13365:2011
Triclosan	3380-34-5	1	Solvent extraction/GC-MS
Others			
Dimethyl fumarate (DMFu)	624-49-7	Usage Ban [TR=0.1]	CEN ISO/TS 16186:2012*
o-Phenylphenol (OPP)	90-43-7	220	EN ISO 13365:2011[10]
Octylisothiazolinone	26530-20-1	250	
2-(Thiocyanomethylthio) benzothiazole (TCMTB)	21564-17-0	500	
Chloromethylisothiazolinone	26172-55-4	1	Solvent extraction/GC-MS, LC-MS for confirmation
Methylisothiazolinone	2682-20-4	1	
1,2-Benzisothiazolin-3-one	2634-33-5	130	

D. Chlorinated Aromatics

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Chlorinated benzenes*			
1,3-Dichlorobenzene	541-73-1	Usage Ban [TR=1]	DIN 54232
1,4-Dichlorobenzene	106-46-7		
1,2,3-Trichlorobenzene	87-61-6		
1,2,4-Trichlorobenzene	120-82-1		
1,3,5-Trichlorobenzene	108-70-3		
1,2,3,4-Tetrachlorobenzene	634-66-2		
1,2,3,5-Tetrachlorobenzene	634-90-2		
1,2,4,5-Tetrachlorobenzene	95-94-3		
Pentachlorobenzene	608-93-5		
Hexachlorobenzene	118-74-1		
1,2-Dichlorobenzene	95-50-1	Usage Ban [TR=10]	
Chlorinated toluenes*			
2-Chlorotoluene	95-49-8	Usage Ban [TR=1]	DIN 54232
3-Chlorotoluene	108-41-8		
4-Chlorotoluene	106-43-4		
2,3-Dichlorotoluene	32768-54-0		
2,4-Dichlorotoluene	95-73-8		
2,5-Dichlorotoluene	19398-61-9		
2,6-Dichlorotoluene	118-69-4		
3,4-Dichlorotoluene	95-75-0		
2,3,6-Trichlorotoluene	2077-46-5		
2,4,5-Trichlorotoluene	6639-30-1		
2,3,4,5-Tetrachlorotoluene	76057-12-0		
2,3,4,6-Tetrachlorotoluene	875-40-1		
2,3,5,6- Tetrachlorotoluene	1006-31-1		
Pentachlorotoluene	877-11-2		

E: Isocyanates[11]

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Diphenylmethane diisocyanate (MDI)[12]	Various	Free: 1 Blocked: 50	Analysis of free isocyanates: Solvent extraction/ HPLC Analysis of releasable (blocked) isocyanates: Solvent extraction/ GC-MS with injector block temperature at 300°C, confirmation at 180°C*
Hexamethylene diisocyanate (HDI)	822-06-0	Free: 1 Blocked: 50	
Isophorone diisocyanate (IPDI)	4098-71-9	Free: 1 Blocked: 100	
Tetramethylxylene diisocyanate (TMXDI)	2778-42-9	Free: 1 Blocked: 100	
Toluene diisocyanate (TDI)[13]	584-84-9 91-08-7	Free: 1 Blocked: 15	
Napthylene-1,5,di-isocyanate (1,5-NDI)	3173-72-6	Free: 1 Blocked: 50	

F. Flame Retardants[14]

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Hexabromocyclododecane[15] (HBCDD)	25637-99-4 3194-55-6	Usage Ban [TR=10*]	EN ISO 17881-1 for brominated flame retardants; EN ISO 17881-2 for phosphorus flame retardants*
Polybrominated biphenyls (PBBs)	Various		
Tris(2,3-dibromopropyl) phosphate (TRIS)	126-72-7		
Bis(2,3-dibromopropyl) phosphate	5412-25-9		
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8		
2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0		
Tris(1,3-dichloro-isopropyl) phosphate (TDCPP)	13674-87-8		
Trixylyl phosphate (TXP)*	25155-23-1		
Polybrominated biphenyl ether (PBDE)*	Various		
Tetrabromobisphenol A (TBBPA)	79-94-7		
Tri-*o*-cresyl phosphate	78-30-8		
(2-ethylhexyl)tetrabromophthalate (TBPH)	26040-51-7		
2-ethylhexyl 2,3,4,5-tetrabromobenzoate (TBB)	183658-27-7		
Tris(1-chloro-2-propyl) phosphate (TCPP)	13674-84-5		
Tris(1-aziridinyl)-phosphine oxide (TEPA)	545-55-1		

G. Metals [Restrictions for Textiles (including Artificial Leather) and Leather (Natural & Coated)][16]

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Total Digestion Metal Content[17,18]			
Cadmium (Cd)	Various	Usage Ban [TR=40]	EN 1122
Lead (Pb)	Various	Usage Ban [TR=50]	CPSC-CH-E1001-08 (metals) CPSC-CH-E1003-09 (coating) ISO 17072-2 (leather) EN16711-1 (textiles) CPSC-CH-E1002-08 (others)
Arsenic (As)	Various	Usage Ban [TR=10]	ISO 17072-2 (leather) EN16711-1 (textiles) Microwave Digestion followed by ICP-MS (others)
Mercury (Hg)	Various	Usage Ban [TR=0.5]*	Microwave digestion with H_2O_2/HNO_3 followed by EN ISO 17294-2:2014*
Extractable Metal Content			
Antimony (Sb)	Various	30	ISO 17072-1 (leather) EN 16711-2 (others)
Arsenic (As)	Various	Usage Ban [TR=0.2]	
Barium (Ba)	Various	1000	
Cadmium (Cd)	Various	Usage Ban [TR=0.1]	
Chromium (Cr)[19]—total	Various	1	
Cobalt (Co)	Various	1	
Copper (Cu)	Various	25	
Lead (Pb)	Various	Usage Ban [TR=0.2]	
Mercury (Hg)	Various	Usage Ban [TR=0.02]	
Nickel (Ni)[20]	Various	1	
Chromium (Cr^{6+})-hexavalent[21]	Various	0.5 (on knitted textiles only applies to babies aged 0-36 months)* 3 (adult)	Sample preparation: Textile: EN 105-E04: 2013 Leather: ageing, see endnote Measurement: Textile: EN ISO 17294-2 Leather: EN ISO 17075-1:2017, EN ISO 17075-2, 2017*

G. Metals [Restrictions for Sundries and Jewelry[22] (to be used by both Children[23] and Adults)]

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Total Digestion Metal Content			
Cadmium (Cd)	Various	40	EN 1122
Lead (Pb)—surface coating and substrate	Various	90	CPSC-CH-E1001-08 (metals) CPSC-CH-E1003-09 (coating) ISO 17072-2 (Leather) CPSC-CH-E1002-08 (others)
Releaseable Metal Content			
Nickel (Ni)[24]	Various	0.5 µg/cm^2/week 0.2 µg/cm^2/week (pierced part)	EN 1811[25]
Extractable Metal Content[26]			
Antimony (Sb)	Various	60	ASTM F963
Arsenic (As)	Various	25	
Barium (Ba)	Various	1000	
Cadmium (Cd)	Various	5	
Chromium (Cr)—total	Various	60	
Mercury (Hg)	Various	60	
Selenium (Se)	Various	500	
Chromium (Cr^{6+})—hexavalent[27]	Various	3	Sample preparation: Textile: EN 105-E04: 2013 Leather: ageing, see endnote Measurement: Textile: EN ISO 17294-2 Leather: EN ISO 17075-1:2017, EN ISO 17075-2, 2017*

H. Organotin Compounds

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Mono, Di-butyltin derivatives	Various	Usage Ban [TR=1 each]*	CEN ISO/TS 16179:2012*
Mono, Di & Tri-methyltin derivatives			
Mono, Di-phenyltin derivatives			
Mono, Di & Tri-octyltin derivatives			
Tricyclohexyltin and Tripropyltin derivatives*		Usage Ban [TR=1 each]	
Tributyltin and Triphenyltin derivatives		Usage Ban [TR=0.5]*	

I. Solvents

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Benzylchloride	100-44-7	2	Solvent extraction/ GC-MS or LC-MS
Ethylbenzene	100-41-4	15	
Ethoxyethanol	110-80-5	80	
Ethoxyethanol acetate	111-15-9	80	
2-Methoxyethanol	109-86-4	25	
2-Methoxyethanol acetate	110-49-6	40	
2-Methoxypropanol	1589-47-5	1,000	
2-Methoxypropanol acetate	70657-70-4	1,000	
2-Phenoxyethanol	122-99-6	400	
N-Methylpyrrolidone (NMP)	872-50-4	Usage Ban [TR=10]	
N-Ethylpyrrolidone (NEP)	2687-91-4	30	
Tetrachloroethene (Perchloroethylene)	127-18-4	1	
Formamide	75-12-7	1,000	
Trichloroethylene (TCE)	79-01-6	40	
1,2-Bis(2-methoxyethoxy)ethane (TEGDME, triglyme)	112-49-2	1,000	
1,2-Dimethoxyethane, ethylene glycol dimethyl ether (EGDME)	110-71-4	1,000	
1,2-Diethoxyethane	629-14-1	500	
Methyl ethyl ketone (MEK)	78-93-3	1,000	
Methanol	67-56-1	1,000	
2-(2-Methoxyethoxy)-ethanol	111-77-3	1,000	
N,N-Dimethylformamide (DMFa)[28]	68-12-2	500*	ISO/TS 16189:2013*
Benzene	71-43-2	Usage Ban [TR=5]	Methanol extraction at 60°C/GC-MS
Carbon disulphide*	75-15-0	1,000	
Cyclohexanone*	108-94-1		
N,N-Dimethylactamide (DMAC)*	127-19-5		
1,1-Dichloroethylene*	75-35-4		
1,1,1- Trichloroethane*	71-55-6		
Xylenes (meta-, ortho-, para-)*	1330-20-7		
Carbon tetrachloride*	56-23-5	100[29]	
Chloroform*	67-66-3		
1,2-Dichloroethane*	107-06-2		
Pentachloroethane*	76-01-7		
1,1,1,2- Tetrachloroethane*	630-20-6		
1,1,2,2- Tetrachloroethane*	79-34-5		
1,1,2- Trichloroethane*	79-00-5		
Toluene	108-94-1		

J. Phthalates

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
All esters of Ortho-phthalic acid. Including, but not limited to, the following[30]:			
Dibutyl phthalate (DBP)	84-74-2	Usage Ban [TR=500[31] each; 1,000 total*]	Sample Preparation: CPSC-CH-C-1001-09.3 Measurement: ISO 14389
Di(ethylhexyl) phthalate (DEHP)	117-81-7		
Dimethyl phthalate (DMP)*	131-11-3		
Di-n-octyl phthalate (DNOP)	117-84-0		
Di-iso-butyl phthalate (DIBP)	84-69-5		
Di-iso-nonyl phthalate (DINP)	28553-12-0 68515-48-0		
Di-iso-decyl phthalate (DIDP)	26761-40-0 68515-49-1		
Butyl benzyl phthalate (BBP)	85-68-7		
Diethyl phthalate (DEP)	84-66-2		
1,2-benzenedicarboxylic acid, di-C6-8 branched alkyl phthalate esters, C7-rich (DIHP)	71888-89-6		
1,2-benzenedicarboxylic acid, di-C7-11-branched and linear alkyl phthalate (DHNUP)	68515-42-4		
Di-n-hexylphthalate (DNHP)	84-75-3		
Di-(2-methoxyethyl) phthalate (DMEP)	117-82-8		
Dinonyl phthalate (DNP)	84-76-4		
Di-n-propyl phthalate (DPRP)	131-16-8		
Di-cyclohexyl phthalate (DCHP)	84-61-7		
Di-iso-octyl phthalate (DIOP)	27554-26-3		
N-pentyl-isopentylphthalate (NPIPP)	776297-69-9		
1,2-benzenedicarboxylic acid, dipentyl ester, branched and linear	84777-06-0		
Di-isopentyl phthalate (DIPP)	605-50-5		
Dipentyl phthalate (DPP)	131-18-0		
Diisohexyl phthalate (DIHP)	68515-50-4		
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)	68515-51-5 68648-93-1		

K. Components and Residuals from Auxiliary Manufacturing

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Acetophenone	98-86-2	50	Methanol extraction* / GC-MS
2-Phenyl-2-propanol*	617-94-7	50	
Chlorinated paraffins[32]	Various	Usage Ban [TR=30]	Combined CADS / ISO 18129:2105 method V1:06/17 (extraction by ISO18219 and analysis by GC-NCI-MS)*
Formaldehyde[33 & 34]	50-00-0	Textile Children: n.d. (16) Adults: 65 Natural Leather Children: n.d. 16 Adults (with direct skin contact)[35]: 65 Adults (without direct skin contact)[36]: 250	Textile: ISO 14184-1 GB/T 2912.1 Natural Leather: Products for markets other than China: ISO 17226-2 Products for China market: GB/T 19941
Perfluorooctane sulfonate and its derivatives (PFOS)*/ Perfluorooctanoic acid (PFOA) and related substances*[37]	Various	Usage Ban [TR=1 µg/m^2]	CEN/TS 15968: 2014*
p-Phenylenediamine	106-50-3	50	Solvent extraction/GC-MS or LC-MS
Hexamethylenetetramine	100-97-0	50	
Bis(2-ethylhexyl) maleate	142-16-5	1,000	
Di(2-ethylhexyl)fumarate	141-02-6	100	
Tris(2-ethylhexyl) phosphate	78-42-2	50	
Mono-2-ethylhexyl phosphate	1070-03-7	50	
Bis-iso-octyl phosphate	27215-10-7	50	
Bis-2-ethylhexyl phosphate	298-07-7	50	
Mono-iso-octyl phosphate	26403-12-3	50	
Mono-bis-2-ethylhexyl phosphate	12645-31-7	50	
Triphenyl phosphate	115-86-6	500	
Triethylamine	121-44-8	50	
Tri-iso-butylphosphate	126-71-6	50	
Tri-n-butylphosphate	126-73-8	50	
Glyoxal	107-22-2	100	
Aminoethyl Ethanol Amine (AEEA)	111-41-1	50	

K. Components and Residuals from Auxiliary Manufacturing (continued)

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Diethanolamine (DEA)	111-42-2	50	Solvent extraction/GC-MS or LC-MS
Ethyleneimine	151-56-4	0.1	
Propyleneimine	75-55-8	RL=0.1	
Epichlorohydrin	106-89-8	1	
Hexamethylene diamine	124-09-4	50	
Benzylbenzoate	120-51-4	200	
2-Ethylhexanol	104-76-7	50	
Phenol	108-95-2	Usage Ban [TR=60]	

L. Polycyclic Aromatic Hydrocarbons (PAHs)

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)		Test Method
Benzo[a]pyrene	50-32-8	1 each	10 [Sum of all PAHs]	AfPS GS 2014:01 PAK
Benzo[a]anthracene	56-55-3			
Dibenzo[a,h]anthracene	53-70-3			
Benzo[e]pyrene	192-97-2			
Benzo[b]fluoranthene	205-99-2			
Benzo[j]fluoranthane	205-82-3			
Chrysene	218-01-9			
Benzo[k]fluoranthene	207-08-9			
Acenaphthene	83-32-9	No individual restriction		
Acenaphthylene	208-96-8			
Anthracene	120-12-7			
Benzo[ghi]perylene	191-24-2			
Fluoranthene	206-44-0			
Fluorene	86-73-7			
Indeno[1,2,3-cd] pyrene	193-39-5			
Naphthalene[38]	91-20-3			
Phenanthrene	85-01-8			
Pyrene	129-00-0			

M. Restriction on Packaging[39]

Chemical Substance[40]	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Cadmium (Cd)	Various	Usage Ban [TR=100 total]	CEN/TR 13695-1 Acid digestion with ICP analysis
Lead (Pb)	Various		
Chromium (Cr^{6+})—hexavalent	Various		
Mercury (Hg)	Various		
PVC	9002-86-2	Usage Ban	Beilstein Test for screening, FTIR for confirmation
Dimethyl fumarate (DMFu)	624-49-7	Usage Ban [TR=0.1]	CEN ISO/TS 16186:2012*

N. Alkyl Phenols and Alkyl Phenol Ethoxylates (APs & APEOs)

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
NP & OP	Various, including 104-40-5 & 140-66-9	Usage Ban [TR=5 sum of all]	Textile: EN ISO 18254-1: 2016, Leather: ISO 18218-1:2015 determination of AP using LC-MS or GC-MS*[41]
NPEO & OPEO $(EO)_{1-20}$	Various	Usage Ban [TR= 100 sum of all]*	

O. RoHS[42]—Electrical and Electronic Equipment

Chemical Substance[43,44]	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Cadmium (Cd)	Various	100	RoHS Directive 2011/65/EU IEC 62321 Part 1 to 7-2
Chromium (Cr^{6+})—hexavalent	Various	1,000 for each	
Lead (Pb)	Various		
Mercury (Hg)	Various		
Polybrominated biphenyls (PBBs)	Various		
Polybrominated diphenyl ethers (PBDE)	Various		
Phthalates	Various	Please refer to Table J Section 1 of this RSL	
Batteries[45]			
Cadmium (Cd)	Various	20	EU Battery Directive 2006/66/EC, Total digestion, ICP
Lead (Pb)	Various	40	
Mercury (Hg)	Various	5	

P. N-Nitrosamines

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
N-Nitrosodimethylamine	62-75-9	Usage Ban [TR=0.5]	GB/T24153-2009[46]
N-Nitrosodiethylamine	55-18-5		
N-Nitrosodipropylamine	621-64-7		
N-Nitrosodibutylamine	924-16-3		
N-Nitrosopiperidine	100-75-4		
N-Nitrosopyrrolidine	930-55-2		
N-Nitrosomorholine	59-89-2		
N-Nitroso-N-methylaniline	614-00-6		
N-Nitroso-N-ethylaniline	612-64-6		

Q. PVC

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
PVC	9002-86-2	Usage Ban	Beilstein Test for screening, FTIR for confirmation

Section 2: **Other Substances**

Application

The prohibitions and restrictions listed in this section apply to all Materials, Chemicals and Other Goods supplied for the production of LS&CO. labeled and/or distributed apparel, non-apparel, footwear, accessories, packaging and other products.

Purpose

The purpose of this section is to identify certain substances not commonly found in apparel, footwear, non-apparel, accessories, or other products but nonetheless might infrequently be unintentionally or inadvertently introduced into these goods. As with Section 1, this section notes each substance and details the appropriate test method for determining RSL compliance. Suppliers and Sources commit to implementing best business processes to achieve compliance with the restrictions in this section.

A. Dioxins and Furans

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Group 1			
2,3,7,8-Tetrachlorodibenzo-*p*-dioxin	1746-01-6	Unavoidable traces acceptable up to 1 µg/kg for Group 1	U.S. EPA Method 8290
1,2,3,7,8-Pentachloro-dibenzo-*p*-dioxin	40321-76-4		
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9		
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4		
Group 2			
1,2,3,4,7,8-Hexachloro-dibenzo-*p*-dioxin	39227-28-6	Unavoidable traces acceptable up to 5 µg/kg for sum of Groups 1 & 2	U.S. EPA Method 8290
1,2,3,7,8,9-Hexachloro-dibenzo-*p*-dioxin	19408-74-3		
1,2,3,6,7,8-Hexachloro-dibenzo-*p*-dioxin	57653-85-7		
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6		
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9		
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9		
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9		
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5		
Group 3			
1,2,3,4,6,7,8-Heptachloro-dibenzo-*p*-dioxin	35822-46-9	Unavoidable traces acceptable up to 100 µg/kg for sum of Groups 1, 2, and 3	U.S. EPA Method 8290
1,2,3,4,6,7,8,9-Octachlorodibenzo-*p*-dioxin	3268-87-9		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7		
1,2,3,4,6,7,8,9-Octachlorodibenzo-furan	39001-02-0		

A. Dioxins and Furans, continued

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Group 4			
2,3,7,8-Tetrabromodibenzo-*p*-dioxin	50585-41-6	Unavoidable traces acceptable up to 1 µg/kg for Group 4	U.S. EPA Method 8290
1,2,3,7,8-Pentabromo-dibenzo-*p*-dioxin	109333-34-8		
2,3,7,8-Tetrabromodibenzofuran	67933-57-7		
2,3,4,7,8-Pentabromodibenzofuran	131166-92-2		
Group 5			
1,2,3,4,7,8-Hexabromo-dibenzo-*p*-dioxin	110999-44-5	Unavoidable traces acceptable up to 5 µg/kg for sum of Groups 4 & 5	U.S. EPA Method 8290
1,2,3,7,8,9-Hexabromo-dibenzo-*p*-dioxin	110999-46-7		
1,2,3,6,7,8-Hexabromo-dibenzo-*p*-dioxin	110999-45-6		
1,2,3,7,8-Pentabromodibenzofuran	107555-93-1		

B. Asbestos

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Actinolite	Various	Usage Ban	U.S. EPA/600/R-93/116
Amosite			
Anthophylite			
Chrysotile			
Crocidolite			
Tremolite			

C. Pesticides

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Aldicarb	116-06-3	0.5 each*	U.S. EPA Methods: 8081A/8151A
Aldrin	309-00-2		
Chlordane	57-74-9		
Chlordimeform	6164-98-3		
1,2-Dibromo-3-Chloropropane (DBCP)	96-12-8		
p,*p*-Dichlorodiphenyl-dichloroethane (*p*,*p*-DDD)	72-54-8		
o,*p*-Dichlorodiphenyl-dichloroethane (*o*,*p*-DDD)	53-19-0		
p,*p*-Dichlorodiphenyl-dichloroethylene (*p*,*p*-DDE)	72-55-9		
o,*p*-Dichlorodiphenyl-dichloroethylene (*o*,*p*-DDE)	3424-82-6		
p,*p*-Dichlorodiphenyl-trichloroethane (*p*,*p*-DDT)	50-29-3		
o,*p*-Dichlorodiphenyl-trichloroethane (*o*,*p*-DDT)	789-02-6		
2,4-Dichlorophenoxy-acetic acid, its salts and compounds[47]	97-75-7		
Dicofol	115-32-2		
Dieldrin	60-57-1		
Endosulfan (Thiosulfan)	115-29-7		
Endrin	72-20-8		
Ethylene Dibromide (EDB)	106-93-4		
Hexachlorocyclohexane (HCH), all isomers[48]	608-73-1		
Heptachlor	76-44-8		
Heptachlor epoxide	1024-57-3		
Isodrin	465-73-6		
Kelevan	4234-79-1		
Kepone	143-50-0		
Malathion	121-75-5		
Methoxychlor	72-43-5		
Methyl Parathion	298-00-0		
Mirex	2385-85-5		
Paraquat	1910-42-5		
Parathion	56-38-2		
Perthane	72-56-0		
Quintozene	82-68-8		
Strobane	8001-50-1		
Telodrin	297-78-9		

C. Pesticides, continued

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Timiperone (DTTB)	57648-21-2		
Toxaphene	8001-35-2		
2,4,5-Trichlorophenoxyacetic acid (2,4,5-T), salts, compounds[49]	Various		
2-(2,4,5-Trichlorophenoxy) propionic acid, salts, compounds[50]	Various		
2,4-D*	94-75-7		
Azinophosmethyl*	86-50-0		
Azinophosethyl*	2642-71-9		
Bromophos-ethyl*	4824-78-6		
Captafol*	2425-06-1		
Carbaryl*	63-25-2		
Chlorfenvinphos*	470-90-6		
Coumaphos*	56-72-4		
Cyfluthrin*	68359-37-5		
Cyhalothrin*	91465-08-6		
Cypermethrin*	52315-07-8		
S,S,S-Tributyl phosphorotrithioate (Tribufos)*	78-48-8		
Deltamethrin*	52918-63-5		
Diazinone*	333-41-5		
Dichloroprop*	120-36-5		
Dicrotophos*	141-66-2		
Dimethoate*	60-51-5		
Dinoseb, its salts and acetate*	88-85-7		
Endosulfan I (alpha)*	959-98-8		
Endosulfan II (beta)*	33213-65-9		
Esfenvalerate*	66230-04-4		
Fenvalerate*	51630-58-1		
Hexabromobiphenyl*	36355-01-8		
Lead hydrogen arsenate*	7784-40-9		
MCPA*	94-74-6		
Mecoprop*	93-65-2		
Metamidophos*	10265-92-6		
Monocrotophos*	6923-22-4		
Phosdrin/Mevinphos*	7786-34-7		
Propethamphos*	31218-83-4		
Profenophos*	41198-08-7		
Quinalphos*	13593-03-8		
Trifluraline*	1582-098		

D. Other Organic Chemicals

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Bisphenol A	80-05-7	1*	Sample preparation: 1g sample/20 ml methanol, sonication for 60 minutes at 70° Measurement: DIN EN ISO 18857-2 (mod)*
Halogenated biphenyls, including: • Polychlorinated biphenyl (PCB)	Various	Usage Ban [TR=1]	Solvent extraction/ GC-MS or LC-MS
Halogenated diarylalkanes	Various		
Halogenated naphthalenes	Various		
Halogenated terphenyls, including: • Polychlorinated terphenyl (PCT)	Various		
Halogenated diphenyl methanes, including:			
• Monomethyl-dibromo-diphenyl methane[51]	99688-47-8		
• Monomethyl-dichloro-diphenyl methane[52]	81161-70-8		
• Monomethyl-tetrachloro-diphenyl methane[53]	76253-60-6		
Ozone depleting substances Regulation (EC) no. 1005/2009*	Various	Usage Ban [TR=5]	GC-MS headspace 120°C for 45 minutes

E. Monomers

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Acrylamide	79-06-1	0.1	Solvent extraction/GC-MS
Acrylonitrile	107-13-1	1	Multiple headspace/GC-MS
Butyl acrylate	141-32-2	50	Solvent extraction/GC-MS
Butyl methacrylate	97-88-1	50	
Ethyl acrylate	140-88-5	10	
Ethyl methacrylate	97-63-2	50	
Methyl methacrylate	80-62-6	50	
Styrene	100-42-5	500	Methanol extraction at 60°C/ GC-MS

F. Fluorinated Greenhouse Gases

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Sulfur hexafluoride - SF_6	2551-62-4	Usage Ban [TR = 0.1]*	Sample preparation: Purge and trap — thermal desorption or SPME Measurement: GC-MS*
Hydrofluorocarbons (HFCs)			
HFC-23 - CHF_3	75-46-7		
HFC-32 - CH_2F_2	75-10-5		
HFC-41 - CH_3F	593-53-3		
HFC-43-10mee - $C_5H_2F_{10}$	138495-42-8		
HFC-125 - C_2HF_5	354-33-6		
HFC-134 - $C_2H_2F_4$	359-35-3		
HFC-134a - CH_2FCF_3	811-97-2		
HFC-152a - $C_2H_4F_2$	75-37-6		
HFC-143 - $C_2H_3F_3$	430-66-0		
HFC-143a - $C_2H_3F_3$	420-46-2		
HFC-227ea - C_3HF_7	431-89-0		
HFC-236cb - $CH_2FCF_2CF_3$	677-56-5		
HFC-236ea - CHF_2CHFCF_3	431-63-0		
HFC-236fa - $C_3H_2F_6$	690-39-1		
HFC-245ca - $C_3H_3F_5$	679-86-7		
HFC-245fa - $CHF_2CH_2CF_3$	460-73-1		
HFC-365mfc - $CF_3CH_2CF_2CH_3$	406-58-6		
Perfluorocarbons (PFCs)			
Perfluoromethane - CF_4	75-73-0		
Perfluoroethane - C_2F_6	76-16-4		
Perfluoropropane - C_3F_8	76-19-7		
Perfluorobutane - C_4F_{10}	355-25-9		
Perfluoropentane - C_5F_{12}	678-26-2		
Perfluorohexane - C_6F_{14}	355-42-0		
Perfluorocyclobutane - C_4F_8	115-25-3		

G. PFCs (Perfluorinated / Polyfluorinated Chemical Substances)

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Ionic (including the salts)			
Perfluorobutanesulfonic acid (PFBS)	375-73-5 or 29420-49-3	Usage Ban [TR = 10 each]	Extraction with organic solvent, GC-MS and LC-MS. Based on CEN/TS 15968
Perfluorohexanesulfonic acid (PFHxS)	355-46-4 or 3871-99-6		
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8 or 60270-55-5		
Perfluorodecanedulfonic acid (PFDS)	335-77-3 or 126105-34-8		
Perfluorooctane Sulfonamide (PFOSA)	754-91-6		
Perfluorobutyric Acid (PFBA)	375-22-4		
Perfluoropentanoic Acid (PFPA)	2706-90-3		
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4		
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9		
Perfluoro-n-nonanoic acid (PFNA)	375-95-1		
Perfluoro-n-decanoic acid (PFDA)	335-76-2		
Perfluoroundecanoic acid (PFUnA)	2058-94-8 or 4234-23-5		
Perfluorododecanoic acid (PFDoA)	307-55-1		
Perfluorotrdecanoic acid (PFTrA)	72629-94-8		
Perfluorotetradecanoic acid (PFTeA)	376-06-7		
Perfluoro-3,7-dimethyldecanoic acid (PF-3,7-DMOA)	172155-07-6		
7H-Perfluoroheptanoic acid (HPFHpA)	1546-95-8		
2H,2H-Perfluorodecanoic acid (H2PFDA)	27854-31-5 or 882489-14-7		
2H,2H,3H,3H-Perfluoroundecanoic acid (H4PFUnA)	34598-33-9		
Perfluorooctanesulphonic acid (H4PFOS 6-2)	27619-97-2		

G. PFCs (Perfluorinated / Polyfluorinated Chemical Substances) (continued)

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Volatile			
1H,1H,2H,2H-Perfluorooctylacrylate (FTA 6-2)	17527-29-6	Usage ban [TR = 100 each]	Extraction with organic solvent, GC-MS and LC-MS based on CEN/TS 15968
1H,1H,2H,2H-Perfluorodecylacrylate (FTA 8-2)	27905-45-9		
1H,1H,2H,2H-Perfluorododecylacrylate (FTA 10-2)	17741-60-5		
2-Perfluorobutylethanol (FTOH 4-2)	2043-47-2		
2-Perfluorohexylethanol (FTOH 6-2)	647-42-7		
2-Perfluorooctylethanol (FTOH 8-2)	678-39-7		
2-Perfluorodecylethanol (FTOH 10-2)	865-86-1		
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)	24448-09-7		
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)	1691-99-2		
N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA)	31506-32-8		
N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSA)	4151-50-2		

Section 3: **Obligation to Comply with REACh and All Other Governmental Requirements**

While for convenience this section of the RSL discusses some of the requirements of REACh, the obligation remains with Suppliers and Sources to identify and comply with all applicable requirements as set out in REACh and in the applicable laws of each country and other jurisdictions in which each Supplier and Source conducts business as well as each country into which each Supplier and Source ships any Materials, Chemicals and Other Goods.

REACh: The European Union's Regulation Concerning the Registration, Evaluation, Authorization and Restriction of Chemicals

Application

This section applies to all Suppliers and Sources manufacturing or supplying Materials, Chemicals and Other Goods for use in LS&CO. labeled and/or distributed products, including, but not limited to, apparel, non-apparel, footwear, accessories, packaging and other products which are intended for distribution or sale in any country within the European Economic Area.

Purpose

The information provided below is intended to assist our Suppliers and Sources to comply with REACh [Regulation (EC) Number 1907/2006 of the European Parliament and of the Council]Every LS&CO. Supplier and Source agree to inform LS&CO. of any substances listed in the candidate or pre-candidate list in European Chemicals Agency (ECHA website: www.echa.europa.eu) present in any and all Materials, Chemicals and Other Goods intended for use in any LS&CO. labeled and/or distributed apparel, non-apparel, footwear, accessories, and other products. In supplying this information, LS&CO. does not intend to assume all or any part of our Suppliers' and/or Sources' duty to comply with the regulation.

What Suppliers and Sources Should Do

All LS&CO. Suppliers and Sources shall visit the European Chemicals Agency (ECHA) website (www.echa.europa.eu) regularly and comply with the published obligations and guidance regarding chemicals and consumer articles.

To help ensure that all products supplied to LS&CO. comply with REACh, each Supplier and Source is obligated to track not only the current SVHCs, as listed on the ECHA website, but also the entire list of potential SVHCs[54].

Suppliers and Sources shall map each step in their supply chains, including the sourcing and processing of Materials, Chemicals and Other Goods ingredients, and immediately inform LS&CO. according to the Information Duty (Article 33) of all cases where a substance listed in the "Candidate List of Substances of Very High Concerns for Authorization" is present in the product or other Materials, Chemicals and Other Goods provided for use in any LS&CO. labeled or distributed product. Additionally, authorization requirements (as per Annex XIV) and restriction requirements (as per Annex XVII) in REACh regulation shall be followed by any Suppliers or Sources situated in Europe.

Others

Other countries have developed or are developing similar laws and regulations, such as, but not limited to, China, Canada, Mexico, Indonesia, Serbia, Vietnam and South Korea. In the United States, many states, including, but not limited to, California, Illinois, Maine and Washington have adopted laws regulating chemicals in consumer products. These and other regulatory requirements are incorporated into the RSL.

Lists of restricted substances are constantly changing as more information from scientists and health professionals becomes available, leading to an enhanced understanding of chemicals and their effect on human health and the environment. Accordingly, LS&CO. will endeavor to publish an updated list on a regular basis. That said, it remains the responsibility of each Supplier and Source to identify and comply with all applicable requirements as set out under these regulations / requirements by each country and other jurisdictions in which each Supplier and Source conducts business and into which it ships any Materials, Chemicals and Other Goods.

Section 4: **Chemical Information Log**

Application

LS&CO. Suppliers and Sources must inform their chemical Sources about the content and requirements of the LS&CO. RSL. Suppliers and Sources must request a comprehensive Chemical Information Log ("CIL") from each and every chemical Source. Chemical Sources must review LS&CO.'s RSL to determine which substance(s) in their preparations (chemical mixtures), if any, has the potential to violate any provision of the applicable LS&CO. RSL.

The CIL must be completed for each substance used in the manufacture of any LS&CO. product. The CIL includes 6 columns. The first column must be completed with the chemical trade name, as indicated on product packaging documents, SDS and label. For each preparation, the chemical supplier shall indicate whether such chemical:

(1) contains an RSL substance, or
(2) may form an RSL substance during normal processing conditions.

When a substance constitutes, contains, or may form, a resulting substance containing a RSL component in a concentration that could exceed a corresponding RSL restriction, the chemical supplier must identify the RSL component of the resulting substance and concentration on the CIL. The concentration set forth on the CIL must be the concentration of the RSL substance in the resulting substance.

Purpose

LS&CO. acknowledges that superior knowledge of specific chemical data and characteristics is likely to reside with the chemical Source. It is therefore imperative to compliant product manufacturing that the chemical Source properly communicates to their customer (the Supplier) the existence of any RSL listed substances in Materials, Chemicals and Other Goods it furnishes to the Supplier.

Chemical Information Log (CIL)

For LS&CO. RSL November 2017

Date of Log: _____

Name of Chemical Source: _____

Address of Source: _____

_____

_____

Instructions: If any Materials, Chemicals and Other Goods which you furnish to the LS&CO. Supplier, Source or to LS&CO. constitute, contain, or form any substance whose nature or concentration might exceed or cause the concentration on the final consumer product to exceed any prohibition, limitation, other requirement in the LS&CO. RSL or other applicable legal requirement, please provide the following information:

Trade Name of Substance	Yes— Constitutes or Contains Separately Identifiable RSL Substance [✓ check if true]	Yes— Forms RSL Substance [✓check if true]	RSL Substance	CAS No.	Concentration in preparation

The undersigned is an owner, director, officer, or managing agent of the Chemical Source, authorized to sign this document on behalf of the Source identified below:

Name (Please Print): _____

Signature: _____

Position: _____

E-mail: _____

Company Stamp:

Appendix 1: **Contact Information**

General contact e-mail: rsl@levi.com

Should you have any questions, please contact your regional RSL representative:

Global
Alex Ho
Levi Strauss Global Trading Co. II Ltd.
Level 22
Standard Chartered Tower, Millennium City 1
388 Kwun Tong Road, Kowloon
HONG KONG
Tel: +852 2412 8076
Fax: +852 2414 1756
E-mail: aho1@levi.com

North Asia
Nigel Cheung
Levi Strauss Global Trading Co. II Ltd.
Level 22
Standard Chartered Tower, Millennium City 1
388 Kwun Tong Road, Kowloon
HONG KONG
Tel: +852 3793 6955
Fax: +852 2414 1756
E-mail: ncheung@levi.com

South Asia, Sub-Sahara
Ayyappan Kandasamy
Levi Strauss (India) Pvt. Ltd.
SJR Cyber
No. 22 Hosur Road, Adugodi
Bangalore - 560030
INDIA
Tel: +91 80 66501415
Fax: +91 80 66501491
E-mail: akandasamy@levi.com

Americas
Elena Pidgeon
Levi Strauss & Co.
1155 Battery Street
San Francisco, CA
USA
Tel: +1 415 501 6523
Fax: +1 415 501 7691
E-mail: epidgeon@levi.com

Appendix 2: **Definitions**

Accessories—Products other than typical pants and shirts. Accessories can include both apparel and non-apparel products such as belts, caps, shoes, handbags, gloves, socks, scarves, eyewear, watches, home textile products, and wallets. The examples covered here are neither exhaustive nor all inclusive; they simply provide examples of products defined as accessories. All accessories are covered by LS&CO.'s RSL.

Allowable Trace (TR)—The Allowable Trace is identified by the TR designation in the Limit Value column. The Allowable Trace [amount] represents the [permitted unavoidable trace presence] amount of a substance that has been added unintentionally or unavoidably to a material, good or finished product, but is nonetheless [is] allowed to be [found] detected in [on the garment] the material, good or finished product when otherwise the substance has been prohibited from use.

Chemical Abstract Service (CAS) Number—A unique number that identifies a particular chemical structure. While there may be various synonyms for a chemical and different naming conventions, there is only one CAS number. Mixtures of chemicals do not have CAS numbers, only individual chemical components have CAS numbers. When there is doubt about the chemical name used in the RSL, always check the CAS number.

Children's Products—An article which is designed for or intended primarily for use by children age 12 and under. All Girls sizes 0–16 and Boys sizes 0–20 are presumptively included within this definition of children's products.

Concentration Limit—The concentration limit is set for each substance as measured in each of the Materials, Chemicals and Other Goods supplied to LS&Co. and in the final product. It represents the maximum allowable amount of the respective substance which can be found in a RSL compliant product. The concentration limit is shown in the Limit Value column. The limit is specified as the amount of the substance on the amount of substrate, by weight (e.g., milligrams substance per kilogram of product [mg/kg]). Concentration limits are applicable to any single part of a garment or accessory, not an average over the whole product. If the limit is given for a group of substance with various CAS numbers, the concentration should be calculated on basic substance of the group generally given with its name in the name column.

For example, with regard to methylene diphenyl diisocyanates (with isomers, homologs, oligomers and polymers), all MDI type isocyanates must be measured and calculated to the monomer 4,4'-methylenediphenyl diisocyanate). Another example is the metals which may be present in apparels in the form of several salts which are measured together and must be calculated as the elemental metal content. On the other hand, sometimes the analytical method measures a substance containing many chemicals. For example, measuring the tin content with ICP gives the summary for the elemental tin content as well as several dialkyl tin carboxylates. In other cases the analytical method gives results for a pure chemical which may be added to the product only as a component of a mixture or a constituent of a substance, e.g., phthalates.

Detection Limit—Specifies the test method detection sensitivity that a laboratory must be able to achieve when measuring the substance in the product.

LS&CO. Product(s)—LS&CO. final products covered by the RSL include all LS&CO. branded products, including Levi's®, Dockers®, DENIZEN® and Signature by Levi Strauss & CO.™ products as well as LS&CO distributed products. LS&CO. Products include those sourced directly by LS&CO., products sourced by an agent, and those designed and sourced by our licensee partners.

Non-Apparel Products—Products that are made from materials other than fabric or leather.

continued on next page

Definitions (continued)

Some products included in non-apparel products are mobile phones, home furnishings, ties, hats, watches, jewelry, eyewear, and electronics. All non-apparel products are covered by LS&CO.'s RSL.

Polyvinyl Chloride (PVC)—Polyvinyl chloride, or PVC for short, is a hard plastic that may be found in packaging materials, flashers, and screen printing. PVC is prohibited for use in packaging for all LS&CO. products. Alternatives to PVC packaging include polyurethane (PU), polyethylene (PE), and polyethylene terephthalate (PET). In addition, PVC screen printing, which utilizes phthalates, is prohibited for products.

Preparation—A mixture or solution composed of two or more substances.

Reporting Limit (RL)—The lowest concentration the laboratory is allowed to report. If the laboratory detects an amount of the substance below the RL, the laboratory report must state "Not Detected".

Source(s)—Business partners of Suppliers that provide Materials, Chemicals and Other Goods for direct or eventual use in fabricating, manufacturing or other processing of LS&CO. labeled and/or distributed apparel, accessories, and other products.

Substance—A chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Sundries—Items that are permanently attached to the garment or footwear and may include zippers, rivets, buttons, care labels, name labels, and tags.

Supplier(s)—Factories and other businesses, including licensees, that contract with LS&CO. to produce finished products, apparel, accessories and other products for LS&CO. Suppliers may also contract with Sources for Materials, Chemicals and Other Goods for direct or eventual use in fabricating, manufacturing or other processing of LS&CO. labeled and/or distributed apparel, accessories and other products.

Usage Ban—A Usage Ban is defined as a prohibition of any use of the substance during any and all stages of product manufacturing. However, the RSL identifies an Allowable Trace ("TR") amount of the substance to be detected if caused by unintentional or unavoidable contamination.

Appendix 3: **Product Testing**

Product Testing

LS&CO. currently maintains various product testing programs to validate RSL compliance. Notwithstanding LS&CO.'s testing programs, the Suppliers and Sources are fully responsible for obtaining all necessary knowledge and information required to understand and execute business processes that ensure RSL compliance. The Suppliers and Sources are also responsible for performing analytical testing on Materials, Chemicals and Other Goods to verify their compliance to all RSL requirements. The Suppliers and Sources must test Materials, Chemicals and Other Goods only at LS&CO. approved laboratories (Appendix 6).

As a general matter, Materials, Chemicals and Other Goods should be tested as indicated in the following tables. Table A provides general testing guidance based on material type. Table B provides general testing guidance based on finish type; Table C provides general testing guidance for screen prints. Table D provides general testing guidance for footwear material. Given the risk that a particular Source or Supplier might use an unanticipated ingredient in the formulation, manufacture or processing of any given type of Materials, Chemicals and Other Goods, these tables necessarily suggest, but do not definitively prescribe the tests necessary to ensure compliance with the RSL. It is the Source's and Supplier's absolute and non-delegable duty to ensure compliance with the RSL. Moreover, LS&CO. may at any time require additional testing to validate compliance with the RSL. All costs associated with testing are the responsibility of the Suppliers and Sources.

When using recycled or re-used material, the supplier has to ensure consistence of conformity within all used material batches. Additional assessment and testing may be needed.

Table A: RSL Testing Guide Based on Material Type

	Natural textile	Synthetic textile	Natural leather	Non-metallic embellishment and trims	Metallic embellishment and trims	Jewelry
Aromatic Amines	X	X	X	X		
Disperse Dyes		X		X		
Other Dyes	X	X	X	X		
Isocyanates				X[55]		
Chromium (VI)	X[56]		X	X[57]		
Total Cadmium			X	X	X	X
Total Lead			X	X	X	X
Nickel Release[58]					X	X
Formaldehyde	X	X	X	X		
Phthalates				X[59]	X[60]	
Organotins				X[61]		
PCP/TeCP/TriCP/ DiCP/MCP/Dimethyl fumarate	X		X	X[62]		
4-chloro-3-methyl phenol/OPP/ Isothiazolinones/ 2-Thiacyanomethyl-thiobenzothiazole			X	X[63]		
Chlorinated Aromatics		X		X[64]		
Chlorinated Paraffins			X	X[65]		
N,N-Dimethylformamide				X[66]		
APEOs	X	X	X	X		
PAH[67]	X	X		X		
Flame retardants[68]	X	X		X[69]		

X indicates applicable test

Table B: RSL Testing Guide Based on Finish/Coating Type

	Resin / Easy Care	Tinted	Overdye	Coating/ Coated Materials	Repellency Performance
Aromatic Amines		X	X	X	
Other Dyes			X	X	
Isocyanates	X			X[70]	X[71]
Metals (Extractable)		X	X		
Metals (Total)				X	
Formaldehyde	X	X	X	X	
Organotins				X	X[72]
Phthalates		X	X	X	
APEOs	X	X	X	X	
PFC					X

X indicates applicable test (also depending on the chemical used in the recipes)

Table C: RSL Testing Guide Based on Print Type

	Plastisol/ Screen/ Glitter/ Puff/Foil/ Pigment/ Graphics Prints	Water-base Prints	Flock Prints	Heat Transfer	Ink-Jet (Digital Print)	Pigment Discharge
Aromatic Amines	X	X	X	X	X	X
Disperse Dyes			X	X	X	
Metals (Total)	X	X	X	X	X	X
Nickel (Extractable)						X[73]
Formaldehyde	X	X	X	X		X
Chlorophenols						X
Organotins	X			X		
Isocyanates[74]	X	X	X	X		
Phthalates[75]	X		X	X		
N,N-Dimethylformamide[76]				X		
APEOs	X	X	X		X	X
PVC	X			X		

X indicates applicable test

Table D: RSL Testing Guide Based on Footwear and Accessories Materials

	Natural textile	Synthetic textile	Blended textile	Natural leather	Synthetic leather	PU coated natural leather	Foam	Plastics (including sole)	Metallic embellishment and trims	Paper (e.g., cellulose insole)
Aromatic Amines	X	X	X	X	X	X				X
Disperse Dyes		X	X							
Other Dyes	X	X	X	X						
PCP/TeCP/TriCP/DCP/ MCP/Dimethylfumarate	X		X	X		X				X
4-chloro-3-methyl phenol/ OPP/ Isothiazolinones/ 2-Thiacyanomethyl-thiobenzothiazole				X						X
N,N-Dimethylformamide		X			X	X	X			
Isocyanates[77]					X	X	X	X		
Chromium (VI)				X		X				X
Total Cadmium				X	X	X		X	X	X
Total Lead				X	X	X		X	X	X
Nickel Release									X[78]	
Formaldehyde	X	X	X	X	X	X		X		X
Phthalates					X	X		X[79]	X[80]	X
Extractable Heavy Metals	X	X	X	X	X	X				X
PAH								X		
Organotins					X	X		X[81]		X
N-nitrosamines								X		
APEOs	X	X	X	X	X	X		X[82]		

Appendix 4: **Azo Dyes which, through reductive cleavage, may form restricted substances (amines)**

Dye Name Color Index #	CAS Number (if available)	Dye Name Color Index #	CAS Number (if available)	Dye Name Color Index #	CAS Number (if available)
Acid Black 29	12217-14-0	Direct Blue 9	No CAS number	Direct Orange 7	2868-76-0
Acid Black 94	6358-80-1	Direct Blue 10	4198-19-0	Direct Orange 8	64083-59-6
Acid Black 131	12219-01-1	Direct Blue 14	72-57-1	Direct Orange 10	6405-94-3
Acid Black 132	12219-02-2	Direct Blue 15	2429-74-5	Direct Orange 108	No CAS number
Acid Black 209	No CAS number	Direct Blue 22	2586-57-4	Direct Red 1	25188-24-3
Acid Brown 415	No CAS number	Direct Blue 25	25180-27-2	Direct Red 2	992-59-6
Acid Orange 24	1320-07-6	Direct Blue 35	No CAS number	Direct Red 7	No CAS number
Acid Orange 45	2429-80-3	Direct Blue 53	314-13-6	Direct Red 10	25188-29-8
Acid Red 4	5858-39-9	Direct Blue 76	16143-79-6	Direct Red 13	25188-30-1
Acid Red 5	No CAS number	Direct Blue 151	110735-25-6	Direct Red 17	No CAS number
Acid Red 24	No CAS number	Direct Blue 160	No CAS number	Direct Red 21	6406-01-5
Acid Red 73	5413-75-2	Direct Blue 173	No CAS number	Direct Red 22	No CAS number
Acid Red 85	3567-65-5	Direct Blue 192	159202-76-3	Direct Red 24	No CAS number
Acid Red 114	6459-94-5	Direct Blue 201	60800-55-7	Direct Red 26	No CAS number
Acid Red 115	No CAS number	Direct Blue 215	6771-80-8	Direct Red 28	573-58-0
Acid Red 116	No CAS number	Direct Blue 295	6420-22-0	Direct Red 37	3530-19-6
Acid Red 128	6548-30-7	Direct Brown 1	3811-71-0	Direct Red 39	6358-29-8
Acid Red 148	No CAS number	Direct Brown 1:2	2586-58-5	Direct Red 44	6548-29-4
Acid Red 150	No CAS number	Direct Brown 2	25255-06-5	Direct Red 46	2302-97-8
Acid Red 158	8004-55-5	Direct Brown 6	25180-39-6	Direct Red 62	No CAS number
Acid Red 167	No CAS number	Direct Brown 25	33363-87-0	Direct Red 67	No CAS number
Acid Red 264	No CAS number	Direct Brown 27	No CAS number	Direct Red 72	8005-64-9
Acid Red 265	6358-43-6	Direct Brown 31	25180-41-0	Direct Violet 1	25188-44-7
Acid Red 420	No CAS number	Direct Brown 33	No CAS number	Direct Violet 12	2429-75-6
Acid Violet 12	6625-46-3	Direct Brown 51	No CAS number	Direct Violet 21	No CAS number
Basic Brown 4	5421-66-9	Direct Brown 59	6247-51-4	Direct Violet 22	25329-82-2
Basic Red 42	No CAS number	Direct Brown 79	6483-77-8	Direct Yellow 1	No CAS number
Basic Red 111	113741-92-7	Direct Brown 95	16071-86-6	Direct Yellow 24	6486-29-9
Direct Black 4	25156-49-4	Direct Brown 101	No CAS number	Direct Yellow 48	No CAS number
Direct Black 29	No CAS number	Direct Brown 154	6360-54-9	Disperse Orange 149	85136-74-9
Direct Black 38	1937-37-7	Direct Brown 222	No CAS number	Disperse Red 151	No CAS number
Direct Black 91	6739-62-4	Direct Green 1	3626-28-6	Disperse Yellow 7	6300-37-4
Direct Black 154	54804-85-2	Direct Green 6	4335-09-5	Disperse Yellow 23	6250-22-3
Direct Blue 1	3814-14-3	Direct Green 8	25180-47-6	Disperse Yellow 56	54077-16-6
Direct Blue 2	2429-73-4	Direct Green 8:1	No CAS number	Solvent Orange 7	3118-98-6
Direct Blue 3	No CAS number	Direct Green 85	72390-60-4	Solvent Red 19	6368-72-5
Direct Blue 6	2602-46-2	Direct Orange 1	54579-28-1	Solvent Red 23	85-86-9
Direct Blue 8	2429-71-2	Direct Orange 6	6637-88-3		

Appendix 5: **Pigments which, through reductive cleavage, may form restricted substances (amines)**

Pigment Name	CAS Number (if available)	C.I. Number
Permanent Brown B	No CAS number	12800
Pigment Blue 25	10127-03-4	21180
Pigment Blue 26	5437-88-7	21185
Pigment Chrome Yellow L Paste	No CAS number	12720
Pigment Green 10	51931-46-5	12775
Pigment Orange 3	No CAS number	12105
Pigment Orange 13	3520-72-7	21110
Pigment Orange 14	No CAS number	21165
Pigment Orange 15	6358-88-9	21130
Pigment Orange 16	6505-28-8	21160
Pigment Orange 34	15793-73-4	21115
Pigment Orange 44	17457-73-5	21162
Pigment Orange 50	No CAS number	21070
Pigment Orange 63	No CAS number	21164
Pigment Red 7	6471-51-8	12420
Pigment Red 8	6410-30-6	12335
Pigment Red 17	6655-84-1	12390
Pigment Red 22	6448-95-9	12315
Pigment Red 37	6883-91-6	21205
Pigment Red 38	6358-87-8	21120
Pigment Red 39	No CAS number	21080
Pigment Red 41	No CAS number	21200

Pigment Name	CAS Number (if available)	C.I. Number
Pigment Red 42	6358-90-3	21210
Pigment Red 114	6358-47-0	12351
Pigment Red 162	No CAS number	12431
Pigment Yellow 12	6358-85-6	21090
Pigment Yellow 13	5102-83-0	21100
Pigment Yellow 14	5468-75-7	21095
Pigment Yellow 17	4531-49-1	21105
Pigment Yellow 49	15110-84-6	11765
Pigment Yellow 55	6358-37-8	21096
Pigment Yellow 63	14569-54-1	21091
Pigment Yellow 83	5567-15-7	21108
Pigment Yellow 87	No CAS number	21107:1
Pigment Yellow 114	71872-66-7	21092
Pigment Yellow 124	67828-22-2	21107
Pigment Yellow 126	90268-23-8	21101
Pigment Yellow 127	68610-86-6	21102
Pigment Yellow 152	20139-66-6	21111
Pigment Yellow 170	31775-16-3	21104
Pigment Yellow 171	53815-04-6	21106
Pigment Yellow 172	No CAS number	21109
Pigment Yellow 174	78952-72-4	21098
Pigment Yellow 176	90268-24-9	21103
Pigment Yellow 188	23792-68-9	21094

Appendix 6: **Approved Laboratories**

Modern Testing Services	Scope of RSL Test	
	Full	Partial
Asia		
China - Hong Kong	X	
China - Shanghai	X	
China - Dongguan	X	
Taiwan		X
India - Tirupur		X
India - Bangalore		X
Bangladesh		X
Pakistan		X
Cambodia		X
Vietnam		X
Europe		
Germany	X	
UK		X
Americas		
US - Norwood, MA		X

Global Contact for Modern Testing Services	
Laboratory Name:	MTS (Global) Ltd. — Hong Kong
Contact Name:	Mavis Tsang
Email:	mavistsang@mts-global.com
Telephone:	+852 3604 1351
Contact Name:	Dr. Charles Wong
Email:	charleswong@mts-global.com
Telephone:	+852 3604 1301

Appendix 6: **Approved Laboratories (continued)**

Bureau Veritas	Scope of RSL Test	
	Full	Partial
Asia		
China - Hong Kong	X	
China - Shanghai	X	
China - Panyu		X
Taiwan		X
Korea		X
India - Banaglore		X
India - Noida		X
India - Tirurpur		X
Bangladesh - Dhaka		X
Sri Lanka		X
Pakistan		X
Vietnam - Ho Chi Minh City		X
Vietnam - Hanoi		X
Europe		
Germany		X
Turkey		X
Egypt		X
Americas		
US - Buffalo, NY		X
Mexico		X
Guatemala		X

Global Contact for Bureau Veritas

Laboratory Name: Bureau Veritas — Hong Kong
Contact Name: Jeannie Leung
Email: Jeannie.Leung@hk.bureauveritas.com
Telephone: +852 2331 0389

Laboratory Name: Bureau Veritas Bangalore — India
Contact Name: VS Sudalai Muthu
Email: sudalaimuthu.vs@in.bureauveritas.com
Telephone: +91 80 40701651

Appendix 6: **Approved Laboratories (continued)**

Intertek	Scope of RSL Test	
	Full	Partial
Asia		
India - Bangalore		X
India - Gurgaon		X
Sri Lanka		X
Bangladesh - Dhaka		X
Bangladesh - Chittagong		X
Pakistan		X
Mauritius		X
China - Shanghai	X	
China - Guangzhou		X
China - Hong Kong	X	
Cambodia		X
Vietnam - Ho Chi Minh City		X
Vietnam - Hanoi		X
Europe		
Turkey		X
Egypt		X
Portugal		X
Americas		
US - Chicago, IL		X

Global Contact for Intertek

Laboratory Name: Intertek — Hong Kong
Contact Name: Arthur Lai
Email: arthur.lai@intertek.com
Telephone: +852 2854 8161

Laboratory Name: Intertek — Hong Kong
Contact Name: Dr. Kathy Leung
Email: kathy.leung@intertek.com
Telephone: +852 2854 8163

Please connect with the laboratory contact for the exact laboratory testing capability availability.

Endnotes

1 Products that are subject to the RSL also include LS&CO. promotional items and nominal "give-away" items provided to customers and business partners.

2 See Appendices 4 and 5 for a partial list of Azo dyes and pigments which, through reductive cleavage, may form restricted substances (amines).

3 The test method indicated shall be used by an LS&CO. approved laboratory to determine compliance with the RSL. The method's Reporting Limit is provided with designation ("RL").

4 Use test method EN ISO14362-3 or GB/T 23344 for analysis of 4-Aminoazobenzene. Use ISO 17234-2 or GB/T 33392 for leather products.

5 3,3'-dichlorobenzidine has been reported to be found when printing using a combination of Pigment Black 7 with either Pigment Orange 13 or Pigment Orange 34. This combination of pigments shall be subjected to the listed usage bans.

6 The test method indicated shall be used by an LS&CO. approved laboratory to determine compliance with the RSL. The method's Reporting Limit is provided with designation ("RL").

7 This azo colorant that is a mixture of: disodium(6-(4-anisido)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-2-naphtholato)(1-(5-chloro-2-oxidophenylazo)-2-naphtolato)chromate(1-) -CAS Number 118685-33-9, and trisodium bis(6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1- naphtolato)chromate(1-).

8 No allocated CAS number. (Blue colorant: CAS Number .Not allocated., Index number 611-070-00-2, EC number 405-665-4). REACh Regulation (EC). 1907/2006 Appendix 9.

9 Any biocide used to impart properties to the final products is not allowed to be used without prior approval of LS&CO. In case of requested biocide finishing by LS&CO. used biocides have to be approved acc. to EC 528/2012 and approval of LS&CO.

10 In case chlorinated phenols are to be tested together with OPP, analysis by 1 M KOH extraction, 12-15 hours at 90°C, derivatization and analysis according § 64 LFGB B 82.02-08 or DIN EN ISO 17070:2015 is also possible.

11 Use of blocked diisocyanates (oxime/pyrazole- or self-blocked) based on any other diisocyanates and pre-polymers (than listed) on the garment / fabric finishes and / or prints needs prior approval from LS&CO. Product Safety.

12 MDIs include monomers, isomers, oligomers and polymers with various CAS Numbers.

13 TDI restriction applies to both 2,4-TDI (584-84-9) and 2,6-TDI (91-08-7), individually.

14 No Flame Retardants are allowed on LS&CO. products. Upon request, the absence of the flame retardants are to be tested for confirmation of RSL compliance.

15 Isomers of HBCDD: Alpha-hexabromocyclododecane (CAS 134237-50-6), Beta-hexabromocyclododecane (CAS 134237-51-7) and Gamma-hexabromocyclododecane (CAS 134237-52-8).

16 Metal restrictions are separated into 2 major categories: (1) Restrictions for textiles and leather (artificial, natural & coated leather), (2) Restrictions for Sundries and Jewelry (children & adults). The concentration is calculated at element level. However, metals can be found in products both at element level and in ionised form(s) (including metal compounds) with various CAS numbers.

17 Total digestion metal content—the sample is digested by concentrated acid and the total metal content in the sample is measured.

18 Applicable for Leather (artificial, natural and coated) only.

19 Chromium (Cr) total means all including Cr (iii) and Cr (vi). This restriction is applicable to all materials except leather.

20 Restriction for Nickel (Ni) is applicable only for Textiles and Artificial Leather

21 Chromium (Cr^{6+})-hexavalent restriction is applicable only for leather. Testing is to be performed after aging [aging condition: 24 hours with 80°C & 20% relative humidity (RH)].

Endnotes (continued)

22 Jewelry includes stones and crystals. Man-made leaded crystals are prohibited from use on any children's products.

23 Children's products are defined as products designed or intended primarily for children age 12 and below.

24 Applicable to metallic parts when the metallic part surface has direct and prolonged skin contact. According to the new reasoning, the limit of 0.5 µg/cm²/week shall be considered exceeded only in case the quantified values are greater or equal to 0.88 µg/cm²/week (or 0.35 µg/cm²/week in case of piercing items with a nickel release limit of 0.2 µg/cm²/week).

25 For metallic parts without a surface coating or plating, test in accordance with method EN 1811. For metallic parts with a surface coating or plating, perform EN 12472, then test in accordance with method EN 1811. The same limit value of 0.5 µg/cm2/week applies regardless of the test method used.

26 Extractable Metal Content Restrictions applicable for Sundries and jewelry for Children only.

27 Chromium (Cr^{6+})-hexavalent restriction is applicable only for leather. Testing is to be performed after aging [aging condition: 24 hours with 80°C & 20% relative humidity (RH)].

28 Test method ISO/TS 16189 for footwear materials.

29 For footwear and accessories such as shoes and belts, the limit is 1,000 mg/kg.

30 LS&CO. indicates that Usage Bans will be imposed upon all esters of ortho-phthalic acid however; Materials, Chemicals and Other Goods are to be tested for one or more of the listed phthalates upon LS&CO.'s request.

31 These phthalate limits do NOT apply to DBP and DEHP when used in the manufacture or finishing of fabric intended for apparel (except pockets). For such fabric (main components and lining), the limit for DBP is 120 mg/kg. The limit for DEHP is 300 mg/kg.

32 Including short chained chlorinated paraffin from C_{10} to C_{13} and medium chained chlorinated paraffin from C_{14} to C_{17} where chlorine content 20% to 70%.The possible application can be fat liquoring (leather), plasticizer and flame retardant (plastics).

33 EXCEPTION: For baby products (age 0 – 24 months) intended for the Japanese market, the formaldehyde concentration must be below an absorbency (A-A0) limit of 0.05 using JIS L1041-1983, Method A.

34 Melamine based resins are: a) prohibited for use at coating; and b) require LS&CO.'s prior approval for use as cross-linker.

35 Direct skin contact means any part of the product (such as collar, cuff, body or sleeves) that has direct prolonged contact with the skin during normal use. An example is leather gloves without inner lining.

36 Without direct skin contact means that during normal use only a portion of the product may occasionally contact the skin during normal use (such as leather jacket). The product must have a lining which meets the RSL requirement. Leather products without linings could be considered direct skin contact.

37 LS&CO. PFCs (perfluorinated and polyfluorinated chemicals) elimination policy: no intentional use of PFCs in the process of manufacturing LS&CO.-labeled products using LS approved test method - extraction with organic solvent, GC-MS and LC-MS, based on CEN/TS 15968. LS&CO. is pursuing this objective by (a) forbidding the knowing purchase or use of any raw materials containing any detectable levels of any PFCs at this detection limit and (b) forbidding the intentional use of any PFCs in the process of manufacturing any LS&CO.-labeled product. Please refer to Table G of Section 2 for the list of PFCs.

38 If GCMS screening or PAH analysis shows only naphthalene, apply limit value for final product as 100 mg/kg. But If GCMS screening or PAH analysis shows naphthalene together with other PAHs, limit value for final product is 10 mg/kg for all PAH including naphthalene.

39 Packaging means transportation packaging as well as product packaging, i.e., any material used for

Endnotes (continued)

the containment, protection, handling, delivery, and presentation of finished goods (article).

40 For metals, concentration is calculated at element level. However, metals can be found in both at element level and in ionised form(s) (including metal compounds) with various CAS numbers.

41 For NP analysis by GC-MS, LC-MS confirmation is needed in case of positive findings of NP.

42 RoHS refers to the Restriction of the use of certain Hazardous Substances in electrical and electronic equipment. RoHS applies to electrical and electronic products. NOTE: The limits listed are by weight of homogeneous material (i.e., single material that is separated mechanically).

43 For metals, concentration is calculated at element level. However, metals can be found in both at element level and in ionised form(s) (including metal compounds) with various CAS numbers.

44 For phthalates requirement, this should refer to Table J of Section1 in this RSL.

45 Regarding batteries, for metals, concentration is calculated at element level. However, metals can be found in both at element level and in ionised form(s) (including metal compounds) with various CAS numbers.

46 The test method has been quoted under GB25038-2010 " Rubber shoes healthy and safety specification and GB25036-2010 " Children's Canvas Rubber Footwear"

47 Different salts and compounds of 2,4-Dichlorophenoxy-acetic acid with various CAS numbers. Amount to be calculated on the free acid.

48 All isomers of HCH, including alpha (319-84-6), beta (319-85-7), delta (319-86-8), epsilon (6108-10-7), and gamma (lindane, 58-89-9).

49 Amount to be calculated on the free acid.

50 Amount to be calculated on the free acid.

51 Also DBBT

52 Also Ugilec 121 or Ugilec 21

53 Also Ugilec 141

54 Substances of Very High Concerns (SVHC) are defined as CMR 1, CMR 2, PBT or vPvB substances as given in the legal text of REACh, Annex XVII for CMR, and on the European Chemicals Agency website, http://echa.europa.eu/ . The listing is inclusive of candidate substances of Substances of Very High Concerns (SVHC) for Authorization and Registry of intentions list, as defined below:

Candidate substances can be found at http://echa.europa.eu/candidate-list-table

Registry of intentions list are found at http://echa.europa.eu/registry-of-current-svhc-intentions

55 Testing is applicable for PU materials, PU foam or with the use of blocked diisocyanates chemistry cross-linkers.

56 Testing is applicable for wool, polyamide and silk dyeswith use of metal complexes acid dyes.

57 Testing is applicable for leather materials, dyes polyamide buttons. For paper patch, this should include extractable heavy metals under Table G of Section 1 Metals — Sundries.

58 For metal components with direct and prolonged skin contact.

59 Testing is applicable for plastics, synthetic leather (like PU), surface coating, paper patch and lacquered embellishments and trims.

60 Testing is applicable for all lacquered and surface coated metallic embellishments and trims.

61 Testing is applicable for plastics, synthetic leather (like PU), rubber, adhesives, paper patch.

62 Testing is applicable for natural leather and paper patch.

63 Testing is applicable for natural leather and paper patch.

64 Testing is applicable for synthetic textile trims and embellishments.

65 Testing is applicable for natural leather and plastics materials.

66 Testing is applicable for PU contained or coated trims and embellishments.

67 Testing is applicable for post-consumer recycled from unknown or inconsistent sources.

Endnotes (continued)

68 Testing is applicable for post-consumer recycled from unknown or inconsistent sources.

69 Testing is applicable for paper patch.

70 Testing is applicable for blocked di-isocyanates chemistry

71 Testing is applicable for blocked di-isocyanates chemistry

72 Testing is applicable for silicone chemistry.

73 This is due to leaching from the metal roller.

74 Testing is applicable for PU coating or use of PU cross-linkers.

75 All plastisol prints must be phthalates and PVC free.

76 Testing is applicable for PU contained or coated materials.

77 Testing is applicable for PU materials or use of blocked diisocyanates chemistry cross-linkers.

78 For metal components with direct and prolonged skin contact (e.g., grommet).

79 Testing is applicable for plastics, rubber, adhesives.

80 Applicable for lacquered or surface coated metal items.

81 Testing is applicable for plastics, rubber, adhesives.

82 AP (alkyl phenols) is applicable.