

LEVI STRAUSS & CO.

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Restricted Substances List ("RSL")

November 2013

Concerning Materials, Parts, Chemicals, Components, Packaging, and Other Goods (including Sundries)

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

Issue: November 2013

Supersedes all previous versions.
Applicable for products for S1:2015 Season and thereafter.

Introduction

LS&Co. is committed to conduct its business in an environmentally sustainable manner that protects consumers, workers, the environment, and the LS&Co. brands. We do so by building principally upon three pillars: (1) the Restricted Substances List (RSL); (2) Environmental Sustainability; and (3) Worker Health and Safety Requirements. These pillars, and all other requirements set out on LS&Co.'s website www.levi.com, apply to all Suppliers as well as 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.

Restricted Substances List

The objectives of the LS&Co. RSL (November 2013) are to:

- (a) Ensure that materials, chemicals, parts and other goods, used or supplied in the manufacture of LS&Co.-labeled and distributed products, as well as the finished products themselves, comply with the applicable chemical content and chemical exposure laws of every governmental jurisdiction in which those products are manufactured or distributed; and
- (b) Protect the health and safety of consumers and others handling LS&Co.'s finished products.

Application

The RSL applies to all of LS&Co.'s finished products, including apparel, non-apparel, footwear, accessories, and other products. The RSL also applies to all materials, parts, chemicals, and other goods (including sundries) supplied or used in producing LS&Co. apparel, accessories, and other finished products.¹ While the RSL does not restrict the use of or specifically limit the concentration of chemicals used during the manufacturing process, LS&Co. requires that parts, other goods, and finished products provided by Suppliers and Sources (as defined on the next page) comply with the "Limit Value Final Product" (LVFP) levels specified in this RSL. To ensure finished products meet the LVFP concentrations set out in Sections 1-3 of this RSL, Suppliers and Sources must implement a testing program in which compliance is assessed based on comparison of the testing results against the LVFP limits.

In addition, Suppliers and Sources must ensure that the chemicals used or supplied in the manufacture of LS&Co.-labeled and distributed products are used in a manner consistent with the requirements of the chemical Supplier or other applicable chemical usage requirements.

As noted above, the RSL is an important part of LS&Co.'s product stewardship and environmental sustainability programs, and Suppliers must share the RSL with all Sources of materials, parts, chemicals, packaging and other goods, supplied or distributed to produce LS&Co. apparel, accessories, and other products. Suppliers are responsible for ensuring that all Sources supply or otherwise deliver to Suppliers materials, parts, chemicals, packaging, and other goods that are in compliance with (a) the prohibitions, limitations and other requirements described or referred to in the RSL, and (b) the applicable laws of every country and local jurisdiction in which they are to be used, manufactured, or distributed.

continued on next page

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.

Using the RSL

The RSL contains four core sections: Restricted Substances 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 provide supplementary guidance to assist our 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 these requirements, and communicate the information to their internal teams. This November 2013 RSL supersedes all prior versions of the LS&Co. RSL.

Throughout this document, references are made to Supplier(s) and Source(s). LS&Co. define them for the purposes of the November 2013 RSL as follows:

Supplier(s) are defined as factories and other businesses that contract with LS&Co. to produce finished products, apparel, accessories and other products for LS&Co. Suppliers may also contract with Sources for raw materials, parts, chemicals, packaging, and/or components for LS&Co. apparel, accessories, and other products.

Source(s) are defined as business partners of Suppliers that provide raw materials, parts, chemicals, packaging, and/or components for LS&Co. apparel, accessories, and other products.

For a glossary of other terms found in this November 2013 RSL, please see Appendix 2 on pages 24–25.

Suppliers' and Sources' Commitment

Each Supplier or Source of materials, chemicals, parts, packaging, and finished goods (a) to LS&Co., and (b) to any LS&Co. contractor when the materials, chemicals, parts, and other goods will be used during the production or sale of a LS&Co.-distributed product represents and warrants that each of its materials, chemicals, parts, packaging, and other goods complies with all provisions of the RSL (including, but not limited to, the RSL's prohibitions, restrictions, and other requirements). Supplier will indemnify and hold LS&Co. harmless from any claim, loss, damage, or other detriment resulting from any such Supplier's or Source's non-compliance.

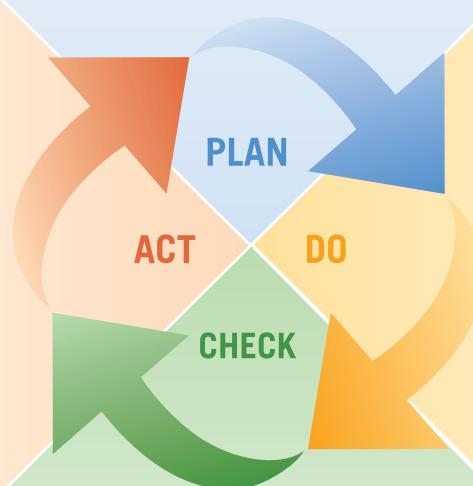
As a Supplier of LS&Co. products or raw materials for LS&Co. products, you are required to understand the RSL product standards and deliver only compliant products. You are also responsible for seeking guidance from LS&Co. in any situation where you may have doubts or uncertainties about your product's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

Suppliers' Management System Approach

Supporting RSL Compliance

at the Factory

- Set up an RSL management team in the factory.
- Contact LS&Co.'s RSL team with any questions or to request training.
- Communicate with, and educate, internal staff responsible for LS&Co. products (staff for material and chemical purchasing, product development, production, etc.) about LS&Co. RSL requirements.
- Communicate LS&Co.'s RSL to all of your raw material suppliers and subcontractors.
- Communicate with your chemical and other Sources, ensuring they are aware that all the chemicals and other goods which they supply have to comply with the prohibitions and restrictions listed in the RSL.
- Replace unknown materials/chemicals with materials/chemicals that meet LS&Co.'s RSL.
- Do not ship products, materials, parts, chemicals, components, packaging, or other goods (including sundries) if you are in doubt about the products' compliance. Verify RSL compliance through laboratory testing and consult LS&Co. RSL team at the same time.



- Purchase only materials, parts, chemicals, and other goods which comply with LS&Co.'s RSL requirements.
- Request Safety Data Sheets (SDS), formerly known as Material Safety Data Sheets (MSDS) from your chemical Sources for every chemical purchased.
- Ensure that employees are familiar with the precautions set out in the SDS's.
- Understand all the chemical inputs to your production by requesting Chemical Information Log (Section 4) from your chemical Sources.
- Contact all your chemical and raw material suppliers and other 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 all finishing/printing formulations.
- Document all process control variables (e.g. curing temperature/duration).

- Validate that only materials and chemicals meeting the RSL requirements are used on LS&Co. products.
- Regularly check process control variables (e.g., curing temperatures, liquor ratios, recipes) to validate proper chemical application.
- Perform analytical laboratory testing (using only LS&Co. approved labs—see [Appendix 6](#)) with random sampling as a routine RSL compliance verification process.

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Section 1: Substances Which May Be Found in Some Apparel, Accessories, and Other Products

Application

The prohibitions and restrictions listed in this section apply to all LS&Co. products—including all materials, parts, chemicals², and other goods—supplied or used in LS&Co. products. Each Supplier of materials, chemicals, parts, and other goods—(a) to LS&Co. and (b) to any LS&Co. contractor when the materials, chemicals, parts, and other goods will be used during the manufacture or sale of a LS&Co. distributed product—represents and warrants that each of its materials, chemicals, parts, and other goods complies with all provisions of the RSL (including, but not limited to, the RSL's prohibitions, restrictions, and other requirements) and that the Supplier will indemnify and hold LS&Co. harmless from any claim, loss, damage, or other detriment resulting from any such Supplier's non-compliance.

Purpose

LS&Co. is committed to upholding health and safety by producing safe products. This section identifies the substances of primary interest to LS&Co. and presents those substances along with the corresponding prohibitions or limitations. In addition, analytical test methods for use by the LS&Co. approved laboratory are given for each substance.

LS&Co. may test materials, parts, chemicals, and other goods for these substances. LS&Co. Suppliers and other contractors 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. apparel, accessory, or other product.

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

The substances listed in the RSL are based in large part on global legislation regulating chemicals usage in the manufacturing of apparel products. The European Union has developed the "Regulation Concerning the Registration, Evaluation, Authorization and Restriction of Chemicals," or REACH, which is aimed at ensuring a high level of 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 regulations, such as, but not limited to, China, Canada, Indonesia, 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 potential 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 in this RSL, in REACH, and the applicable laws of each country and local jurisdiction in which the Supplier and Source conducts business.

² Compliance with the RSL's "Limit Values Final Product" (LVFP) will be checked on final LS&Co. products.

A. Aromatic Amines from Azo Dyes³

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg) ⁴	Test Method ⁵
4-Aminoazobenzene ⁶	60-09-3	Not Detected	Products for all markets except China: <u>Textiles (natural & synthetic):</u> EN 14362-1 <u>Natural leather:</u> ISO 17234-1 [RL=20]
<i>o</i> -Aminoazotoluene	97-56-3		
4-Aminodiphenyl	92-67-1		
2-Amino-4-nitrotoluene	99-55-8		
<i>o</i> -Anisidine	90-04-0		
Benzidine	92-87-5		
<i>p</i> -Chloroaniline	106-47-8		
4-Chloro- <i>o</i> -toluidine	95-69-2		
<i>p</i> -Cresidine	120-71-8		
2,4-Diaminoanisole	615-05-4		
4,4'-Diamino-diphenylmethane	101-77-9		
3,3'-Dichlorobenzidine ⁷	91-94-1		
3,3'-Dimethoxybenzidine	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		
<i>o</i> -Toluidine	95-53-4		
2,4,5-Trimethylaniline	137-17-7		
2,4-Xylidine	95-68-1		
2,6-Xylidine	87-62-7		

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

4 Any reference to the term "Not Detected" indicates that the substance must not be detected in the final product.

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

6 Use test method §64 LFBG 82.02.9, EN14362-3, or GB/T 23344 for analysis of 4-Aminoazobenzene.

7 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 avoided.**

B. Disperse Dyes and Other Dyes

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
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		
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		
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 DYES			
Acid Red 26	3761-53-3		
Basic Red 9	569-61-9		
Basic Violet 14	632-99-5		
Direct Black 38	1937-37-7		
Direct Blue 6	2602-46-2		
Direct Red 28	573-58-0		
Blue Colorant ⁹	Not Allocated ¹⁰	Not Detected [TR=1000]	Extraction in solvent and detection with HPLC-DAD

⁸ The result for test method DIN 54231 is reported in milligrams of dye per liter of extract.

⁹ An azo colorant that is a mixture of: disodium[6-(4-anisidol)-3-sulfonato-2-[3,5-dinitro-2-oxidophenylazo]-2-naphtholato]{1-[5-chloro-2-oxidophenylazo]-2-naphtholato}chromate(1-) -CAS Number 118685-33-9 and trisodium bis{6-(4-anisidinol)-3-sulfonato-2-[3,5-dinitro-2-oxidophenylazo]-1- naphtholato}chromate(1-).

¹⁰ No allocated CAS number. (Blue colorant: CAS Number not allocated, Index number 611-070-00-2, EC number 405-665-4). EU Directive 93/32/EEC, 7th Amendment to Directive 67/548/EEC.

C. Biocides¹¹

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Dimethyl fumarate	624-49-7	Usage Ban [TR=0.1]	
<i>o</i> -Phenylphenol (OPP)	90-43-7	50	Solvent extraction / GC-MS, LC-MS for confirmation
Sensitizing Isothiazolinones	26530-20-1 26172-55-4 2682-20-4	50	
Pentachlorophenol (PCP)	87-86-5		
Tetrachlorophenol (TeCP) 2,3,4,5 TetraCP 2,3,4,6 TetraCP 2,3,5,6 TetraCP	4901-51-3 58-90-2 935-95-5	Not Detected	§64 LFGB 82.02.8 ¹² [RL=0.5]
Trichlorophenols (TriCP) 2,4,6 TriCP 2,3,6 TriCP 2,3,5 TriCP 2,4,5 TriCP 2,3,4 TriCP 3,4,5 TriCP	88-06-2 933-75-5 933-78-8 95-95-4 15950-66-0 609-19-8	Not Detected	§64 LFGB 82.02.8 ¹³ [RL=0.5]

D. Chlorinated Aromatics

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Chlorinated benzenes ¹⁴	Various	Usage Ban [TR=10]	
Chlorinated toluenes ¹⁵	Various	Usage Ban [TR=1]	DIN 54232

11 Any biocide use requires LS&Co.'s prior approval.

12 EXCEPTION: PCP and TeCP analysis for leather substrates requires test method ISO 17070.

13 EXCEPTION: TriCP analysis for leather substrates requires test method ISO 17070.

14 Chlorinated benzenes include monochlorobenzene (108-90-7), all isomers of di-, tri-, and tetra-chlorobenzenes, pentachlorobenzene (608-93-5) and hexachlorobenzene (118-74-1).

15 Chlorinated Toluenes include all isomers of mono-, di-, tri-, and tetra-chlorotoluenes and pentachlorotoluene (877-11-2).

E. Isocyanates¹⁶

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Diphenylmethane diisocyanates (MDI) ¹⁷	Various	Free: 1 Blocked: 50	<u>Analysis of free isocyanates:</u> Solvent extraction / HPLC
Hexamethylene diisocyanate (HDI)	822-06-0	Free: 1 Blocked: 50	<u>Analysis of releasable (blocked) isocyanates:</u> Solvent extraction / GC-MS with injector block temperature at 300°C, confirmation at 180°C.
Isophorone diisocyanate (IPDI)	4098-71-9	Free: 1 Blocked: 100	
Tetramethylxylene diisocyanate (TMXDI)	2778-42-9	Free: 1 Blocked: 100	
Toluene diisocyanate (TDI) ¹⁸	584-84-9 91-08-7	Free: 1 Blocked: 15	

F. Flame Retardants¹⁹

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Hexabromocyclododecane ²⁰ (HBCDD)	25637-99-4 3194-55-6	Usage Ban [TR=5]	Solvent extraction / GC-MS
Polybrominated biphenyls (PBBs)	Various		
Penta-bromodiphenyl ether (pentaBDE)	32534-81-9		
Octa-bromodiphenyl ether (octaBDE)	32536-52-0		
Deca-bromodiphenyl ether (decaBDE)	1163-19-5		
Tri- <i>o</i> -cresyl phosphate	78-30-8		
Tris (2,3-dibromopropyl) phosphate (TRIS)	126-72-7		
Bis (2,3-dibromopropyl) phosphate	5412-25-9		
Tris (1-aziridinyl)-phosphine oxide (TEPA)	545-55-1		KOH digestion / headspace analysis of ethyleneimine fragment by GC-MS

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

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

18 TDI restriction applies to both 2,4-TDI [584-84-9] and 2,6-TDI [91-08-7], individually.

19 No Flame Retardants are allowed on LS&Co. products. Upon request, listed flame retardants are to be tested.

20 Isomers of HBCDD: Alpha-hexabromocyclododecane [CAS 134237-50-6], Beta-hexabromocyclododecane [CAS 134237-51-7] and Gamma-hexabromocyclododecane [CAS 134237-52-8].

G. Metals^{21,22}

Restrictions for Textiles and Leather (Artificial, Natural & Coated)			
Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Total Digestion Metal Content^{23,24}			
Cadmium (Cd)	7440-43-9	Usage Ban [TR=100]	EN 1122
Lead (Pb)	7439-92-1	Usage Ban [TR=90]	CPSC-CH-E1002-08 Modified EPA 5051 / ICP-MS Modified ASTM E1613-04 CPSC-CH-E1003-09
Extractable Metal Content			
Antimony (Sb)	7440-36-0	30	Extraction in acidic perspiration as per EN ISO 105-E04 / ICP-MS
Arsenic (As)	7440-38-2	Usage Ban [TR=0.2]	
Cadmium (Cd)	7440-43-9	Usage Ban [TR=0.1]	
Chromium (Cr)-total ²⁵	7440-47-3	1	
Cobalt (Co)	7440-48-4	1	
Copper (Cu)	7440-50-8	25	
Lead (Pb)	7439-92-1	Usage Ban [TR=0.2]	
Mercury (Hg)	7439-97-6	Usage Ban [TR=0.02]	
Nickel (Ni) ²⁶	7440-02-0	1	
Chromium (Cr ⁺⁶) - hexavalent ²⁷	18540-29-9	Not Detected	ISO 17075 (RL=3)

21 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).

22 The concentration is calculated at element level.

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

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

25 Chromium (Cr) total means all including Cr (iii) and Cr (vi). This restriction is applicable to all except Natural Leather.

26 Restriction for nickel (Ni) is applicable only for Textiles and Artificial Leather.

27 Chromium (Cr⁺⁶)-hexavalent restriction is applicable only for Natural & Coated Leather. Testing is to be performed after aging (aging condition: 24 hours at 80°C & 20% relative humidity (RH)).

G. Metals (continued)

Restrictions for Sundries and Jewelry ²⁸ (Children ²⁹ & Adult)			
Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Total Digestion Metal Content			
Cadmium (Cd)	7440-43-9	100	EN 1122
Lead (Pb)—surface coating and substrate	7439-92-1	90	CPSC-CH-E1002-08 Modified EPA 5051 / ICP-MS Modified ASTM E1613 CPSC-CH-E1003-09
Releaseable Metal Content			
Nickel (Ni) ³⁰	7440-02-0	0.5 µg/cm ² /week 0.2 µg/cm ² /week (pierced part)	EN 1811 ³¹
Extractable Metal Content³²			
Antimony (Sb)	7440-36-0	60	ASTM F963
Arsenic (As)	7440-38-2	25	
Barium (Ba)	7440-39-3	1000	
Cadmium (Cd)	7440-43-9	Not Detected [RL=5]	
Chromium (Cr)—total	7440-47-3	60	
Mercury (Hg)	7439-97-6	60	
Selenium (Se)	7782-49-2	500	

H. Organotin Compounds

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Mono-, Di- & Tri-butylin derivatives	Various	Usage Ban [TR=1] (Sum of all)	Ethanol extraction + ISO 17353 [RL=0.05]
Mono-, Di- & Tri-methyltin derivatives			
Mono-, Di- & Tri-phenyltin derivatives			
Mono-, Di- & Tri-octyltin derivatives			

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

29 Children's products are defined as products designed and marketed for children age 12 and below.

30 Applicable to metallic parts when the metallic part surface has direct and prolonged skin contact.

31 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.

32 Extractable Metal Content Restrictions applicable for sundries and jewelry for children only.

I. Solvents

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Benzene	71-43-2	Usage Ban [TR=5]	Solvent extraction / GC-MS or LC-MS
N,N-Dimethylformamide (DMF)	68-12-2	1000	
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	
N-Methylpyrrolidone (NMP)	872-50-4	Usage Ban [TR=10]	
Tetrachloroethylene (Perchloroethylene)	127-18-4	1	
Formamide	75-12-7	1000	
Trichloroethylene (TCE)	79-01-6	40	
Toluene	108-88-3	Usage Ban [TR=1,000]	

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 ³³ :			CPSC-CH-C1001-09.3	
Di[ethylhexyl] phthalate (DEHP)	117-81-7	Usage Ban [TR=200]		
Di-n-octyl phthalate (DNOP)	117-84-0	Usage Ban [TR=500 mg/kg each phthalate; 1,000 mg/kg total phthalates including DEHP]		
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			
Dibutyl phthalate (DBP)	84-74-2			
Diethyl phthalate (DEP)	84-66-2			
Di-C6-8-branched Alkyl phthalates (DIHP)	71888-89-6			
Di-C7-11-branched Alkyl phthalates (DHNUP)	68515-42-4			
Di-n-hexylphthalate (DNHP)	84-75-3			
Di-(2-methoxyethyl) phthalate (DMEP)	117-82-8			

33 LS&Co. imposes a policy of Usage Ban for all esters of ortho-phthalic acid; however, listed phthalates are to be tested.

K. Components and Residuals from Auxiliary Manufacturing³⁴

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Acetophenone	98-86-2	50	Solvent extraction / GC-MS
Benzylchloride	100-44-7	2	
Ethylbenzene	100-41-4	15	
Chlorinated paraffins ³⁵	Various	Usage Ban [TR=1]	
Formaldehyde ³⁶	50-00-0	<u>Textile</u> Children: 16 Adults: 65 <u>Natural Leather</u> Children: 16 Adults (with direct skin contact) ³⁷ : 65 Adults (without direct skin contact) ³⁸ : 250	Textile: ISO 14184-1 Natural Leather: Products for markets other than China: ISO 17226-2 Products for China market: GB/T 19941
Perfluorooctane sulfonate (PFOS)	Various	Usage Ban [TR=1 $\mu\text{g}/\text{m}^2$]	Solvent extraction / GC-MS or LC-MS
Perfluorooctanoic acid (PFOA)	Various	Usage Ban [TR=1]	
<i>p</i> -Phenylenediamine	106-50-3	50	
2-Phenoxyethanol	122-99-6	400	

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

³⁵ Including short chain chlorinated paraffin from C₁₀ to C₃₀, where chlorine content 20% to 70%. Use LC-MS for C₂₀ to C₃₀.

³⁶ **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, Method A.

³⁷ Direct skin contact means any part of the product (such as collar, cuff, body or sleeves) that has direct prolonged contact with the skin. An example is leather gloves without inner lining.

³⁸ 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 are considered direct skin contact.

L. Polycyclic Aromatic Hydrocarbons (PAH)

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Benzo[a]pyrene	50-32-8	1 10 [Sum of all PAH]	ZEK 01.4-08/GC-MS or LC-MS
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]fluoranthene	205-82-3		
Chrysene	218-01-9		
Benzo[k]fluoranthene	207-08-9		
Acenaphthene	83-32-9		
Acenaphthalene	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 ³⁹	91-20-3		
Phenanthrene	85-01-8		
Pyrene	129-00-0		

M. Restriction on Packaging^{40,41}

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Cadmium (Cd)	7440-43-9	Usage Ban [TR=100 mg/kg total]	CEN/TR 13695-1 Acid digestion with ICP analysis
Lead (Pb)	7439-92-1		
Chromium (Cr ⁶⁺)— hexavalent	18540-29-9		
Mercury (Hg)	7439-97-6		
PVC	9002-86-2	Usage Ban	Beilstein Test for screening, FTIR for confirmation
Dimethyl fumarate	624-49-7	Usage Ban [TR=0.1]	Solvent extraction / GC-MS, For confirmation, LC-MS

³⁹ If GCMS screening or PAH analysis shows only naphthalene, apply limit value for final product as 25 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..

⁴⁰ Packaging means transportation packaging as well as product packaging, i.e., any material used for the containment, protection, handling, delivery, and presentation of finished goods (article).

⁴¹ For metals, concentration is calculated at element level.

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

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
NP & OP	Various incl. 104-40-5 & 140-66-9	Usage Ban [TR=50 (sum of all)]	Extraction in Methanol; detection and quantification by LC-MS
NPEO & OPEO (EO) ₁₋₁₅	Various	Usage Ban [TR= 250 (sum of all)]	

O. RoHS⁴²—Electrical and Electronic Equipment

Chemical Substance ⁴³	CAS Number	Limit Value Final Product (mg/kg)	Test Method	
Cadmium (Cd)	7440-43-9	100	RoHS Directive (2002/95/EC) 111/54/CDV: IEC 62321, Ed. 3	
Chromium (Cr ⁶⁺)— hexavalent	18540-29-9	1000 for each substance		
Lead (Pb)	7439-92-1			
Mercury (Hg)	7439-97-6			
Polybrominated biphenyls (PBBs)	Various			
Polybrominated diphenyl ethers (PBDE)	Various			

P. N-Nitrosamines

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
N-Nitrosodimethylamine	62-75-9	Usage Ban [TR=50 (sum of all)]	GB/T24153-2009 ⁴⁴
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		

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.

⁴⁴ [GB25038-2010](#) "Rubber Shoes Health and Safety Specifications" and GB25036-2010 "Children's Canvas Rubber Footwear [Shoes]"

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, parts, chemicals, and other goods supplied for the production of LS&Co. apparel, accessories, or other products.

Purpose

The purpose of this section is to identify substances not commonly found in apparel, footwear, non-apparel, accessories, or other products but are nonetheless restricted from LS&Co. products. As with *Section 1*, this section notes whether each listed substance is prohibited or limited 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- <i>p</i> -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- <i>p</i> -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- <i>p</i> -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- <i>p</i> -dioxin	19408-74-3		
1,2,3,6,7,8-Hexachloro-dibenzo- <i>p</i> -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		

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Dioxins and Furans, continued

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Group 3			
1,2,3,4,6,7,8-Heptachloro-dibenzo- <i>p</i> -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- <i>p</i> -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-Octachlorodibenzofuran	39001-02-0		
Group 4			
2,3,7,8-Tetrabromodibenzo- <i>p</i> -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- <i>p</i> -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- <i>p</i> -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- <i>p</i> -dioxin	110999-46-7		
1,2,3,6,7,8-Hexabromo-dibenzo- <i>p</i> -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			
Amosite			
Anthophyllite			
Chrysotile			
Crocidolite			
Tremolite			

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C. Pesticides

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Aldicarb	116-06-3		
Aldrin	309-00-2		
Chlordane	57-74-9		
Chlordimeform	6164-98-3		
1,2-Dibromo-3-Chloropropane (DBCP)	96-12-8		
<i>p,p</i> -Dichlorodiphenyl-dichloroethane (<i>p,p</i> -DDD)	72-54-8		
<i>o,p</i> -Dichlorodiphenyl-dichloroethane (<i>o,p</i> -DDD)	53-19-0		
<i>p,p</i> -Dichlorodiphenyl-dichloroethylene (<i>p,p</i> -DDE)	72-55-9		
<i>o,p</i> -Dichlorodiphenyl-dichloroethylene (<i>o,p</i> -DDE)	3424-82-6		
<i>p,p</i> -Dichlorodiphenyl-trichloroethane (<i>p,p</i> -DDT)	50-29-3		
<i>o,p</i> -Dichlorodiphenyl-trichloroethane (<i>o,p</i> -DDT) ⁴⁵	789-02-6		
2,4-Dichlorophenoxy-acetic acid, its salts and compounds ⁴⁶	97-75-7		Not Detected U.S. EPA Methods: 8081A / 8151A [RL=0.5]
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 ⁴⁷	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		

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⁴⁵ Amount to be calculated on the free acid.

⁴⁶ Different salts and compounds of 2,4-Dichlorophenoxy-acetic acid with various CAS numbers. Amount to be calculated on the free acid.

⁴⁷ 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).

Pesticides, continued

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Paraquat	1910-42-5	Not Detected	U.S. EPA Methods: 8081A / 8151A [RL=0.5]
Parathion	56-38-2		
Perthane	72-56-0		
Quintozene	82-68-8		
Strobane	8001-50-1		
Telodrin	297-78-9		
Timiperone (DTTB)	57648-21-2		
Toxaphene	8001-35-2		
2,4,5-Trichlorophenoxyacetic acid (2,4,5-T), salts, compounds	Various		
2-(2,4,5-Trichlorophenoxy) propionic acid, salts, compounds	Various		

continued on next page

D. Other Organic Chemicals

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method
Bisphenol A	80-05-7	Not detected [TR=0.1]	
Halogenated biphenyls, including: • Polychlorinated biphenyl (PCB)	1336-36-3 53469-21-9		
Halogenated diarylalkanes	Various		
Halogenated naphthalenes	Various		
Halogenated terphenyls, including: • Polychlorinated terphenyl (PCT)	Various	Usage Ban [TR=1]	Solvent extraction / GC-MS
Halogenated diphenyl methanes, including: • Monomethyl-dibromo- diphenyl methane ⁴⁸ • Monomethyl-dichloro- diphenyl methane ⁴⁹ • Monomethyl-tetrachloro- diphenyl methane ⁵⁰	99688-47-8 81161-70-8 76253-60-6		

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		
Ethyl acrylate	140-88-5	10	
Ethyl methacrylate	97-63-2	50	
Methyl methacrylate	80-62-6		

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⁴⁸ Also DBBT.

⁴⁹ Also Ugilec 121 or Ugilec 21.

⁵⁰ Also Ugilec 141.

F. Fluorinated Substances

Chemical Substance	CAS Number	Limit Value Final Product (mg/kg)	Test Method		
Sulfur hexafluoride - SF ₆	2551-62-4				
Hydrofluorocarbons (HFCs)					
HFC-23 - CHF ₃	75-46-7				
HFC-32 - CH ₂ F ₂	75-10-5				
HFC-41 - CH ₃ F	593-53-3				
HFC-43-10mee - C ₅ H ₂ F ₁₀	138495-42-8				
HFC-125 - C ₂ HF ₅	354-33-6				
HFC-134 - C ₂ H ₂ F ₄	359-35-3				
HFC-134a - CH ₂ FCF ₃	811-97-2				
HFC-152a - C ₂ H ₄ F ₂	75-37-6				
HFC-143 - C ₂ H ₃ F ₃	430-66-0				
HFC-143a - C ₂ H ₃ F ₃	420-46-2				
HFC-227ea - C ₃ HF ₇	431-89-0				
HFC-236cb - CH ₂ FCF ₂ CF ₃	677-56-5	Not Detected	GC-MS		
HFC-236ea - CHF ₂ CHFCF ₃	431-63-0				
HFC-236fa - C ₃ H ₂ F ₆	690-39-1				
HFC-245ca - C ₃ H ₃ F ₅	679-86-7				
HFC-245fa - CHF ₂ CH ₂ CF ₃	460-73-1				
HFC-365mfc - CF ₃ CH ₂ CF ₂ CH ₃	406-58-6				
Perfluorocarbons (PFCs)					
Perfluoromethane - CF ₄	75-73-0				
Perfluoroethane - C ₂ F ₆	76-16-4				
Perfluoropropane - C ₃ F ₈	76-19-7				
Perfluorobutane - C ₄ F ₁₀	355-25-9				
Perfluoropentane - C ₅ F ₁₂	678-26-2				
Perfluorohexane - C ₆ F ₁₄	355-42-0				
Perfluorocyclobutane - C ₄ F ₈	115-25-3				

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 the Suppliers and Sources to identify and comply with all applicable requirements as set out in REACH and by the applicable laws of each country and local jurisdiction in which the Supplier and Sources conduct business.

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, parts, chemicals, and other goods supplied for use in LS&Co. apparel, accessories, 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 in complying with REACH [Regulation (EC) Number 1907/2006 of the European Parliament and of the Council]. Every LS&CO. Supplier agrees to inform LS&CO. of any substances listed in the candidate or pre-candidate list in European Chemical Agency (ECHA website: www.echa.europa.eu) present in any and all products, including 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' duty to comply with the regulation.

What Suppliers 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 is obligated to track not only the current SVHCs, as listed on the ECHA website, but also the entire list of potential SVHCs⁵¹. Suppliers shall map each step in their supply chains, including the sourcing and processing of raw materials, parts, chemicals, and other product ingredients, and immediately inform LS&Co. according to the Information Duty (Article 33) of all cases where a substance listed in the "SVHC List or Candidate List or Pre-candidate List" is present in the product or other materials, parts, components, packaging, or other goods (including sundries) provided for use in any LS&Co. labeled or distributed product.

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⁵¹ Substances of Very High Concern (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 Chemical Bureau website, <http://esis.jrc.ec.europa.eu/index.php?PGM=pbt>. The listing is inclusive of SVHCs, candidate substances and pre-candidate substances, as defined below:

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

Pre-candidate substances are found at <http://echa.europa.eu/registry-of-current-svhc-intentions>

Others

Other countries have developed or are developing similar laws and regulations, such as, but not limited to, China, Canada, Indonesia, Vietnam and South Korea. In the United States, states—including 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 local jurisdiction in which the Supplier and Source conducts business.

Section 4: Chemical Information Log

Application

LS&Co. Suppliers must communicate with their chemical(s) Sources about the LS&Co. RSL. Suppliers must request a comprehensive **Chemical Information Log** from each and every chemical Source. Chemical Sources must review LS&Co.'s RSL to determine which substances in their preparations (chemical mixtures), if any, may violate LS&Co.'s RSL.

The CIL must be sent to LS&Co. by e-mail (rsl@levi.com).

The CIL should be completed for each preparation used in the manufacture of any LS&Co. product. The CIL includes 6 columns. The first column should be completed with the chemical trade name, as indicated on product packaging documents, Safety Data Sheet (SDS) and label. For each preparation, the chemical Source shall indicate whether such chemical:

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

When a preparation contains, or may form, an RSL substance in a concentration that could cause an LS&Co. product to exceed corresponding RSL restrictions, the chemical Supplier must identify the RSL substance and concentration on the CIL. The concentration set forth on the CIL must be the concentration of the RSL substance in the chemical preparation.

Purpose

LS&Co. acknowledges that superior knowledge of specific chemical data may reside with the chemical company. It is therefore imperative to compliant product manufacturing that the chemical Source properly communicates to their customer (the product manufacturer) the existence of RSL-listed substances. Such information flow from chemical Source to product manufacturer is one way of allowing the product manufacturer to properly understand the potential for each chemical to meet the RSL requirements.

We believe the CIL allows for such information flow in a clear and concise manner.

Appendix 1: Contact Information

General contact e-mail: rsl@levi.com

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

Canada and United States of America Elena Pidgeon Levi Strauss & Co. 1155 Battery Street San Francisco, CA 94111 USA Tel: +1.415.501.6523 Fax: +1.415.501.7691 E-mail: epidgeon@levi.com	Latin and South America Gene Croyle Levi Strauss & Co. 3249 Steven Drive Plano, Texas 75023 USA Tel: +1.972.839.2212 E-mail: gcroyle@levi.com
Europe, Middle East and Africa Szilard Szarvas Levi Strauss & CO. Europe Vuurborg 1831, Diegem, BELGIUM Tel: +32.2.641.6725 Fax: +32.2.641.6267 E-mail: sszarvas@levi.com	South Asia Niraj Singh Levi Strauss (India) Pvt. Ltd. Raheja Plaza, IV Floor, No. 17/1 – 1, Commissariat Road Bangalore – 560025, INDIA Tel: +91.80.4158.9741 Fax: +91.80.4112.8491 E-mail: nsingh@levi.com
Global Alex Ho Levi Strauss Global Trading Co. II Ltd. Level 23 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 Lawrence Lai Levi Strauss Global Trading Co. II Ltd. Level 23, Standard Chartered Tower, Millennium City 1 388 Kwun Tong Road, Kowloon HONG KONG Tel: +852.3793.6955 Fax: +852.2414.1756 E-mail: llai@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 trace amount represents the permitted unavoidable trace presence of a substance that is allowed to be found on the garment when 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 made for, marketed for use by, or marketed to children age 12 and under. All Girls's articles size 0-16 and Boys' articles size 8-20 are included within the definition of children's products.

Concentration Limit – The concentration limit is set for each substance as measured on the final product and 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 the apparel 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.

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®, dENiZEN™, Dockers®, Signature by Levi Strauss & Co.™ products, as well as products provided for distribution by LS&Co. Products include those sourced directly by LS&Co., products sourced by an agent, and those designed and sourced by our licensee partners.

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Definitions (continued)

Non-Apparel Products—Non-apparel products are those that are made from materials other than fabric or leather. 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 reporting limit is 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 raw materials, parts, chemicals, packaging, and/or components or other goods for LS&Co. 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 that contract with LS&Co. to produce finished products, apparel, accessories and other products for LS&Co. Suppliers may also contract with Sources for raw materials, parts, chemicals, packaging, and/or components or other goods for LS&Co. apparel, accessories, and other products.

Usage Ban—A prohibition of any use of the substance during any and all stages of product manufacturing. However, the RSL identifies an allowable trace amount of some substances due to unavoidable contamination.

Appendix 3: Product Testing & Data Management

Product Testing

LS&Co. currently maintains various product testing programs to validate RSL compliance. Notwithstanding LS&Co.'s testing programs, the Supplier is fully responsible for obtaining all necessary knowledge and information required to understand and execute business processes that ensure RSL compliance. The Supplier is also responsible for performing analytical testing on products to verify the product's compliance with all RSL requirements. The Supplier must test products only at LS&Co. approved laboratories (see Appendix 6).

Products should be tested as prescribed in the following tables. Table A provides testing guidance based on material type. Table B provides testing guidance based on finish type; Table C provides testing guidance for screen prints. Table D provides testing guidance for footwear material. These tables define—but are not limited to defining—appropriate tests. In addition to the testing guidance provided in the following tables, LS&Co. may at any time request additional testing to validate product compliance with the RSL. All costs associated with product testing are the responsibility of the Supplier.

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 ⁵²	X ⁵³	X ⁵⁴	X ⁵⁵		
Chromium (VI)			X			
Total Cadmium			X	X	X	X
Total Lead			X	X	X	X
Nickel					X	X
Formaldehyde	X	X	X	X		
Phthalates	X ⁵⁶	X ⁵⁷		X	X ⁵⁸	
PCP/TeCP/TriCP	X		X			
APEOs	X	X	X	X		

X indicates applicable test

continued on next page

52 Testing is applicable for natural textiles with PU coating.

53 Testing is applicable for synthetic textiles with PU coating.

54 Testing is applicable for natural leather with PU coating. If natural leather without PU coating, then isocyanates and phthalates tests are not required.

55 Testing is applicable for PU foam.

56 Testing is applicable for coated natural textiles.

57 Testing is applicable for coated synthetic textiles.

58 Testing is applicable for all lacquered metallic embellishments and trims.

Table B: RSL Testing Guide Based on Finish Type

	Resin / Easy Care	Tinted	Overdye
Aromatic Amines		X	X
Other Dyes			X
Isocyanates	X		
Metals		X	X
Formaldehyde	X	X	X
Organotin	X		
APEOs	X	X	X

X indicates applicable test

Table C: RSL Testing Guide Based on Print Type

	Plastisol Prints	Glitter Prints	Puff Prints	Water-base Prints	Flock Prints
Aromatic Amines	X	X	X	X	X
Total Cadmium	X	X	X	X	X
Total Lead	X	X	X	X	X
Formaldehyde	X	X	X	X	X
Organotin	X	X	X		
Phthalates ⁵⁹	X	X	X		X
APEOs	X	X	X	X	X

X indicates applicable test

continued on next page

59 All plastisol prints must be phthalates- and PVC-free.

Table D: RSL Testing Guide Based on Footwear Material

	Natural textile	Synthetic textile	Blended textile	Natural leather	Synthetic leather	PU coated natural leather	Foam	Plastics (including sole)	Metallic embellishment and trims
Aromatic Amines	X	X	X	X	X	X			
Disperse Dyes		X	X						
Other Dyes	X	X	X	X					
PCP/TeCP/TriCP	X	X	X	X		X			
Isocyanates ⁶⁰					X	X	X	X	
Chromium (VI)					X	X			
Total Cadmium					X	X	X		X
Total Lead					X	X	X		X
Nickel									X ⁶¹
Formaldehyde	X	X	X	X	X	X	X	X	
Phthalates					X	X			
Extractable Heavy Metals	X	X	X	X	X	X			
PAH							X		
Organotin							X	X	
N-nitrosamines									X
APEOs	X	X	X	X	X	X	X	X	

X indicates applicable test.

⁶⁰ Testing is applicable for PU materials.
⁶¹ For metal components with direct and prolonged skin contact (e.g., grommet).
⁶² Applicable for only lacquered metal items.

RSL Test Data Management

LS&Co. uses a database service as a tool to manage RSL testing data. It is mandatory for all third party laboratories, approved for performing LS&Co. Restricted Substances List (RSL) testing, to upload all test data to this database (C*Insight).

Once the data are uploaded, each laboratory must use this database to generate the LS&Co. RSL Test Report (Technical Report) for RSL testing performed by this lab.

It is mandatory that all approved labs register at <https://secure7.cinsight.net/rsl-levis/login.do> for access to this database.

The laboratory may contact the appropriate regional product safety representative as identified in Appendix 1 for the instruction manual or for any further information.



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 8	2429-71-2	Direct Orange 6	6637-88-3
Acid Black 94	6358-80-1	Direct Blue 9	No CAS number	Direct Orange 7	2868-76-0
Acid Black 131	12219-01-1	Direct Blue 10	4198-19-0	Direct Orange 8	64083-59-6
Acid Black 132	12219-02-2	Direct Blue 14	72-57-1	Direct Orange 10	6405-94-3
Acid Black 209	No CAS number	Direct Blue 15	2429-74-5	Direct Orange 108	No CAS number
Acid Brown 415	No CAS number	Direct Blue 22	2586-57-4	Direct Red 1	25188-24-3
Acid Orange 24	1320-07-6	Direct Blue 25	25180-27-2	Direct Red 2	992-59-6
Acid Orange 45	2429-80-3	Direct Blue 35	No CAS number	Direct Red 7	No CAS number
Acid Red 4	5858-39-9	Direct Blue 53	314-13-6	Direct Red 10	25188-29-8
Acid Red 5	No CAS number	Direct Blue 76	16143-79-6	Direct Red 13	25188-30-1
Acid Red 24	No CAS number	Direct Blue 151	110735-25-6	Direct Red 17	No CAS number
Acid Red 73	5413-75-2	Direct Blue 160	No CAS number	Direct Red 21	6406-01-5
Acid Red 85	3567-65-5	Direct Blue 173	No CAS number	Direct Red 22	No CAS number
Acid Red 114	6459-94-5	Direct Blue 192	159202-76-3	Direct Red 24	No CAS number
Acid Red 115	No CAS number	Direct Blue 201	60800-55-7	Direct Red 26	No CAS number
Acid Red 116	No CAS number	Direct Blue 215	6771-80-8	Direct Red 28	573-58-0
Acid Red 128	6548-30-7	Direct Blue 295	6420-22-0	Direct Red 37	3530-19-6
Acid Red 148	No CAS number	Direct Brown 1	3811-71-0	Direct Red 39	6358-29-8
Acid Red 150	No CAS number	Direct Brown 1:2	2586-58-5	Direct Red 44	6548-29-4
Acid Red 158	8004-55-5	Direct Brown 2	25255-06-5	Direct Red 46	2302-97-8
Acid Red 167	No CAS number	Direct Brown 6	25180-39-6	Direct Red 62	No CAS number
Acid Red 264	No CAS number	Direct Brown 25	33363-87-0	Direct Red 67	No CAS number
Acid Red 265	6358-43-6	Direct Brown 27	No CAS number	Direct Red 72	8005-64-9
Acid Red 420	No CAS number	Direct Brown 31	25180-41-0	Direct Violet 1	25188-44-7
Acid Violet 12	6625-46-3	Direct Brown 33	No CAS number	Direct Violet 12	2429-75-6
Acid Violet 49	1694-09-3	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

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	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 Name	CAS Number (if available)	C.I. Number
Pigment Red 41	No CAS number	21200
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 87	No CAS number	21107:1
Pigment Yellow 114	71872-66-7	21092
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

Azo Dyes without CAS Numbers		
Acid Black 209	Direct Blue 160	Direct Violet 21
Acid Brown 415	Direct Blue 173	Direct Yellow 1
Acid Red 5	Direct Brown 27	Direct Yellow 48
Acid Red 24	Direct Brown 33	Disperse Red 151
Acid Red 115	Direct Brown 51	Permanent Brown B
Acid Red 116	Direct Brown 101	Pigment Chrome Yellow L Paste
Acid Red 148	Direct Brown 222	Pigment Orange 3
Acid Red 150	Direct Green 8:1	Pigment Orange 14
Acid Red 167	Direct Orange 108	Pigment Orange 50
Acid Red 264	Direct Red 7	Pigment Orange 63
Acid Red 420	Direct Red 17	Pigment Red 39
Basic Red 42	Direct Red 22	Pigment Red 41
Direct Black 29	Direct Red 24	Pigment Red 162
Direct Blue 3	Direct Red 26	Pigment Yellow 87
Direct Blue 9	Direct Red 62	Pigment Yellow 172
Direct Blue 35	Direct Red 67	

Appendix 6: Approved Laboratories

<p>SHENZHEN ACADEMY OF METROLOGY & QUALITY INSPECTION (SZ)</p> <p>Ms. Cherry Min Kang Road, Minzhi Avenue, Minzhi Subdistrict, Bao An District, ShenZhen, CHINA E-mail: lingping212@126.com Tel: +86.755.2752.8607 Fax: +86.755.2752.8479</p>	<p>GUANGZHOU TEXTILE AND FIBER TESTING INSTITUTION NATIONAL TEXTILE AND GARMENT QUALITY SUPERVISION TESTING CENTRE (GZ)</p> <p>Ms. Guo Ying Liao / Mr. Tomorrow Ruan No.35-2, Caofangwei, Binjiang Middle Road, Guangzhou City CHINA E-mail: gjfz2006@tom.com Tel: +86.20.3440.2318 +86.20.8441.4682 Fax : +86.20.3440.1376</p>
<p>* For China market product</p> <p>INTERTEK TESTING SERVICES Ltd. (Hong Kong)</p> <p>Ms. Leona Wong Unit C, 4/F., Garment Centre 576 Castle Peak Road, Kowloon HONG KONG E-mail: leona.wong@intertek.com kubbey.fong@intertek.com Tel: +852.2173.8251, +852.2173.8339 Fax: +852.2785.7998</p>	<p>* For China market product</p> <p>INTERTEK TESTING SERVICES Ltd. (Shanghai)</p> <p>Ms. Linda Dang / Ms. Jane Wu 2/F, Building No.2, Shanghai Comalong Industrial Park, 889 Yi Shan Road, Shanghai 200233, CHINA E-mail: linda.dang@intertek.com jane.wu@intertek.com Tel: +86.21.6190.7249 +86.21.6091.7026 Fax: +86.21.6485.0559</p>
<p>MODERN TESTING SERVICES Ltd—Hong Kong</p> <p>Ms. Karen Chung / Ms. Candy Wong Unit 4D, Leory Plaza, 15, Cheung Shun Street, Cheung Sha Wan, Kowloon, HONG KONG E-mail: kchung@mts-global.com cwong@mts-global.com Tel: +852.3604.1301, +852.3604.1350 Fax: +852.2323.4180</p>	<p>MODERN TESTING SERVICES Ltd—Dongguan</p> <p>Mr. Derek Yam / Mr. Poniran Tukimin No. 76, Liang Ping Road, Xin Jiu Wei Cun, Liaobu, Dongguan, Guangdong, CHINA E-mail: derekyam@mts-global.com ptukimin@mts-global.com Tel: +86.769.8112.0820 Fax: +86.769.8112.0815</p>

Approved Laboratories, continued

<p>Bureau Veritas Hong Kong Limited</p> <p>Ms. Parker Pat 1/F, Pacific Trade Centre 2 Kai Hing Road, Kowloon Bay, Kowloon, HONG KONG</p> <p>E-mail: parker.pat@hk.bureauveritas.com Tel: +852 2332 0888 Fax: +852 2331 0688</p>	<p>SGS Hong Kong Ltd.</p> <p>Ms. Christy Chan 5-8/F, 28/F, Metropole Square, 2 On Yiu Street, Siu Lek Yuen, Shatin, NT, HONG KONG</p> <p>E-mail : christy.chan@sgs.com Tel: +852.2765.3680 Fax: +852.2334.8752</p> <p>* For Japanese vendor only</p>
<p>BV CPS TEST LABORATUVARLARI LTD. STI. BUREAU VERITAS CONSUMER PRODUCTS SERVICES</p> <p>Mahmutbey Mahallesi, Haci Bostan Caddesi No:4, Kat:3-4-5 Bagcilar 34218 Istanbul TURKEY</p> <p>Responsible person for the AL testing lab is Elif Bozkurt.</p> <p>E-mail: elif.bozkurt@tr.bureauveritas.com Tel: +90.212.494.3535 (Ext. 423) Fax: +90.212.494.3560</p>	<p>TEXANLAB LABORATORIES Pvt. Ltd.</p> <p>Mr. Rahul Bhajekar R-855, 1st Floor, TTC Industrial Area Rabale P.O. Ghansoli, Navi Mumbai 400701, INDIA</p> <p>E-mail: rahul.bhajekar@texanlab.com Tel: +91.22.6141.7100 Fax: +91.22.6141.7101</p>
<p>INTERTEK TESTING SERVICES—Turkey</p> <p>Merkez Mah Sanayi Cad No23 Altindag Plaza Yenibosna 34197 Istanbul TURKEY</p> <p>Responsible for RSL testing: Mr. Askin Guneri</p> <p>E-mail: Askin.guner@intertek.com Tel: +90.212.496.46.46 Fax: +90.212.452.80.55</p>	<p>INTERTEK TESTING SERVICES—Guragon</p> <p>Mr. Sunil Gupta 290, Udyog Vihar, Phase II, Gurgaon, Haryana – 122015 INDIA</p> <p>Email: sunil.gupta@intertek.com Tel: +91.124.430.3592</p>

Approved Laboratories, continued

<p>BUREAU VERITAS CONSUMER PRODUCTS SERVICES Ltd.—Bangladesh</p> <p>Nur Alam Senior Manager, Analytical Laboratory Plot no : 130, DEPZ Extension Area, Savar, Dhaka, BANGLADESH E-mail: nur.alam@bd.bureauveritas.com Tel: +880 2 7789464-6 / Ext. 207 Cell: +88 017 555 63 404; +88 017 11220187 Fax: +880 2 7789462-3</p>	<p>INTERTEK TESTING SERVICES—Bangladesh</p> <p>Mr. Badrul Islam 5th & 6th Floor, T.K Bhaban, 13 Kawran Bazar C/A, Dhaka - 1215. BANGLADESH Email: badrul.islam@intertek.com Tel: +880.2.815.6226 to 28 or +880.2.815.6579 to 80 Ext: 472 Fax: +880.2.912.5866</p>
<p>TÜV SÜD Product Service GmbH</p> <p>Dr. Benedikt Hendar Daimlerstrasse 40 60314 Frankfurt GERMANY</p> <p>E-mail: Benedikt.Hendar@tuev-sued.de Tel: +49 69 408968-170 Fax: +49 69 408968-179</p>	<p>MODERN TESTING SERVICES GmbH—Germany</p> <p>Dr. Dieter Sedlak Provinostrasse 52 D-86153 Augsburg GERMANY</p> <p>E-mail: d.sedlak@mts-germany.eu Tel: +49.821.5697.9610 Fax: +49.821.5697.9690</p>
<p>NISSEN KEN</p> <p>Mr. Satoru Kiuchi 2-16-11 Kuramae Taito – Ku Tokyo 111-0051 JAPAN</p> <p>E-mail: s_kiuchi@nissenken.or.jp Tel: +81.3.5809.1360 Fax: +81.3.5809.1361</p>	<p>Note: Some of the Testing Laboratories are not capable of performing some individual tests (such as Monomers/Isocyanates, etc). It is recommended to check the capability of selected laboratory for all required tests for submitted sample(s).</p>

Notes

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