

# Restricted Substance List (RSL) – Euro Sko Norge AS

Product related chemicals - revised February 2019

Please only use Euro Sko Norge AS **authorised** laboratory.

For leather metods polyurethane (PU) is applicable

Chemical substances	Eurosko Requirement Limit value in product	Test method Test equipment
<b>Allergenic dyes</b> appendix 1 for specified dyes	See Usage ban / below 50 mg/kg	EN ISO 16373
<b>Navy Blue (banned mordant dye)</b> CAS RN 405-665-4	Usage ban / below 50 mg/kg	EN ISO 16373
<b>Azo dyes</b> , degradable to carcinogenic arylamines See appendix 2 for specified dyes	Usage ban / below 20 mg/kg	ISO 17234-1, -2 (leather) EN 14362-1, -3 (textile)
<b>Arsenic and Arsenic salts</b> CAS RN 7440-38-2	Usage ban / below 50 mg/kg, total content	EN ISO 17072-2 (leather) EN 16711-1 (textile)
<b>Cadmium and cadmium salts</b> CAS RN 7440-43-9	Usage ban / below 50 mg/kg, total content	EN ISO 17072-2 (leather) EN 16711-1 (textile)
<b>CMR, Carcinogenic, Mutagenic, Reproductive toxic dyestuffs</b> See appendix 3 for specified dyes	Usage ban / below 20 mg/kg	EN ISO 16373

<b>Chloroparaffins</b> Short-chain chloroparaffins (C10 - C13) CAS RN 85535-84-8 Medium-chain chloroparaffins(C14-C17) CAS RN 85535-85-9	Usage ban / below 100 mg/kg	ISO 18219
<b>Chromium VI (Cr+6)</b> CAS RN 18540-29-9.	0.5 mg/kg (textile & leather)	EN ISO 17075-1 (leather) UV-VIS spectrometer (textile)
<b>Formaldehyde</b> CAS RN 50-00-0	Below 30 mg/kg	EN ISO 141 84-1 (Textil)    ISO 17226 (Leather)
<b>C,C'-azodi (formamide) (ADCA)</b> CAS RN 123-77-3	Usage ban / below 100 mg/kg	LC-MS
<b>Formamide</b> CAS RN 75-12-7	Below 100 mg/kg	Test equipment:                    GC- MS or LC-MS
<b>Tris (2-chlorethyl) phosphate (TCEP)</b> CAS RN 115-96-8	Usage ban / below 5 mg/kg	EN ISO 17881-2
<b>Lead and Lead salts</b> CAS RN 7439-92-1 See appendix 4	Usage ban / below 50 mg/kg, total content	EN ISO 17072-2 (leather) EN 16711-1 (textile)
<b>Mercury and Mercury compounds</b> CAS RN 7439-97-6 See appendix 5	Usage ban / below 1 mg/kg	EN ISO 17072-2 (leather) EN 16711-1 (textile)

<b>Nickel</b> CAS RN 7440-02-0	Usage ban / below 0,05 ug/cm <sup>2</sup> Products intended to come into direct and prolonged contact with skin.	EN 12472:2005+A1:2009 EN 1811:2011+A1:2015
<b>Perfluorooctane carboxylic acid, PFOA and related substances</b> CAS RN 335-67-1 See appendix 6 - All regulated per- and polyfluorinated substances in EU and the Stockholm Convention.	Usage ban / below 0,01 mg/kg Usage ban of fluorochemicals that transform into PFOA and related substances.	No standardized test method available LC-MS (ionic PFAS)
<b>Perfluorooctane sulfonate, PFOS and related substances</b> CAS RN 1763-23-1 See appendix 6 - All regulated per- and polyfluorinated substances in EU and the Stockholm Convention.	Usage ban / below 0,0001 mg/kg Usage ban of fluorochemicals that transform into PFOS and related substances.	EN/TS 15968:2009
<b>Phthalates esters</b> CAS RN 7439-97-6 See appendix 7	Usage ban / below 100 mg/kg	EN ISO 14389:2014
<b>Trixylyl phosphate</b> CAS RN 25155-23-1	Usage ban / below 5 mg/kg	EN ISO 17881-2 (textile)
<b>Boric acid, borate compounds</b> See appendix 8	Usage ban / below 25 mg/kg	<b>Test equipment:</b> 1) AAS 2) ICP-MS and ICP-OES

<b>Benzotriazols</b> UV-320: 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320): CAS RN 3846-71-7 UV-328: 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol(UV-328): CAS RN 25973-55-1 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327). CAS RN 3864-99-1 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350): CAS RN 36437-37-3	Usage ban / below 50 mg/kg	GC-MS, LC-MS, GC-ECD
<b>Bisphenol A; BPA (4,4'-isopropylidenediphenol)</b> CAS RN 80-05-7	Usage ban / below 10 mg/kg	LC-MS

## PROCESS CHEMICALS

<b>Alkylphenol ethoxylates (APEO) and Alkylphenol (AP)</b> For example: Nonylphenol ethoxylates (NPEO) Octylphenol ethoxylates (OPEO) Nonylphenol (NP) Octylphenol (OP)	Usage ban / below 10 mg/kg	ISO 18254 (textile) ISO 18218-1 (leather)
<b>Aromatic</b> organic solvents	Usage ban / SNV 195651 No odour	GC-MS
<b>Aliphatic</b> organic solvents	Usage ban / SNV 195651 No odour	GC-MS
<b>Chlorinated organic solvents</b> See appendix 9	Usage ban / below 0,05 mg/kg, total content	Test equipment: GC-MS, GC-ECD

<b>Other organic solvents</b> See appendix 10	Should not exceed 100 mg/kg in products	CEN ISO/TS 16189 (footwear)
<b>Ethylenethiourea</b>	Usage ban / below 20 mg/kg	LC-MS
<b>Hydrazine</b>	Usage ban / below 200 mg/kg	UV-VIS Spectrometer
<b>PAH- Polycyclic aromatic hydrocarbons</b> See appendix 11	Usage ban / below 0,2 mg/kg	AfPS GS 2014-01-PAK
<b>Tin organic compounds</b> Biocides; TBT, TpHT, Stabilisers: DOT, DBT See appendix 12	Biocides: usage ban Stabilisers: usage ban below 0,2 mg/kg	GC-MS

## BIOCIDAL AGENTS

<b>Dimethylfumarate (DMFu)</b> CAS RN 624-49-7	Usage ban / below 0,1 mg/kg	ISO/TS 16186
<b>Pentachlorphenol (PCP)</b> CAS RN 87-86-5, 131-52-2 All isomers of Tetrachlorphenols (TeCP)	Usage ban / below 0,1 mg/kg	ISO 17070 (leather) XP G 08-015 (textile)
<b>Permethrin</b> CAS RN 52645-53-1	Usage ban / below 5 mg/kg	GC MS, LC-MS
<b>Silver compounds (Ag+)</b>	Usage ban / below 10 mg/kg, total content	ICP-MS, ICP-OES, AAS
<b>Triclosan</b> CAS RN 3380-34-5	Usage ban / below 0,05 mg/kg	GC MS, LC-MS

<b>Cu-HDO</b> (Bis-(N-cyclohexyldiazaniumdioxy) –copper) CAS RN 312600-89-8	Usage ban	GC-MS
<b>PHMB 1600; 1.8</b> CAS RN 27083-27-8	Usage ban	GC-MS

**OTHER**

<b>pH</b>	ISO 4045 (leather) ISO 3071 (textile)	3.5 - 7.0 (leather) 4.0 - 8.5 (textile)
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**APPENDIX 1**

## List of 20 allergenic disperse dyestuffs

<b>C.I. Name</b>	<b>CAS RN</b>
C.I. Disperse Yellow 1	119-15-3
C.I. Disperse Blue 35	12222-75-2
C.I. Disperse Blue 102	12222-97-8
C.I. Disperse Blue 106	12223-01-7
C.I. Disperse Yellow 39	12236-29-2
C.I. Disperse Orange 37/59/76	13301-61-6
C.I. Disperse Brown 1	23355-64-8
C.I. Disperse Blue 3	2475-46-9
C.I. Disperse Orange 1	2581-69-3
C.I. Disperse Yellow 3	2832-40-8
C.I. Disperse Red 11	2872-48-2
C.I. Disperse Red 1	2872-52-8
C.I. Disperse Red 17	3179-89-3
C.I. Disperse Blue 7	3179-90-6
C.I. Disperse Blue 26	3860-63-7
C.I. Disperse Yellow 49	54824-37-2
C.I. Disperse Blue 124	61951-51-7
C.I. Disperse Yellow 9	6373-73-5
C.I. Disperse Orange 3	730-40-5
C.I. Disperse Blue 1	2475-45-8

APPENDIX 2

List of 24 banned arylamines

Name	CAS RN
4,4-Methylene-bis[2-chloro-aniline]	101-14-4
4,4-Methylenedianiline	101-77-9
4,4'-oxydianiline	101-80-4*
4-chloroaniline	106-47-8
o-Dianisidine	119-90-4
4,4'-bi-o-toluidine	119-93-7
p-Cresidine	120-71-8*
2,4,5-trimethylaniline	137-17-7
4,4'-thiodianiline	139-65-1
4-Aminoazobenzene	60-09-3*
4-methoxy-m-phenylenediamine	615-05-4
4,4-Methylenedi-o-toluidine	838-88-0*
2,6-xylidine	87-62-7
o-Anisidine	90-04-0*
2-Naphthylamine	91-59-8
3,3-Dichlorobenzidine	91-94-1
Biphenyl-4-ylamine	92-67-1*
Benzidine	92-87-5
o-Toluidine	95-53-4*
2,4-xylidine	95-68-1
4-Chloro-o-toluidine	95-69-2
4-methyl-m-phenylenediamine	95-80-7*
o-Aminoazotoluene	97-56-3*
5-Nitro-o-toluidine	99-55-8

\* SVHC substances



**APPENDIX 3**

## List of 15 carcinogenic dye stuffs

<b>C.I. Name</b>	<b>CAS RN</b>
C.I. Direct Brown 95	16071-86-6
C.I. Direct Black 38	1937-37-7
C.I. Disperse Blue 1	2475-45-8
C.I. Direct Blue 6	2602-46-2
C.I. Acid Red 26	3761-53-3
C.I. Basic Red 9	569-61-9
C.I. Direct Red 28	573-58-0
C.I. Basic Violet 14	632-99-5
C.I. Disperse Orange 11	82-28-0
C.I. Disperse Orange 149	85136-74-9
C.I. Solvent Blue 4	6786-83-0*
C.I. Basic Blue 26,	2580-56-5*
C.I. Basic Violet 3	548-62-9*
Michler's base	101-61-1*
4,4'-bis(dimethylamino)-4''- (methylamino)trityl alcohol	561-41-1*

\*SVHC substances

## APPENDIX 4

## List of SVHC Lead compounds

Name	CAS RN
Lead chromate	7758-97-6
Lead sulfochromate	1344-37-2
Lead chromate molybdate sulphate	12656-85-8
Lead dipicrate	6477-64-1
Lead styphnate	15245-44-0
Lead diazide	13424-46-9
Lead hydrogen arsenate	7784-40-9
Lead monoxide (Lead oxide)	1317-36-8
Orange lead (Lead tetroxide)	1314-41-6
Lead bis(tetrafluoroborate)	13814-96-5
Trilead bis(carbonate)dihydroxide	1319-46-6
Lead titanium trioxide	12060-00-3
Lead titanium zirconium oxide	12626-81-2
Lead(II) bis(methanesulfonate)	17570-76-2
Silicic acid, lead salt	11120-22-2
Silicic acid (H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> ), barium salt (1:1), leaddoped	68784-75-8
Acetic acid, lead salt, basic	51404-69-4
Lead oxide sulfate	12036-76-9
[Phthalato(2-)]dioxotrilead	69011-06-9
Dioxobis(stearato)trilead	12578-12-0
Fatty acids, C16-18, lead salts	91031-62-8
Lead cyanamide	20837-86-9
Lead dinitrate	10099-74-8
Pentalead tetraoxide sulphate	12065-90-6
Pyrochlore, antimony lead yellow	8012-00-8
Sulfurous acid, lead salt, dibasic	62229-08-7
Tetraethyllead	78-00-2
Tetralead trioxide sulphate	12202-17-4
Trilead dioxide phosphonate	12141-20-7

APPENDIX 5

List of phenyl mercury substances

Name	CAS RN
Mercury (metal)	7439-97-6
Phenylmercury neodecanoat	26545-49-3
Phenylmercury octanoate	13864-38-5
Phenylmercury 2-ethylhexanoate	13302-00-6
Phenylmercury propionate	103-27-5
Phenylmercury acetate	62-38-4

APPENDIX 6

Regulated per and polyfluorinated compounds (PFAS)

Name	CAS RN
Perfluorooctane sulfonic acid and related substances	PFOS 1763-23-1
Perfluorohexane sulfonic acid	PFHxS 108427-53-8
Perfluorooctanoic acid and related substances	PFOA 335-67-1
Perfluorononan-1-oic-acid	PFNA 375-95-1
Nonadecafluorodecanoic acid and its sodium and ammonium salts	PFDA 3108-42-7, 335-76-2, 3830-45-3
NH <sub>4</sub> - Perfluorononan-1-oate	NH <sub>4</sub> -PFNO 4149-60-4
Na- Perfluorononan-1-oate	Na-PFNO 21049-39-8
Pentacosafuorotridecanoic acid	PFT <sub>r</sub> DA 72629-94-8
Tricosafuorododecanoic acid	PFDoA 307-55-1
Henicosafuoroundecanoic acid	PFUnA 2058-94-8
Heptacosafuorotetradecanoic acid	PFTA 376-06-7

## APPENDIX 7

## List of Phthalate esters

Name	CAS RN
DEHP	117-81-7
DBP	84-74-2
BBP	85-68-7
DINP	28553-12-0 & 68515-48-0
DIDP	26761-40-0 & 68515-49-1
DNOP	117-84-0
DIBP	84-69-5
DIHP	71888-89-6
DHNUP	68515-42-4
DMEP	117-82-8
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0
DIPP	605-50-5
N-pentyl-isopentylphthalate	776297-69-9
Dipentyl phthalate (DPP)	131-18-0
Dihexyl phthalate	84-75-3
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters with $\geq 0.3\%$ of dihexyl phthalate (CAS 84-75-3): 68515-51-5 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate (CAS 84-75-3): 68648-93-1	68515-50-4
DCHP (dicyclohexyl phthalate):	84-61-7

## APPENDIX 8

## List of Boric acid, borate compounds

Name	CAS RN
Boric acid	10043-35-3 and 11113-50-1
Disodium tetraborate anhydrous;	1303-96-4, 12179-04-3, 1330-43-4
Tetraboron disodium heptaoxid, hydrate	12267-73-1
Sodium perborate; perboric acid, sodium salt	234-390-0
Sodium peroxometaborate,	7632-04-04
Disodium octaborate,	12008-41-2

## APPENDIX 9

## List of Chlorinated organic solvents

Constituent	CAS RN
Chloroform	67-66-3
1,1,2 Trichloroethane	79-00-5
1,1,2,2 Tetrachloroethane	79-34-5
1,1,1,2 Tetrachloroethane	630-20-6
Pentachloroethane	76-01-7
1,1 Dichloroethylene	75-35-4
1,4-dichlorobenzene	106-46-7
Carbon tetrachloridetetracloromethane	56-23-5
1,1,1 Trichloroethane, methyl chloroform	71-55-6
Trichloroethylene	79-01-6
1,2,3-trichloropropane	96-18-4
$\alpha,\alpha,\alpha,4$ -tetrachlorotoluene; p-chlorobenzotrichloride	5216-25-1
$\alpha,\alpha,\alpha$ -trichlorotoluene; benzotrighloride	98-07-7
$\alpha$ -chlorotoluene; benzyl chloride	100-44-7

APPENDIX 10

List of other organic solvents

Constituent	CAS RN
N,N-dimethylformamide (DMFa)	68-12-2
N, N dimethylacetamide (DMAC)	127-19-5
N-methyl-2- pyrrolidone (NMP)	872-50-4
Formamide	75-12-7

APPENDIX 11

List of PAH (= PolyAromatic Hydrocarbons) banned in EU/EEA

PAH name	CAS RN	
Benzo(j)fluoranthene	205-82-3	REACH Annex XVII
Benzo(b)fluoranthene	205-99-2	REACH Annex XVII
Benzo(k)fluoranthene	207-08-9	REACH Annex XVII
Benzo(a)phenanthrene (chrysene)	218-01-9	REACH Annex XVII
Benzo(a)pyrene	50-32-8	REACH Annex XVII
Dibenzo(a,h)anthracene	53-70-3	REACH Annex XVII
Benzo(a)anthracene	56-55-3	REACH Annex XVII
Benzo(e)pyrene	192-97-2	REACH Annex XVII
Benzo[ghi]perylene	191-24-2	SVHC

## APPENDIX 12

## List of DBTs

Constituent	CAS RN	No. of carbons
R = oxide (DBTO)	818-08-6	0
R = acetate	1067-33-0	2
R = butoxide	3349-36-8	4
R = methylmaleate	15546-11-9	5
R = octanoate	4731-77-5	8
R = isoocanoate	85702-74-5	8
R = (monobutyl)maleate	15546-16-4	8
R = 2-ethylhexanoate	2781-10-4	8
R = laurate	77-58-7	12
R = palmitate	13323-63-2	16
R = stearate	5847-55-2	18
R = oleate	13323-62-1	18
R = linoleate	85391-79-3	18
R = linolenate	95873-60-2	18