

# Lindex Manufacturing Restricted Substances List

## Scope, aim and purpose

Substances in this list are banned from intentional use in facilities that process raw materials and manufacture finished products.

### Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers

Substance	CAS	Supplier Guidance
4-Nonylphenol (one example of Nonylphenol isomers)	104-40-5	No intentional use
Nonylphenol, mixed isomers	25154-52-3	
4-Nonylphenol, branched	84852-15-3	
4-tert-Octylphenol	140-66-9	
4-Octylphenol	1806-26-4	
Octylphenol	27193-28-8	
Alkylphenoethoxylates (APEOs) and derivatives	Several	
OPEO (several)	9002-93-1 (one example)	
NPEO (several)	9016-45-9 (one example)	

### Other surfactants, wetting agents and related substances

Substance	CAS	Supplier Guidance
AEEA	111-47-1	No intentional use
Polyoxyethylated p-nonyl phenol (several)	26027-38-3 (one example)	
Ditallow dimethyl ammonium chloride (DTDMAC)	68783-78-8	
DODMAC	107-64-2	
Di(hydrogenated tallow alkyl) dimethylammonium chloride (DHTDMAC)	61789-80-8	

### Anti- Microbials & Biocides

Substance	CAS	Supplier Guidance
Permethrin	Multiple	No intentional use
Triclosan	3380-34-5	
Zincpyrithion	13463-41-7	
Dimethylfumarate (DMFu)	624-49-7	

### Chlorinated parafins

Substance	CAS	Supplier Guidance
Short-chain chlorinated Paraffins (SCCP) (C10-C13)	85535-84-8	No intentional use
Medium-chain chlorinated Paraffins (MCCP) (C14-C17)	85535-85-9	

### Chlorobenzenes and Chlorotoluenes

Substance	CAS	Supplier Guidance
All isomers of mono-, di, tri-, tetra-, penta- and hexachlorobenzene	Multiple	No intentional use
1,2-Dichlorobenzene	95-50-1	
All isomers of mono-, di-, tri- tetra- and penta- chlorotoluene	Multiple	

### Chlorinated phenols

Substance	CAS	Supplier Guidance
Pentachlorophenol (PCP), salts, esters and compounds	87-86-5	No intentional use
Tetrachlorophenols (TeCP) all isomers	Multiple	
2,3,5,6-Tetrachlorophenol	935-95-5	
2,4-dichlorophenol	120-83-2	
2-chlorophenol	95-57-8	
2,5-dichlorophenol	583-78-8	
2,6-dichlorophenol	87-65-0	
2,4,6-trichlorophenol	88-06-2	
3,5-dichloropheno l	591-35-5	
2,4,5-trichlorophenol	95-95-4	
2,3-dichloropheno l	576-24-9	
3,4-dichloropheno l	95-77-2	
3-chlorophenol	108-43-0	
4-chlorophenol	106-48-9	
2,3,4-trichlorophenol	15950-66-0	
3,4,5-trichlorophenol	609-19-8	
2,3,5-trichlorophenol	933-78-8	
2,3,6-trichlorophenol	933-75-5	

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## Dyes

### Banned arylamines related to azo dyes

Substance	CAS	Supplier Guidance
4,4-Methylene-bis[2-chloro-aniline]	101-14-4	No intentional use
4,4-Methylenedianiline (MDA)	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	

### Banned allergenic dyes

Substance	CAS	Supplier Guidance
Navy Blue	118685-33-9	No intentional use
Disperse Yellow 1	119-15-3	
Disperse Blue 35	12222-75-2, 56524-77-7	
Disperse Blue 102	12222-97-8	
Disperse Blue 106	12223-01-7	
Disperse Orange 37/59/76	13301-61-6	
Disperse Yellow 39	12236-29-2	
Disperse Brown 1	23355-64-8	
Disperse Blue 3	2475-46-9	
Disperse Orange 1	2581-69-3	
Disperse Red 11	2872-48-2	
Disperse Red 1	2872-52-8	
Disperse Red 17	3179-89-3	
Disperse Blue 7	3179-90-6	
Disperse Blue 26	3860-63-7	
Disperse Yellow 49	54824-37-2	
Disperse Blue 124	61951-51-7	
Disperse Orange 3	730-40-5	
Navy Blue: A mixture of: disodium (6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1-naphtholato)(1-(5-chloro-2-oxidophenylazo)-2-naphtholato)chromate(1-);trisodium bis(6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1-naphtholato)chromate(1-)	Component 1: 118685-33-9 Component 2: Not allocated	

### Banned CMR, Carcinogenic, Mutagenic, Reproductive toxic dyestuffs

Substance	CAS	Supplier Guidance
N,N,N',N'-tetramethyl-4,4'-methylenedianiline	101-61-1	No intentional use
Acid Violet 49	1694-09-3	
C.I. Direct Black 38	1937-37-7	
C.I. Disperse Blue 1	2475-45-8	
C.I. Basic Blue 26	2580-56-5	
C.I. Direct Blue 6	2602-46-2	
Disperse Yellow 3	2832-40-8	
Acid Red 26	3761-53-3	
C.I. Basic Violet 3	548-62-9	
C.I. Basic Red 9	569-61-9	
C.I. Direct Red 28	573-58-0	
C.I. Basic Violet 14	632-99-5	
Direct Blue 14	72-57-1	
Disperse Orange 11	82-28-0	
Malachit green chloride	569-64-2	
Malachit green	10309-95-2	
Malachit green oxalate	2437-29-8	

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## Forbidden flame retardant substances

All Halogenated Flame Retardants are banned from intentional use that means including but not exclusive the list below.

Substance	CAS	Supplier Guidance
Short-chain chlorinated Paraffins (SCCP) (C10-C13)	85535-84-8	No intentional use
Medium-chain chlorinated Paraffins (MCCP) (C14-C17)	85535-85-9	
Chlorinated and Brominated flame retardants	Several	
Octabromodiphenyl ether (OctaBDE)	32536-52-0	
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	
Tris(2,3-dibromopropyl)phosphate (TBPP)	126-72-7	
Bis (2,3-dibromopropyl) phosphate (BIS)	5412-25-9	
Decabromodiphenyl ether (DecaBDE)	1163-19-5	
Pentabromodiphenyl oxide (Pentabromodiphenyl ether, pentaBDE)	32534-81-9	
Tris (1-aziridinyl) phosphineoxide (TEPA)	545-55-1	
Tetrabromobisphenol A (TBBPA)	79-94-7	
Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	13674-87-8	
Polybrominated biphenyls (mix)	59536-65-1	
2,2-bis (bromomethyl) -1,3-propanediol (BBMP)	3296-90-0	
Hexabromocyclododecan (HBCDD)	25637-99-4/3194-55-6	
Boric acid	10043-35-3/11113-50-1	
Decabromobiphenyl (DecaBB)	13654-09-6	
Disodium tetraborate, anhydrous	1303-96-4/1330-43-4	
Disodium octaborate	12008-41-2	
dibromopropylether	21850-44-2	
Diboron trioxide	1303-86-2	
Heptabromodiphenyl ether (HeptaBDE)	207122-16-5, 446255-22-7	
Dibromobiphenyls (DiBB)	Multiple	
Monobromodiphenylethers (MonoBDEs)	Multiple	
Monobromobiphenyls (MonoBB)	Multiple	
Hexabromodiphenyl ether (HexaBDE)	36483-60-0, 68631-49-2, 207122-15-4	
Nonabromobiphenyls (NonaBB)	Multiple	
Nonabromodiphenyl ether (NonaBDE)	63936-56-1	
Octabromobiphenyls (OctaBB)	Multiple	
Tetraboron disodium heptaoxide, hydrate	12267-73-1	
Tetrabromodiphenyl ether (TetraBDE)	5436-43-1, 189084-62-6, 189084-63-7, 189084-61-5, 93703-48-1, 40088-47-9	
Tribromodiphenyl ethers (TriBDEs)	Multiple	
Tris- (2-chloro-1-m ethylethyl) phosphate (TCPP)	13674-84-5	
Trixylyl phosphate(TXP)	25155-23-1	
Tri-o-cresyl phosphate	78-30-8	
Trimethyl phosphate	512-56-1	

## Glycols / Glycol Ethers

Substance	CAS	Supplier Guidance
Ethylene glycol dimethylether	110-71-4	No intentional use
2-Methoxyethylacetate	110-49-6	
2-Ethoxyethanol	110-80-5	
2-Methoxyethanol	109-86-4	
Bis (2-methoxyethyl) -ether	111-96-6	
2-Ethoxyethyl acetate	111-15-9	
2-methoxypropyl acetate	70657-70-4	
Triethylene glycol dimethyl ether	112-49-2	

## Halogenated Solvents

Substance	CAS	Supplier Guidance
1,2-dichloroethane ethylene dichloride	107--06-2	No intentional use
Benzylchloride	100-44-7	
Dichloromethane	75-09-2	
Tetrachloroethylene (Perchloroethylene)	127-18-4	
Trichloroethylene	79-01-6	

## Organotin compounds

Substance	CAS	Supplier Guidance
Dibutyltin compounds (DBT)	Multiple	No intentional use
Mono-, di- and tri-methyltin derivatives	Multiple	
Mono-, di- and tri-octyltin derivatives	Multiple	
Mono-, di- and tri-phenyltin derivatives	Multiple	
Mono- and tri-butyltin derivatives	Multiple	

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## Organotin compounds cont.

Substance	CAS	Supplier Guidance
Dipropyltin compounds (DPT)	Multiple	No intentional use
Tetraethyltin Compounds (TeET)	Multiple	
Tripropyltin Compounds (TPT)	Multiple	
Tetrabutyltin compounds (TeBT)	Multiple	
Tetraoctyltin compounds (TeOT)	Multiple	
Tricyclohexyltin (TCyHT)	Multiple	
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetra decanoate (DOTE)	15571-58-1	
Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-thylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (Reaction mass of DOTE and MOTE)		

## Other substances

Substance	CAS	Supplier Guidance
(Free) Aniline	62-53-3	No intentional use
Bisphenol A; BPA (4,4'-isopropylidenediphenol)	80-05-7	
Borate, zinc salt	12767-90-7	
C,C'-azodi(formamide) (ADCA)		
Quinoline	91-22-5	
Thiourea	62-56-6	
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	
2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV 328)	25973-55-1	
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	

## Perfluoroalkyl and polyfluoroalkyl substances (PFASs)

All deliberate use of functional finishes and polymers based on PFASs are banned even if not listed below.

PFAS - Highly fluorinated ethers		
Substance	CAS	Supplier Guidance
HFPO-DA, its salts and its acyl halides	13252-13-6, 67118-55-2, 2062-98-8 and 62037-80-3	No intentional use
PFAS - Highly fluorinated carboxylic acids (PFOA and related substances)		
PFOA and its salts (Examples of C8-C14 PFCAs)		
Pentadecafluorooctanoic acid (PFOA) and salts (example of C8)	335-67-1, 3825-26-1, et. al.	No intentional use
Perfluorononan-1-oic-acid (PFNA) and its sodium and ammonium salts (example of C9)	375-95-1, 21049-39-8, 4149-60-4	
Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts (example of C10)	335-76-2, 3108-42-7, 3830-45-3	
Henicosafluoroundecanoic acid (PFUnA) ammonium salts (example of C11)	2058-94-8	
Tricosafluorododecanoic acid PFDoA (example of C12)	307-55-1	
Pentacosafuorotridecanoic acid (PFTTrDA) (example of C13)	72629-94-8	
Heptacosafuorotetradecanoic acid (PFTA) (example of C14)	376-06-7	
1H,1H,2H,2H-Perfluorodecylacrylat 8:2 FTA	27905-45-9	
Sodium perfluorooctanoate (PFOA-Na)	335-95-5	
Potassium perfluorooctanoate PFOA-K	2395-00-8	
Silver perfluorooctanoate (PFOA-Ag)	335-93-3	
Perfluorooctanoyl fluoride (PFOA-F)	335-66-0	
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	
PFOA-related substances		
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4, et. al.	No intentional use
Methyl perfluorooctanoate (Me-PFOA)	376-27-2	
2-Perfluorooctylethanol (8:2 FTOH)	678-39-7	
1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)	27905-45-9	
1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)	1996-88-9	
Perfluorobutanoic acid PFBA	375-22-4, et. al.	
PFOS and related substances		
Perfluorohexane sulfonic acid (PFOS)/Perfluorohexane sulfonate PFHxS	355-46-4/1763-23-1/432-50-7, et. al.	No intentional use
Perfluorooctanesulfonic acid, potassium salt (PFOS-K)	2795-39-3	
Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5	
Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH4)	29081-56-9	
Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH)2)	70225-14-8	
Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C2H5)4)	56773-42-3	
Perfluoro-1-octanesulfonyl fluoride (POSF)	307-35-7	
Perfluorooctane sulfonamide (PFOSA)	754-91-6	

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## Perfluoroalkyl and polyfluoroalkyl substances (PFASs) cont.

<b>Others</b>		
<b>Substance</b>	<b>CAS</b>	<b>Supplier Guidance</b>
Perfluorobutane sulfonic acid and salts	375-73-5, 59933-66-3, et. al.	No intentional use
Perfluoroheptane sulfonic acid and salts	375-92-8, et. al.	
Perfluorodecane sulfonic acid and salts	335-77-3, et. al.	
<b>PFAS (perfluorinated alkylated substances)</b>		
Breakdown product, Production of fluoropolymers		
Perfluoropentanoic acid	2706-90-3, et. al.	No intentional use
Perfluorohexanoic acid PFHxA	307-24-4, et. al.	
Perfluoroheptanoic acid PFHpA	375-85-9, et. al.	
Perfluoro(3,7-dimethyloctanoic acid) and salts	172155-07-6, et. al.	
<b>Effect chemical precursors</b>		
1H,1H,2H,2H-Perfluoro-1-hexanol 4:2 FTOH	2043-47-2	No intentional use
1H,1H,2H,2H-Perfluoro-1-octanol 6:2 FTOH	647-42-7	
1H,1H,2H,2H-Perfluoro-1-dodecanol 10:2 FTOH	865-86-1	
2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-Me-FOSE)	24448-09-7	
2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE)	1691-99-2	
N-Methylperfluoro-1-octanesulfonamide (N-Me-FOSA)	31506-32-8	
N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)	4151-50-2	
1H,1H,2H,2H-Perfluorooctylacrylat 6:2 FTA	17527-29-6	
Ethyl perfluorooctanonate EtPFO	3108-24-5	
1H,1H,2H,2H-Perfluorododecylacrylat 10:2 FTA	17741-60-5	
<b>Partially fluorinated carboxylic/sulfonic acids</b>		
<b>Substance</b>	<b>CAS</b>	<b>Supplier Guidance</b>
7H-Perfluoro heptanoic acid and salts (7HPFHpA)	1546-95-8, et.al.	No intentional use
2H, 2H, 3H, 3H-Perfluoroundecanonic acid and salts (4HPFUa)	34598-33-9, et. al.	
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid and salts (1H, 1H, 2H, 2H-PFOS)	27619-97-2, et. al.	

## Phthalates – including all other esters of ortho-phthalic acid, and plasticisers

<b>Substance</b>	<b>CAS</b>	<b>Supplier Guidance</b>
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	No intentional use
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	
1,2-Benzenedicarboxylic acid, dipentyl ester, branched and linear	84777-06-0	
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	
1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters	68515-51-5	
1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters	68648-93-1	
Bis-(2-methoxyethyl) phthalate (DMEP)	117-82-8	
Butylbenzyl phthalate (BBP)	85-68-7	
Di-cyclohexyl phthalate (DCHP)	84-61-7	
Diethyl phthalate (DEP)	84-66-2	
Dibutyl phthalate (DBP)	84-74-2	
Diethylhexyl phthalate (DEHP)	117-81-7	
Diisobutyl phthalate (DIBP)	84-69-5	
Diisopentyl phthalate (DIPP)	605-50-5	
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	
Di-n-pentyl phthalate (DnPP)	131-18-0	
Di-n-hexyl phthalate (DnHP)	84-75-3	
Di-n-octyl phthalate (DnOP)	117-84-0	
n-Pentyl-isopentyl phthalate	776297-69-9	
Short-chain chlorinated Paraffins (SCCP) (C10-C13)	85535-84-8	
Medium-chain chlorinated Paraffins (MCCP) (C14-C17)	85535-85-9	

## Polycyclic aromatic hydrocarbons (PAH)

<b>Substance</b>	<b>CAS</b>	<b>Supplier Guidance</b>
Acenaphthene	83-32-9	No intentional use
Acenaphthylene	208-96-8	
Anthracene	120-12-7	
Benzo[a]anthracene	56-55-3	
Benzo[a]pyrene	50-32-8	
Benzo[b]fluoranthene	205-99-2	
Benzo[e]pyrene	192-97-2	
Benzo[ghi]perylene	191-24-2	
Benzo[j]fluoranthene	205-82-3	
Benzo[k]fluoranthene	207-08-9	

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## Polycyclic aromatic hydrocarbons (PAH) cont.

Substance	CAS	Supplier Guidance
Chrysene	218-01-9	No intentional use
Dibenz[a, h]anthracene	53-70-3	
Fluoranthene	206-44-0	
Fluorene	86-73-7	
Indeno[1, 2, 3-cd]pyrene	193-39-5	
Naphthalene	91-20-3	
Phenanthrene	85-01-8	
Pyrene	129-00-0	

## Total metals

Substance	CAS	Supplier Guidance
Antimony (Sb)	7440-36-0	No intentional use
Arsenic (As)	7440-38-2	
Barium (Ba)	7440-39-3	
Cadmium (Cd)	7440-43-9	
Cobalt (Co)	7440-48-4	
Copper (Cu)	7440-50-8	
Chromium (Cr)	7440-47-3	
Cr VI	18540-29-9	
Lead (Pb)	7439-92-1	
Mercury (Hg)	7439-97-6	
Nickel (Ni)	7440-02-0	
Selenium	7782-49-2	
Silver (Ag)	7440-22-4	
Tin	7440-31-5	

## Solvents

Substance	CAS	Supplier Guidance
Aliphatic organic solvents	Several	No intentional use
<b>Volatile Organic Compounds (VOC)</b>		
Benzene	71-43-2	No intentional use
Toluene	108-88-3	
Xylene	1330-20-7	
m-cresol	108-39-4	
o-cresol	95-48-7	
p-cresol	106-44-5	
<b>Other solvents</b>		
Substance	CAS	Supplier Guidance
Formaldehyde	50-00-0	No intentional use
DMAC (N,N-dimethylacetamide)	127-19-5	
DMFa (N,N-dimethylformamide)	68-12-2	
N-Methyl-2-Pyrrolidone; 1-methyl-2-pyrrolidone (NMP)	872-50-4	
Hydrazin	302-01-2, 7803-57-8	
Formamide	75-12-7	

## Bleaching

Substance	CAS	Supplier Guidance
Sodium hypochlorite	7681-52-9	In production process: General usage ban. Finishing treatments with chlorinated bleaching agents can only be used in denim production; however the use of hypochlorite as bleaching agent should be avoided or minimized whenever possible.
Chlorine	7782-50-5	
Sodium chlorite	7758-19-2	
Calcium hypochlorite	7778-54-3	

## Banned fibres/materials

Substance	CAS	Supplier Guidance
Asbestos		Shall not be used
Polyvinyl chloride (PVC)	9002-86-2	
Silica (particles of respirable size)	14464-46-1	No use of sandblasting