

Substance(s)		Threshold	Test Method
1.	Prohibited and restricted substances named in Annex XVII of the Reach Regulation: https://echa.europa.eu/substances-restricted-under-reach	As required in Annex XVII of the Regulation (EG) 1907/2006 unless substance is specifically named in this RSL	Where appropriate as required in Annex XVII of the Regulation (EG) 1907/2006 unless substance is specifically named in this RSL
2.	Substances of Very High Concern (SVHC) in articles registered in the current Reach Candidate List: https://echa.europa.eu/web/guest/candidate-list-table	0.1 % (w/w) relating to article or component (compound products)	Testing necessary when substance is specifically named in this RSL
3.	Tantalum, Tin, Tungsten (Wolfram), Gold - Please complete the RMI 'Conflict Minerals Reporting Template' (CMRT): http://www.responsiblemineralsinitiative.org/reporting-templates/cmrt	n/a	n/a
Substance(s)		Threshold	Test Method
4.	Dyestuffs		
4.1.	Azodyes with carcinogenic amines listed in Annex A Additionally: Aniline (CAS No.: 62-53-3) as amine in Azodyes and as residues in Indigo	Detection limit 20 mg/kg for each 20 mg/kg	DIN EN 14362-1 DIN EN 14362-3
4.2.	Allergenic disperse dyes listed in Annex B	Detection limit 20 mg/kg for each	DIN 54231 (GCMSD after extraction with Methanol)
4.3.	Carcinogenic dyes listed in Annex C	No intended use Detection limit 20 mg/kg for each	DIN 54231 (GCMSD after extraction with Methanol)
4.4.	Navy Blue, Blue Azodye (CAS No.: 118685-33-9)	No intended use detection limit 20 mg/kg	DIN 54231 (GCMSD after extraction with Methanol)
Substance(s)		Threshold	Test Method
5.	Heavy Metals		
5.1.	Cadmium (CAS No.: 7440-43-9, et. al.)	100 mg/kg in total and 1mg/kg, extractable	DIN EN 1122-2001 EN 16711-2:2015
5.2.	Chromium VI, extractable (CAS No.: 18540-29-9, et. al.)	1 mg/kg for textile	DIN EN 170751:2017
5.3.	Lead (CAS No.: 7439-92-1, et. al.)	90 mg/kg in total and 1 mg/kg, extractable	DIN EN 1122-2001 EN 16711-2:2015
5.4.	Mercury (CAS No.: 7439-97-6, et. al.)	0.1 %	n/a
5.5.	Nickel (7440-02-0, et. al.), releasable	0.5 µg/cm ² /Week	DIN EN 1811:2015-10
5.6.	Arsenic (7440-38-2, et. al.), extractable	1 mg/kg, extractable	EN 16711-2:2015

Substance(s)		Threshold	Test Method
6.	Organic substances		
6.1.	Polycyclic aromatic hydrocarbons (PAH) listed in Annex D1	1 mg/kg in sum	AfPS GD 2014-01 PAK (method only)
6.2.	Polycyclic aromatic hydrocarbons (PAH) listed in Annex D1 plus D2	10 mg/kg in sum	AfPS GD 2014-01 PAK (method only)
6.3.	Octamethylcyclotetrasiloxane D4 (CAS No.: 556-67-2)	0.1 %	Extraction with solvent, GC-MS
6.4.	Decamethylcyclopentasiloxane D5 (CAS No.: 541-02-6)	0.1 %	Extraction with solvent, GC-MS
6.5.	Dodecamethylcyclohexasiloxane D6 (CAS No.: 540-97-6)	0.1 %	Extraction with solvent, GC-MS
6.6.	Organotin compounds (Mono-, Di-, Tetra-) listed in Annex E	2 mg/kg for each	ISO 17353 2004-09
6.7.	Organotin compounds (Tri-) listed in Annex E	1 mg/kg for each	ISO 17353 2004-09
6.8.	Phthalates listed in Annex F1	0.1 % in sum	Textiles: ISO 14389:2014 / Plastics: EN 14372
6.9.	Spinning solvent Dimethylformamide / DMF (CAS No.: 68-12-2)	0.1 %	Headspace GC-MS
6.10.	Spinning solvent Dimethylacetamide / DMAC (CAS No.: 127-19-5)	0.1 %	Headspace GC-MS
6.11.	Spinning solvent N-Methyl-2-Pyrrolidone / NMP (CAS No.: 872-50-4)	0.1 %	Headspace GC-MS
6.12.	Alkylphenols (AP) and Alkylphenol Ethoxylates (APEO) listed in Annex F2	100 ppm in sum	Extraction with solvent, GC-MS or LC-MS
6.13.	4-tert-Butyl-Phenol (CAS No.: 98-54-4)	0.1 %	Extraction with solvent, GC-MS or LC-MS
6.14.	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with $\geq 0.1\%$ w/w of 4-nonylphenol, branched and linear (4-NP)	0.1 %	Extraction with solvent, GC-MS or LC-MS
6.15.	Entry 68 Reach: Perfluorooctanoic acid / PFOA (CAS No.: 335-67-1) and its salts	25 ppb	Extraction with solvent, LC-MS
6.16.	Entry 68 Reach: Perfluorooctanoic acid / PFOA (CAS No.: 335-67-1) - any related substance	1000 ppb (one or more PFOA- related substances)	Extraction with solvent, LC-MS
6.17.	Perfluorooctane sulfonic acid and its derivatives (PFOS)	1 $\mu\text{g}/\text{m}^2$	Extraction with solvent, LC-MS
6.18.	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides	0.1 %	Extraction with solvent, GC-MS or LC-MS
6.19.	Formaldehyde (CAS No.: 50-00-0)	75 ppm	ISO 14184-1:2011
6.20.	Benzene (CAS No.: 74-43-2)	5 mg/kg	VDA 278
6.21.	Quinoline (CAS No.: 91-22-5)	50 mg/kg	Extraction with THF and HPLC/MS
6.22.	Chlorinated phenols listed in Annex G	Detection limit 0.5 mg/kg for each	Extraction followed by GC-MS analysis
6.23.	Monomeric Vinylchloride	100 mg/kg	Extraction followed by GC-MS analysis

Substance(s)		Threshold	Test Method
6. Organic substances (continued)			
6.24.	Chlorinated benzenes and toluenes listed in Annex H	Detection limit 1 mg/kg for each	DIN 54232
6.25.	Chlorinated organic solvents listed in Annex I	50 mg/kg for each	GC-MS Headspace analysis
6.26.	Short chained chlorinated paraffins, C10 - C13 (CAS No.: 85535-84-8)	0.1 % for each	EN ISO 18219 (modified)
6.27.	Flame retardants listed in Annex J	100 mg/kg for each	EN ISO 18219 (modified)
6.28.	VOC listed in Annex K	100 mg/kg in sum	GC-MS Headspace analysis

Annex A: List of carcinogenic Amines

Substances	CAS No.
Biphenyl-4-ylamin, 4-aminobiphenyl xenylamine	92-67-1
Benzidine	92-87-5
4-chloro-o-toluidine	95-69-2
2-naphtylamine	91-59-8
o-aminoazotoluene 4-amino-2',3-dimethylazobenzene 4-o-tolylazo-o-toluidine	97-56-3
5-nitro-o-toluidine	99-55-8
4-chloroaniline	106-47-8
4-methoxy-m-phenylenediamine	615-05-4
4,4'-methylenedianiline 4,4'-diaminodiphenylmethane	101-77-9
3,3'-dichlorobenzidine 3,3'-dichlorobiphenyl-4,4'-ylenediamine	91-94-1
3,3-dimethoxybenzidine (o-dianisidine)	119-90-4
3,3-dimethylbenzidine (4,4'-bi-o-toluidine)	119-93-7
4,4'-methylenedi-o-toluidine	838-88-0
6-methoxy-m-toluidine (p-cresidine)	120-71-8
4,4'-methylene-bis-(2-chloro-aniline) 2,2'-dichloro-4,4'-ethylene-dianiline	101-14-4
4,4'-oxydianiline	101-80-4
4,4'-thiodianiline	139-65-1
o-toluidine (2-aminotoluene)	95-53-4
4-methyl-m-phenylenediamine	95-80-7
2,4,5-trimethylaniline	137-17-7
o-anisidine (2-methoxyanilin)	90-04-0
4-amino azobenzene	60-09-3
2,4-xylydine	95-68-1
2,6-xylydine	87-62-7

Annex B: List of allergenic disperse dyes

Substances	CAS No.
C.I. Disperse Blue 1	2475-45-8
C.I. Disperse Blue 3	2475-46-9
C.I. Disperse Blue 7	3179-90-6
C.I. Disperse Blue 26	3860-63-7
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 Blue 124	61951-51-7
C.I. Disperse Polyester Dark Blue 35	56524-77-7
C.I. Disperse Brown 1	23355-64-8
C.I. Disperse Orange 1	2581-69-3
C.I. Disperse Orange 3	730-40-5
C.I. Disperse Orange 11	82-28-0
C.I. Disperse Orange 37/59/76	12223-33-5 / 13301-61-6
C.I. Disperse Orange 149	85136-74-9
C.I. Disperse Red 1	2872-52-8
C.I. Disperse Red 11	2872-48-2
C.I. Disperse Red 17	3179-89-3
C.I. Disperse Yellow 1	119-15-3
C.I. Disperse Yellow 3	2832-40-8
C.I. Disperse Yellow 9	6373-73-5
C.I. Disperse Yellow 23	6250-23-3
C.I. Disperse Yellow 39	12236-29-2
C.I. Disperse Yellow 49	54824-37-2

Annex C: List of carcinogenic dyes

Substances	CAS No.
C.I. Acid Red 26	3761-53-3
C.I. Acid Violet 49	1694-09-3
C.I. Acid Red 114	6459-94-5
C.I. Basic Blue 26	2580-56-5
C.I. Basic Green 4 (malachite green chloride)	569-64-2
C.I. Basic Green 4 (malachite green oxalate)	2437-29-8
C.I. Basic Green 4 (malachite green)	10309-95-2
C.I. Basic Red 9	569-61-9
C.I. Basic Violet 1	8004-87-3
C.I. Basic Violet 3	548-62-9
C.I. Basic Violet 14	632-99-5
C.I. Direct Black 38	1937-37-7
C.I. Direct Blue 6	2602-46-2
C.I. Direct Blue 15	2429-74-5
C.I. Direct Blue 218	28407-37-6
C.I. Direct Brown 95	16071-86-6


C.I. Direct Red 28	573-58-0
C.I. Pigment Red 104 (contains lead)	12656-85-8
C.I. Pigment Yellow 34 (contains lead)	1344-37-2
C.I. Solvent Yellow 1	60-09-3
C.I. Solvent Yellow 2	60-11-7
C.I. Solvent Yellow 3	97-56-3
C.I. Solvent Yellow 14	842-07-9

Annex D1: List of the PAH regulated by law

Substances	CAS No.
Benzo[a]anthracen	56-55-3
Benzo[a]pyren	50-32-8
Benzo[b]fluoranthene	205-99-2
Benzo[e]pyren	192-97-2
Benzo[j]fluoranthen	205-82-3
Benzo[k]fluoranthen	207-08-9
Chrysen	218-01-9
Dibenzo[a,h]anthracen	53-70-3

Annex D2: List of additional restricted PAH

Substances	CAS No.
1-Methylpyrene	2381-21-7
Acenaphthene	83-32-9
Acenaphthylene	208-96-8
Anthracene	120-12-7
Benzo[ghi]perylene	191-24-2
Cyclopenta[a,d]pyrene	27208-37-3
Dibenzo[a,e]pyrene	192-65-4
Dibenzo[a,h]pyrene	189-64-0
Dibenzo[a,i]pyrene	189-55-9
Dibenzo[a,l]pyrene	191-30-0
Fluoranthene	206-44-0
Fluorene	86-73-7
Ideno[1,2,3-cd]pyrene	193-39-5
Naphthalene	91-20-3
Phenanthrene	85-01-8

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Pyrene	129-00-0
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Annex E: List of organotin compounds

Substances	CAS No.
Dibutyltin	1002-53-5
Dimethyltin	753-73-1
Diocetylzinn	15231-44-4, 3542-36-7
Diphenyltin	1011-95-6
Monobutyltin	78763-54-9
Monomethyltin	23001-26-5
Monooctyltin	3091-25-6
Monophenyltin	2406-68-0
Tetraethyltin	597-64-8
Tetrabutyltin	1461-25-2
Tributyltin	56573-85-4
Tricyclohexyltin	3091-32-5
Trimethyltin	1066-45-1
Trioctyltin	2587-76-0
Triphenyltin	892-20-6
Tripopyltin	2279-76-7

Annex F1: List of the Phthalates

Substances	CAS No.
1,2-Benzenedicarboxylic acid - dihexylester branched & linear	68515-50-4
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0
Bis-(2-methoxy-ethyl) phthalate (BMEP)	117-82-8
Butyl-benzyl phthalate (BBP)	85-68-7
Di (C7-C11 alkyl) phthalate Linear and branched (DHNUP)	68515-42-4
Di-(2-ethyl-hexyl) phthalate (DEHP)	117-81-7
Di-(C6-C8 alkyl) phthalate Branched (DIHP)	71888-89-6
Di-butyl phthalate (DBP)	84-74-2
Di-C6-C10 alkyl ester, 1,2-Benzenedicarboxylic acid, mixed decyl-,	68648-93-1
Di-cyclohexyl phthalate (DCHP)	84-61-7
Diethyl phthalate (DEP)	84-66-2
Di-iso-butyl phthalate (DIBP)	84-69-5
Di-Iso-Decyl Phthalate (DIDP)	26761-40-0, 68515-49-1

Di-iso-hexylphthalate	71850-09-4
Di-iso-nonyl phthalate (DINP)	28553-12-0
Di-iso-octyl phthalate (DIOP)	27554-26-3
Di-iso-pentyl phthalate (DIPP)	605-50-5
Dimethyl phthalate (DMP)	131-11-3
Di-n-hexyl phthalate (DHP)	84-75-3
Di-n-octyl phthalate (DNOP)	117-84-0
Dinonyl phthalate (DNP)	84-76-4
Di-n-propyl phthalate (DPRP)	131-16-8
Di-pentyl phthalate (DPP)	131-18-0
N-pentyl-iso-pentyl phthalate (PIPP)	776297-69-9

Annex F2: Alkylphenols (AP) and Alkylphenol Ethoxylates (APEO)

Substances	CAS No.
Nonylphenols (NP)	104-40-5
	11066-49-2
	25154-52-3
	84852-15-3
Nonylphenol ethoxylates (NPE)	9016-45-9
	26027-38-3
	37205-87-1
	68412-54-4
	127087-87-0
Octylphenols (OP)	140-66-9
	1806-26-4
	27193-28-8
Octylphenol ethoxylates (OPE)	9002-93-1
	9036-19-5
	68987-90-6

Annex G: List of Chlorinated phenols

Substances	CAS No.
2-chlorophenol	95-57-8
3-chlorophenol	108-43-0
4-chlorophenol	106-48-9
2,3-dichlorophenol	576-24-9

2,4-dichlorophenol	120-83-2
2,5-dichlorophenol	583-78-8
2,6-dichlorophenol	87-65-0
3,4-dichlorophenol	95-77-2
3,5-dichlorophenol	591-35-5
Pentachlorophenol (PCP)	87-86-5
2,3,4,5-tetrachlorophenol	4901-51-3
2,3,4,6-tetrachlorophenol	58-90-2
2,3,5,6-tetrachlorophenol	935-95-5
2,3,4-trichlorophenol	15950-66-0
2,3,5-trichlorophenol	933-78-8
2,3,6-trichlorophenol	933-75-5
2,4,5-trichlorophenol	95-95-4
2,4,6-trichlorophenol	88-06-2
3,4,5-trichlorophenol	609-19-8

Annex H: List of chlorinated Benzenes and Toluenes

Substances	CAS No.
alfa, 2,4-trichlorotoluene	94-99-5
alfa, 2,6-trichlorotoluene	2014-83-7
alfa, 3,4-trichlorotoluene	102-47-6
alpha, alpha, 2,6-tetrachlorotoluene	81-19-6
alpha, alpha, alpha, 2,-tetrachlorotoluene	2136-89-2
alpha, alpha, alpha, 4-tetrachlorotoluene	5216-25-1
Benzotrichloride	98-07-7
Chlorobenzene	108-90-7
2-chlorotoluene	95-49-8
3-chlorotoluene	108-41-8
4-chlorotoluene	106-43-4
1,2-Dichlorobenzene	95-50-1
1,3-Dichlorobenzene	541-73-1
1,4-Dichlorobenzene	106-46-7
2,3-dichlorotoluene	32768-54-0
2,4-dichlorotoluene	95-73-8
2,5-dichlorotoluene	19398-61-9
2,6-dichlorotoluene	118-69-4
3,4-dichlorotoluene	95-75-0
3,5-dichlorotoluene	25186-47-4


Hexachlorobenzene	118-74-1
Pentachlorobenzene	608-93-5
2,3,4,5,6-pentachlorotoluene	877-11-2
Tetrachlorobenzene	12408-10-5
1,2,3,4-tetrachlorobenzene	634-66-2
1,2,3,5-tetrachlorobenzene	634-90-2
1,2,4,5-tetrachlorobenzene	95-94-3
1,2,3-Trichlorobenzene	87-61-6
1,2,4-trichlorobenzene	120-82-1
1,3,5-Trichlorobenzene	108-70-3
2,3,6-trichlorotoluene	2077-46-5
2,4,5-trichlorotoluene	6639-30-1

Annex I: List of chlorinated solvents

Substances	CAS No.
Chloroform	67-66-3
Methylenchloride	75-09-2
cis-1,2-Dichloroethylene	156-59-2
trans-1,2-Dichloroethylene	156-60-5
1,2-Dichloroethane	107-06-2
1,1-Dichloroethane	75-34-3
1,1-Dichloroethylene	75-35-4
Pentachloroethane	76-01-7
Tetrachlorethylene	127-18-4
1,1,1,2-Tetrachloroethane	630-20-6
1,1,2,2-Tetrachloroethane	79-34-5
Tetrachloromethane	56-23-5
Trichlorethylene	79-01-6
1,1,2-Trichloroethane	79-00-5
1,1,1-trichloroethane	71-55-6

Annex J: List of Flame Retardants

Substances	CAS No.
2,2-bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0
Bis(2,3-dibromopropyl)phosphate (BIS)	5412-25-9
Boric Acid	10043-35-3, 11113-50-1

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Decabromodiphenyl ether (DecaBDE)	1163-19-5
Hexabromocyclodecane (HBCDD)	3194-55-6
Octabromodiphenyl ether (OctaBDE)	32536-52-0
Pentabromodiphenyl ether (PentaBDE)	32534-81-9
Polybromobiphenyls (PBB)	59536-65-1
Tetrabromobisphenol A (TBBPA)	79-94-7
Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8
Tris(2-chloro-1-methylethyl) phosphate (TCPP)	13674-84-5
Tris(1-aziridinyl)phosphine oxide (TEPA)	545-55-1
Tris(2-chloroethyl)phosphate (TCEP)	115-96-8
Tris(2,3,-dibromopropyl)-phosphate (TRIS)	126-72-7

Annex K: VOC

Substances	CAS No.
Acetophenone	98-86-2
Acrylamid	79-06-1
Benzene	71-43-2
Cyclohexanone	108-94-1
Ethylbenzene	100-41-4
Formamide	75-12-7
m-Cresol	108-39-4
Methyl-ethyl ketone	78-93-3
Moschusxylol	81-15-2
o-Cresol	95-48-7
p-Cresol	106-44-5
2-phenyl-2-propanole	617-94-7
Styrene	100-42-5
Toluene	108-88-3
1,2,3-trichloropropane	96-18-4
Xylene	1330-20-7