

Combined M-RSL - September 2014

The following reflects Miroglio S.p.A.'s RSL detection limits as of 01 September 2014. These detection / reporting limits and test methods will be revised - at least yearly, to always reflect best current technology using lowest detection / reporting limits.

Manufacturing process including input chemical formulations, outputs of discharge water and sludge, and all products produced

Substance	CAS-nr.	Detection Limit		Test Method				STATUS Banned / phase-out
		Input: Chemical Formulations / Output: Waste water (µg/l)	Output: Products / Output: Waste Water Sludge (mg/kg)	Input: Chemical Formulations	Output: Waste water	Output: Sludge	Output: Products	
1. Alkylphenols (APEO)								
Octylphenol OP	Variou	1	0.2	With Reference To DIN EN ISO 18857 And Followed by Liquid Chromatography – Mass Spectrometry (LC-MS) Analysis. NPEO ₍₁₊₂₎ : GC/MS	With Reference To DIN EN ISO 18857 And Followed by Liquid Chromatography – Mass Spectrometry (LC-MS) Analysis. NPEO ₍₁₊₂₎ : GC/MS	Solvent extraction DIN EN ISO 18857 LC/MS mod, resp. NPEO ₍₁₊₂₎ : GC/MS	Solvent Extraction, GC-MS (AP) & LC-MS (APEO) analysis.	All use of Alkylphenols (APEO) are banned as of 01 July 2015)
4-(1,1,3,3-Tetramethylbutyl)-phenol	140-66-9	1	0.2					
Octylphenol	27193-28-8	1	0.2					
4-Octylphenol	1806-26-4	1	0.2					
Nonylphenol NP	various	1	0.2					
4-Nonylphenol	25154-52-3	1	0.2					
Nonylphenol	104-40-5	1	0.2					
Nonylphenol	90481-04-2	1	0.2					
4-Nonylphenol (branched)	84852-15-3	1	0.2					
Nonylphenol	1173019-62-9	1	0.2					
Nonylphenol Ethoxylates NPEO ₍₁₋₂₎	various	1	0.2					
Nonylphenol Ethoxylates NPEO ₍₃₋₁₈₎	various	1	0.2					
(Nonylphenoxy)-polyethylenoxid	9016-45-9	1	0.2					
4-Nonylphenol, ethoxylated	26027-38-3	1	0.2					
(NPEs 3-18) Poly(oxy-1,2-ethanediyl),	68412-54-4	1	0.2					
4-Nonylphenol, branched, ethoxylated	127087-87-0	1	0.2					
Unbekanntes Farbmittel 94 (SIN list	37205-87-1	1	0.2					
Octylphenol Ethoxylates OPEO ₍₁₋₂₎	various	1	0.2					
Octylphenol Ethoxylates OPEO ₍₃₋₁₈₎	various	1	0.2					
(OPEs 3-18) alpha-[4-(1,1,3,3-	9002-93-1	1	0.2					
4-tert-Octylphenoethoxylate	9036-19-5	1	0.2					
4-tert-Octylphenoethoxylate	68987-90-6	1	0.2					
2. Phthalates								
Di-Butyl Phthalate (DBP)	84-74-2	1	0.3	Toluene Extraction And Followed by Gas Chromatography-Mass Spectrometry (GC-MS) Analysis resp. LC/MS.	Toluene Extraction And Followed by Gas Chromatography-Mass Spectrometry (GC-MS) Analysis resp. LC/MS.	Extraction with toluene, GC-MS resp. LC/MS.	CEN-ISO-TS 16181; TS 16181; EN 15777; EN 14372; Solvent Extraction & GC-MS analysis.	All use of Phthalates are banned as of 01 September 2014
Di(2-Ethyl Hexyl) Phthalate(DEHP)	117-81-7	1	0.3					
Benzyl Butyl Phthalate (BBP)	85-68-7	1	0.3					
Di-Iso-Nonyl Phthalate (DINP)	28553-12-0, 68515-48-0	1	0.3					
Di-N-Octyl Phthalate (DNOP)	117-84-0	1	0.3					

Di-Iso-Decyl Phthalate (DIDP)	26761-40-0, 68515-49-1	1	0.3	Extraction with toluene at pH6, GC/MS*				UNI EN 15777
Di-Iso-Butyl Phthalate (DIBP)	84-69-5	1	0.3					
Di-N-Hexyl Phthalate (DNHP)	84-75-3	1	0.3					
Di-(2-metossietil) ftalato (DMEP)	117-82-8	Best current testing technology using lowest	Best current testing technology using lowest detection / reporting limits always updated and					
DHNUP	68515-42-4							
DIHP	71888-89-6							
DPP	131-18-0							

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3. Brominated and Chlorinated Flame Retardants								
Polybrominated biphenyls (PBBs)	59536-65-1 various			By Toluene Extraction And Followed By Liquid Chromatography - Mass Spectrometry (LC-MS) And Gas Chromatography - Mass Spectrometry (GC-MS) Analysis	By Toluene Extraction And Followed By Liquid Chromatography - Mass Spectrometry (LC-MS) And Gas Chromatography - Mass Spectrometry (GC-MS) Analysis.	Extraction with toluene, GC-MS resp. LC/MS.	Solvent Extraction & GC-CE analysis.	All use of Bromianted and Chlorinated Flame Retardants are banned as of 01 September 2014
Monobromo biphenyls (MonoBB)		0.05	0.03					
Dibromo biphenyls (DiBB)	-	0.05	0.03					
Tribromo biphenyls (TriBB)	-	0.05	0.03					
Tetrabromo biphenyls (TetraBB)	-	0.05	0.03					
Pentabromo biphenyls (PentaBB)	-	0.05	0.03					
Hexabromo biphenyls (HexaBB)	-	0.05	0.03					
Heptabromo biphenyls (HeptaBB)	-	0.05	0.03					
Octabromo biphenyls (OctaBB)	-	0.05	0.03					
Nonabromo biphenyls (NonaBB)	-	0.05	0.03					
Decabromo biphenyl (DecaBB)	13654-09-6	0.05	0.03					
Polybrominated diphenyl ethers (PBDEs)	various	0.05	0.03					
Monobromo diphenyl ethers (MonoBDE)	-	0.05	0.03					
Dibromo diphenyl ethers (DiBDE)	-	0.05	0.03					
Tribromo diphenyl ethers (TriBDE)	-	0.05	0.03					
Tetrabromo diphenyl ethers (TetraBDE)	40088-47-9	0.05	0.03					
Pentabromo diphenyl ethers (PentaBDE)	32534-81-9	0.05	0.03					
Hexabromo diphenyl ethers (HexaBDE)	36483-60-0	0.05	0.03					
Heptabromo diphenyl ethers (HeptaBDE)	68928-80-3	0.05	0.03					
Octabromo diphenyl ethers (OctaBDE)	32536-52-0	0.05	0.03					
Nonabromo diphenyl ethers (NonaBDE)	63936-56-1	0.05	0.03					
Decabromo diphenyl ether (DecaBDE)	1163-19-5	0.05	0.03					
Tris(2,3-Dibromopropyl)-Phosphate	126-72-7	0.5	0.25					
Tris(2-Chloroethyl)Phosphate (TCEP)	115-96-8	0.05	0.25					
Hexabromocyclododecane (HBCDD)	134237-50-6, 134237-51-7, 134237-52-8, 25637-99-4, 3194-55-6	0.5	0.25					
Tetrabromo-bisphenol A (TBBPA)	79-94-7	0.5	0.25					
Subgroup: Other Flame Retardants								
TEPA	5455-55-1	Best current testing technology using lowest detection / reporting limits always updated and applied	Best current testing technology using lowest detection / reporting limits always updated and applied				Solvent extraction and GC-MS / LC-MS analysis	All use of Subgroup: Other Flame Retardants banned a of 01 Septmeber 2014
TRIS	5412-25-9							
Sodium tetraborate	1303-96-4 1303-43-4 12179-04-3 215-540-4							
Boron trioxide	1303-86-2							
Boric acid	10043-35-3 11113-50-1							
Antimony trioxide	1309-64-4							
Tri-o-cresyl phosphate	78-30-8							

Tris(1,3-dichloro-2-propyl)phosphate (TDCPP)	13674-87-8						
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		Input: Chemical Formulations / Output: Waste water (µg/l)	Output: Products / Output: Waste Water Sludge (mg/kg)	Input: Chemical Formulations	Output: Waste water	Output: Sludge		Output: Products
4. Amines (Associated with Azo dyes)								
4-Aminodiphenyl	92-67-1	0.01	0.01	With Reference To EN 14362:1&3 And Followed By Gas Chromatographic – Mass Spectrometric (GC-MS) And High Performance Liquid Chromatographic	With Reference To EN 14362:1&3 And Followed By Gas Chromatographic – Mass Spectrometric (GC-MS) And High Performance Liquid Chromatographic (HPLC) Analysis.	EN 14362 modified GC/MS resp. HPLC.	EN 14362-1:2012; ISO 17234-1:2010; ISO 17234-2:2011; Leather, GB/T 17592 ; GB/T 23344 (4-aminozobenzene)	All use of Amines (associated with Azo dyes) banned as of 01 September 2014
Benzidine	92-87-5							
4-Chloro-o-Toluidine	95-69-2							
2-Naphthylamine	91-59-8							
o-Aminoazotoluene	97-56-3							
2-Amino-4-Nitrotoluene	99-55-8							
p-Chloroaniline	106-47-8							
2,4-Diaminoanisole	615-05-4							
4,4'-Diaminodiphenylmethane	101-77-9							
3,3'-Dichlorobenzidine	91-94-1							
3,3'-Dimethoxybenzidine	119-90-4							
3,3'-Dimethylbenzidine	119-93-7							
3,3'-Dimethyl-4,4'diaminodiphenylmethane	838-88-0							
p-Cresidine	120-71-8							
4,4'-Methylene-Bis(2-Chloroaniline)	101-14-4							
4,4'-Oxydianiline	101-80-4							
4,4'-Thiodianiline	139-65-1							
o-Toluidine	95-53-4							
2,4-Toluylenediamine	95-80-7							
2,4,5-Trimethylaniline	137-17-7							
o-Anisidine	90-04-0							
p-Aminoazobenzene	60-09-3							
2,4-Xylidine	95-68-1							
2,6-Xylidine	87-62-7							
Subgroup: Carcinogenic Dyes								
C.I Acid Red 26	3761-53-3	Best current testing technology using lowest detection / reporting limits always updated and applied	Best current testing technology using lowest detection / reporting limits always updated and applied				Solvent extraction and GC-MS analysis	All use of Subgroup: carcinogenic Dyes banned as of 01 September 2014
C.I. Basic Red 9	569-61-9							
C.I. Basic Violet 14	632-99-5							
C.I Direct Blue 6	2602-46-2							
C.I Direct Red 28	573-58-0							
C.I Direct Black 38	1937-37-7							
C.I Disperse Blue 1	2475-45-8							
C.I. Disperse Yellow 3	2832-40-8							
C.I. Disperse Orange 11	82-28-0							
C.I. Disperse Yellow 23	6250-23-3							
C.I. Disperse Orange 149	85136-74-9							
C.I. Solvent Yellow 1	60-09-3							
C.I. Solvent Yellow 2	60-11-7 EN71-9							
C.I. Solvent Yellow 3	97-56-3							
C.I. Solvent Yellow 14	842-07-9							
C.I. Basic Blue 26	2580-56-5							
C.I. Basic Violet 1	8004-87-3 EN71-9							

C.I. Direct Brown 95	16071-86-6							
C.I. Direct Blue 15	2429-74-5							
C.I. Direct Blue 218	28407-37-6							
C.I Acid Red 114	6459-94-5							
C.I Acid Violet 49	1694-09-3							
Subgroup: Allergenic Disperse Dyes								
C.I. Disperse Blue 1	2475-45-8	Best current testing technology using lowest detection / reporting limits always updated and applied	Best current testing technology using lowest detection / reporting limits always updated and applied				DIN 54231	All use of Subgroup: Allergenic Disperse Dyes banned as of 01 September 2014
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 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 37/76	13301-61-6							
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 39	12236-29-2							
C.I. Disperse Yellow 49	54824-37-2							

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		Input: Chemical Formulations / Output: Waste water (µg/l)	Output: Products / Output: Waste Water Sludge (mg/kg)	Input: Chemical Formulations	Output: Waste water	Output: Sludge	Output: Products	
5. Organotin compounds								
MBT(Monobutyltin)	1118-46-3	0.01	0.01	With Reference To DIN EN17353 And Followed by Gas Chromatography-Mass Spectrometry (GC-MS) Analysis.	With Reference To DIN EN17353 And Followed by Gas Chromatography-Mass Spectrometry (GC-MS) Analysis.	Solvent extraction, derivatisation with tetraethylborate, GC/MS.	Extraction / Derivation followed by GC-MS analysis	All use of Organotin Compounds banned as of 01 September 2014
DBT(Dibutyltin)	1002-53-5							
TBT(Tributyltin)	56573-85-4							
TPhT(Triphenyltin)	892-20-6							
DOT(Dioctyltin)	94410-05-6							
MOT(Monooctyltin)	15231-44-4							
DPhT(Diphenyltin)	1011-95-6							
TeBT(Tetrabutyltin)	1461-25-2							
TCyT(TricyclohexylTin)	NA							
TPT(Tripopyltin)	NA							
TeET(Tetraethyltin)	597-64-8							
TBTO	56-35-9	Best current testing technology using lowest detection / reporting limits always updated and applied	Best current testing technology using lowest detection / reporting limits always updated and applied					
DBTC	683-18-1							
TPT	668-34-8							
DBB	75113-37-0							

Substance	CAS-nr.	Detection Limit		Test Method				STATUS Banned/ phase-out
		Input: Chemical Formulations / Output: Waste water (µg/l)	Output: Products / Output: Waste Water Sludge	Input: Chemical Formulations	Output: Waste water	Output: Sludge	Output: Products	
6. PFCs (Perfluorocarbon / Polyfluorinated Compounds)								
PFOA	335-67-1	0.01	0.001	CEN/TS 15968:2010 - modified	C EN/TS 15968:2010. LC/MS analysis - modified	Solvent extraction CEN/TS 15968:2010. LC/MS analysis - modified	Solvent Extraction, LC- MS analysis.	All use of PFCs (Perfluorinated / Polyfluorinated Compounds) banned as of 01 July 2016
PFNA	375-95-1	0.01	0.001					
PFBS	375-73-5 or 59933-66-3	0.01	0.001					
PFOS	1763-23-1	0.01	0.001					
4:2 FTOH	2043-47-2	0.1	0.01					
6:2 FTOH	647-42-7	0.1	0.01					
8:2 FTOH	678-39-7	0.1	0.01					
10:2 FTOH	865-86-1	0.1	0.01					
POSF	307-35-7	0.1	0.01					
PFHxS	355-46-4	0.01	0.001					
PFHxA	307-24-4	0.01	0.001					
PFOSA	754-91-6	0.1	0.01					
N-Me-FOSA	31506-32-8	0.1	0.01					
N-Et-FOSA	4151-50-2	0.1	0.01					
N-Me-FOSE alcohol	24448-09-7	0.1	0.01					
N-Et-FOSE alcohol	1691-99-2	0.1	0.01					
PFBA	375-22-4	0.01	0.001					
PFPeA	2706-90-3	0.01	0.001					
PFHpA	375-85-9	0.01	0.001					
PFDA	335-76-2	0.01	0.001					
PFUnA	2058-94-8	0.01	0.001					
PFDoA	307-55-1	0.01	0.001					
PFTra	72629-94-8	0.01	0.001					
PfteA	376-06-7	0.01	0.001					
PFHpS	375-92-8	0.01	0.001					
PFDS	335-77-3	0.01	0.001					
6:2 FTA	17527-29-6	0.1	0.01					
8:2 FTA	27905-45-9	0.1	0.01					
10:2 FTA	17741-60-5	0.1	0.01					
PF-3,7-DMOA	172155-07-6	0.01	0.001					
HPFHpA	1546-95-8	0.01	0.001					
4HPFUnA	34598-33-9	0.01	0.001					
1H, 1H, 2H, 2H-PFOS	27619-97-2	0.01	0.001					

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		Input: Chemical Formulations / Output: Waste water (µg/l)	Output: Products / Output: Waste Water Sludge (mg/kg)	Input: Chemical Formulations	Output: Waste water	Output: Sludge	Output: Products	
7. Chloro benzenes								
Dichlorobenzenes	various	0.02	0.01	Liquid extraction GC-MS	Liquid extraction GC-MS	Solvent extraction GC-	Extraction / Derivation	All use of Chloro

1,2-Dichlorobenzene	95-50-1			analysis.	analysis.	MS analysis.	followed by GC-MS analysis	Benzenes are banned as of 01 September 2014
1,3-Dichlorobenzene	541-73-1							
1,4-Dichlorobenzene	106-46-7							
Trichlorobenzene	various							
1,2,3-Trichlorobenzene	87-61-6							
1,2,4-trichlorobenzene	120-82-1							
1,3,5-Trichlorobenzene	108-70-3							
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							
Pentachlorobenzene	608-93-5							
Hexachlorobenzene #	118-74-1							

Substance	CAS-nr.	Detection Limit		Test Method				STATUS Banned/ phase-out
		Input: Chemical Formulations / Output: Waste water (µg/l)	Output: Products / Output: Waste Water Sludge (mg/kg)	Input: Chemical Formulations	Output: Waste water	Output: Sludge	Output: Products	
Chloro-Toluenes (solvents and biocides. Production dyes. Chemical Intermediates. Antifelting)								
2-chlorotoluene	95-49-8	Best current testing technology using lowest detection / reporting limits always updated and applied	Best current testing technology using lowest detection / reporting limits always updated and applied				Solvent extraction and GC-MS analysis	All use of Chloro-Toluenes are banned as of 01 September 2014
3-chlorotoluene	108-41-8							
4-chlorotoluene	106-43-4							
2,3-dichlorotoluene	32768-54-0							
2,4-dichlorotoluene	95-73-8							
2,5-dichlorotoluene	19398-61-9							
2,7-dichlorotoluene	118-69-4							
3,4-dichlorotoluene	95-75-0							
2,3,6-trichlorotoluene	2077-46-5							
2,4,5-trichlorotoluene	6639-30-1							
Benzotrichloride	98-07-7							
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							
2,3,4,5,6-pentachlorotoluene	877-11-2							

Substance	CAS-nr.	Detection Limit		Test Method				STATUS Banned/ phase-out
		Input: Chemical Formulations / Output: Waste water (µg/l)	Output: Products / Output: Waste Water Sludge (mg/kg)	Input: Chemical Formulations	Output: Waste water	Output: Sludge	Output: Products	
8. Chlorinated solvents								
Dichloromethane	75-09-2	1	0.3	By Headspace Gas Chromatography Mass Spectrometric (HS - GC/MS) Analysis.	By Headspace Gas Chromatography Mass Spectrometric (HS - GC/MS) Analysis.	GC-MS Headspace analysis.	Extraction / Derivation followed by GC-MS analysis	All Chlorinated solvents are banned as of 01 September 2014 (perchloroethylene banned as of 01 September 2015)
Chloroform	67-66-3							
Tetrachloromethane	56-23-5							
1,1,2-Trichloroethane	79-00-5							
1,1-Dichloroethane	75-34-3							
1,2-Dichloroethane	107-06-2							
Trichloroethylene	79-01-6							
Perchloroethylene	127-18-4							
1,1,1-trichloroethane	71-55-6							
1,1,1,2-Tetrachloroethane	630-20-6							

1,1,2,2-Tetrachloroethane	79-34-5							
Pentachloroethane	76-01-7							
1,1-Dichloroethylene	75-35-4							

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		Input: Chemical Formulations / Output: Waste water (µg/l)	Output: Products / Output: Waste Water Sludge (mg/kg)	Input: Chemical Formulations	Output: Waste water	Output: Sludge	
Other VOCs							
Methyl-ethyl ketone	78-93-3	Best current testing technology using lowest detection / reporting limits always updated and applied	0,1 ppm			Solvent extraction and GC-MS analysis	All use of Other VOCs banned as of 01 September 2014
Benzene	71-43-2		0,1 ppm				
Toluene	108-88-3		0,1 ppm				
Ethylbenzene	100-41-4		0,1 ppm				
Xylene	1330-20-7		0,1 ppm				
Styrene	100-42-5		0,1 ppm				
Cyclohexanone	108-94-1		2,0 ppm				
2-ethoxyethylacetate	111-15-9		10,0 ppm				
1,2,3-trichloropropane	96-18-4		10,0 ppm				
Acetophenone	98-86-2		0,1 ppm				
Naphtalene	91-20-3		0,1 ppm				
N,N-dimethylformamide	68-12-2		0,1 ppm				
1-methyl-2-pyrrolidone	872-50-4		50,0 ppm				
2-phenyl-2-propanole	617-94-7		0,1 ppm				
Bis-(2-methoxyethyl) ether	111-96-6	20,0 ppm					
N,N-dimethylacetamide	127-19-5	20,0 ppm					

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		Input: Chemical Formulations / Output: Waste water (µg/l)	Output: Products / Output: Waste Water Sludge (mg/kg)	Input: Chemical Formulations	Output: Waste water	Output: Sludge	Output: Products	
9. Chloro phenols								
Pentachlorophenols (PCP) #	87-86-5	0.5	0.025	Extraction / Derivation followed by GC-MS analysis	Liquid extraction, derivatisation, with acetic anhydride, GC-MS analysis.	Solvent extraction, derivatisation, with acetic anhydride, GC-MS analysis.	Extraction / Derivation followed by GC-MS analysis	All use of Chloro phenols are banned as of 01 September 2014
Tetrachlorophenols (TeCP)	25167-83-3							
2,3,4,5-Tetrachlorophenol	4901-51-3							
2,3,4,6-Tetrachlorophenol	58-90-2							
2,3,5,6-tetrachlorophenol	935-95-5							
Trichlorophenol (TriCP)	25167-82-2							
2,4,6-trichlorophenol	88-06-2							
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							
3,4,5-trichlorophenol	609-19-8							
Dichlorophenols (DiCP)	25167-81-1							
2,3-dichlorophenol	576-24-9							
2,4-dichlorophenol	120-83-2							
2,5-dichlorophenol	583-78-8							
3, 4-dichlorophenol	95-77-2							
3, 5-dichlorophenol	591-35-5							
Mono Chlorophenol	various							

Substance	CAS-nr.	Detection Limit		Test Method				STATUS Banned/ phase-out
		Input: Chemical Formulations / Output: Waste water (µg/l)	Output: Products / Output: Waste Water Sludge (mg/kg)	Input: Chemical Formulations	Output: Waste water	Output: Sludge	Output: Products	
10. SCCP								
SCCP C ₁₀₋₁₃	85535-84-8	0.4	0.03	Extraction with toluene, GC-MS resp. LC/MS analysis.	Liquid extraction with toluene, GC-MS resp. LC/MS analysis.	Solvent extraction with toluene, GC-MS resp. LC/MS analysis.	Solvent Extraction & GC-CE analysis.	All use of SCCP is banned as of 01 September 2014

Substance	CAS-nr.	Detection Limit		Test Method			Output: Products	STATUS Banned/ phase-out
		Input: Chemical Formulations / Output: Waste water (µg/l)	Output: Products / Output: Waste Water Sludge (mg/kg)	Input: Chemical Formulations	Output: Waste water	Output: Sludge		
11. Heavy metals								
Total Cadmium(Cd)	7440-43-9	0.1	1	Digestion, ICP analysis.	Digestion, ICP analysis.	Digestion, ICP analysis.	EN 1122-2001 / Acid Digestion followed by ICP analysis. (Total)	All use of Heavy Metals phasie-out
Total Lead(Pb)	7439-92-1	1	1				ISO 105-E04 acid perspiration extraction & ICP analysis. Extractable)	
Total Mercury(Hg)	7439-97-6	0.05	0.006				DIN 53314-1996 UNE EN 17075:2008	
Total Nickel(Ni)	7440-02-0	1	1				ISO 105-E04 acid perspiration extraction & ICP analysis. Extractable)	
Total Hexavalent hromium(Cr-VI)	18540-29-9		1					
Total Arsenic(As)	7440-38-2	1	1					
Total Chromium(Cr)	7440-47-3	1	1					
Total Copper(Cu)	7440-50-8	1	1				ISO 105-E04 acid perspiration extraction & ICP analysis. Extractable)	
Total Zinc(Zn)	7440-66-6	1	4					
Total Manganese(Mn)	7439-96-5	1	1					
Total Antimony (Sb)	7440-36-0	1	1					
Total Cobalt (Co) (Extractable heavy-metals by artificial acidic sweat)	7440-48-4	Best current testing technology using lowest detection / reporting limits always updated and applied	≤ 4 ppm (≤ 1 ppm for children)	Best current testing technology using lowest detection / reporting limits always updated and applied	Best current testing technology using lowest detection / reporting limits always updated and applied	Best current testing technology using lowest detection / reporting limits always updated and applied	Heavy metals extractable: by acid sweat Extraction UNI EN ISO 105-E04. Determination AAS-ICP/OES/MS. Determination CrVI: extraction in alkaline buffer - colorimetric detection method to difenilcabazide.	

Substance	CAS-nr.	Detection Limit		Test Method			STATUS Banned/ phase-out	
		Input: Chemical Formulations / Output: Waste water (µg/l)	Output: Products / Output: Waste Water Sludge (mg/kg)	Input: Chemical Formulations	Output: Waste water	Output: Sludge		Output: Products
OTHERS								
Cyanide	-	4	declaration of non-use – best current testing technology always updated and applied	declaration of non-use – best current testing technology always updated and applied	Digestion, ICP analysis.	Digestion, ICP analysis.	ISO 105-E04 acid perspiration extraction & ICP analysis. (Extractable)	All use of Cyanide banned as 01 September 2014
Formaldehyde (gas)	50-00-0	declaration of non-use – Best current testing technology using lowest detection / reporting limits always updated and applied	declaration of non-use – Best current testing technology using lowest detection / reporting limits always updated and applied	declaration of non-use – Best current testing technology using lowest detection / reporting limits always updated and applied	declaration of non-use – Best current testing technology using lowest detection / reporting limits always updated and applied	declaration of non-use – Best current testing technology using lowest detection / reporting limits always updated and applied	UNI EN ISO 14184-1	All use of Formaldehyde (gas) banned as of 01 September 2014
BIOCIDES								
Aldrin	309-00-2	Best current testing technology using lowest detection / reporting limits always updated and applied	declaration of non-use / <1ppm	Best current testing technology using lowest detection / reporting limits always updated and applied			Organo-chlorinated pesticides: US EPA 8081: cotton and cellulose natural fibres - Soxhlet extraction or ultrasonic bath with apolar solvents (iso-octane, n-hexane). Chlorinated herbicides: US EPA 8151: cotton and cellulose natural fibres - methanol extraction. Organo-phosphorous compounds: US EPA 8141: cotton and cellulose natural fibres. Semi-volatile organic compounds: US EPA 8270 C: cotton and cellulose natural fibres. IWTO Draft Test Method 59: Wool and animal keratin fibres - determination using GC-MS and LC-MS.	All use of Biocides banned as of 01 September 2014
Captafol	2425-06-1							
Chlordane	57-74-9							
DDT	50-29-3							
o,p'-DDT	789-02-6							
Dieldrin	60-57-1							
Endrin	72-20-8							
Heptachlor	76-44-8							
Hexachlorobenzene #	118-74-1							
α-Hexachlorocyclohexane	319-84-6							
β-Hexachlorocyclohexane	319-85-7							
δ-Hexachlorocyclohexane	319-86-8							
2,4,5- T	93-76-5							
2,4-D	94-75-7							
chlordimeform	6164-98-3							
Ethyl-4,4'-dichlorobenzilate	510-15-6							
Dinoseb	88-85-7							
monocrotophos	6923-22-4							
Pentachlorophenol #	87-86-5							
Toxaphene	8001-35-2							
methamidophos	10265-92-6							
methyl parathion	298-00-0							
parathion	56-38-2							
phosphamidon	13171-21-6							
lindane	58-89-9							
DDD	53-19-0							
DDD (Dichlorodiphenyl-dichloroethane)	72-54-8							
diazinon	333-41-5							
propanfos	31218-83-4							
chlorfenvinphos	470-90-6							
diclorofention	97-17-6							
clorpyrofos	5598-15-2							
fenchlorphos	299-84-3							
diflubenzurone	35367-38-5							
triflumurone	64628-44-0							

cypermethrin	52315-07-8							
deltamethrin	52918-63-5							
fenvalerate	51630-58-1							
cyhalothrin	91465-08-6							
flumethrin	69770-45-2							
Azinophosmethyl	86-50-0							
Azinophosethyl	2642-71-9							
Bromophos-ethyl	4824-78-6							
Carbaryl	63-25-2							
Coumaphos	56-72-4							
Cyfluthrin	68359-37-5							
DEF	78-48-8							
DDE	3424-82-6 72-55-9							
Dichlorprop	120-36-2							
Dicrotophos	141-66-2							
Dimethoate	60-51-5							
Endosulfan, α -	959-98-8							
Endosulfan, β -	33213-65-9							
Esfenvalerate	66230-04-4							
Heptachloroepoxide	1024-57-3							
Isodrine	465-73-6							
Kelevane	4234-79-1							
Kepone	143-50-0							
Malathion	121-75-5							
MCPA	94-74-6							
MCPB	94-81-5							
Mecoprop	93-65-2							
Mirex	2385-85-5							
Methoxychlor	72-43-5							
Perthane	72-56-0							
Phosdrin/Mevinphos	7786-34-7							
Profenophos	41198-08-7							
Quinalphos	13593-03-8							
Strobane	8001-50-1							
Telodrine	297-78-9							
Trifluralin	1582-09-8							

Substance	CAS-nr.	Detection Limit		Test Method				STATUS Banned/ phase-out	
		Input: Chemical Formulations / Output: Waste water (µg/l)	Output: Products / Output: Waste Water Sludge (mg/kg)	Input: Chemical Formulations	Output: Waste water	Output: Sludge	Output: Products		
ORTHO-PHENYLPHENOL									
<i>o</i> -Phenylphenol (OPP)	90-43-7		Best current testing technology using lowest detection / reporting limits always updated and applied					All use banned as of 01 September 2014	
NITROSAMINES									
N-Nitrosodimethylamine (NDMA)	62-75-9		Declaration of non-use-Best current testing technology using lowest detection / reporting limits always updated and applied				UNI EN 14602		
N-Nitrosodiethylamine (NDEA)	55-18-5								
N-Nitrosodi- <i>n</i> -propylamine (NDPA)	621-64-7								
N-Nitrosodi- <i>n</i> -butylamine (NDBA)	924-16-3								
N-Nitrosopiperidine (NPIP)	100-75-4								
N-Nitrosopyrrolidine (NPYR)	930-55-2								
N-Nitrosomorpholine (NMOR)	59-89-2								
N-nitroso N-methyl N-phenylamine (NMPPhA)	614-00-6								
N-nitroso-N-ethyl-N-phenylamine (NEPhA)	612-64-6								
POLYAROMATIC HYDROCARBONS									
Benzo-[a]-pyrene (BaP)	50-32-8		declaration of non-use- Best current testing technology using lowest detection / reporting limits always updated and applied				Solvent extraction and GC-MS analysis	All use banned as of 01 September 2014	
Benzo-[e]-pyrene(BeP)	192-97-2								
Benzo-[a]-anthracene(BaA)	56-55-3								
Chrysene(CHR)	218-01-9								
Benzo-[b]-fluoranthene(BbFA)	205-99-2								
Benzo-[j]-fluoranthene(BjFA)	205-82-3								
Benzo-[k]-fluoranthene(BkFA)	207-08-9								
Dibenzo-[a,h]-anthracene (DBA _h A)	53-70-3								
BIOCIDES – ANTI-MOULD									
Dimethyl fumarate (DMF)	624-49-7		declaration of non-use-				Solvent extraction and GC-MS\LC-MS analysis	All use banned as of 01 September 2014	
N,N-Dimethyl formamide (DMF(A))	68-12-2		Best current testing technology using lowest detection / reporting limits always updated and applied				Extraction and GC-MS\LC-MS analysis		