

## **Tchibo Greenpeace Detox Commitment**

**DATE: 27 October 2014**

Tchibo is responsible for our global operations, all inputs we use and practices we employ, and the environmental outcomes we create. We recognize our actions must support responsible environmental outcomes via closed loop whole lifecycles that actively progress responsible production and consumption (1) across all of the products we produce and / or sell.

In line with Tchibo's long-term sustainability program Tchibo recognizes the urgent need for eliminating industrial releases of all hazardous chemicals (2). According to its approach based on prevention (3) and the Precautionary Principle (4) Tchibo is committed to zero discharges (5) of all hazardous chemicals from the whole lifecycle and all production procedures that are associated with the making and using of all products Tchibo produces and / or sells (6) by no later than 01 January 2020.

We recognize that to achieve this goal, mechanisms for disclosure and transparency about the hazardous chemicals used in our global supply chains are important and necessary, in line with the 'Right to Know principle' (6). In line with this principle we will deliver full public availability and transparency of our restricted substance list and audit process and will set up full public disclosure of discharges of hazardous chemicals in our supply chain.

Tchibo also commits to fully and publicly support systemic (i.e. wider societal and policy) change to achieve zero discharge of hazardous chemicals (associated with supply chains and the lifecycles of products) within one generation (7) or less. This commitment includes sustained investment in moving industry, government, science and technology to deliver on systemic change and to affect system change across the industry towards this goal.

Tchibo agrees to publicly support Greenpeace's efforts to eliminate all global hazardous chemical use, and to fully integrate the precautionary principle and the public's right-to-know regarding all environmental aspects across our operations.

Tchibo acknowledges our individual corporate responsibility to always operate with a strong system of environmental oversight of our suppliers and our operations.

Tchibo's following Detox commitment, as well as a individual action plan - with the dates indicate, and the links to the complete detailed evidence supporting the delivery for all aspects of this commitment no later than the delivery schedule dates indicated within this commitment - will always be available to the global public via our main public webpage.

Tchibo understands the scope of the commitment to be a long term vision – with ongoing ambitious practices to be defined by the following individual action plan:

### **Individual action plan**

#### **1. Supply-chain disclosure**

In line with Tchibo's commitment to the public's 'right to know' the chemical substances used within its global supply-chain and the products it sells, Tchibo will be taking the following actions:

1. publish its updated Combined 'Restricted Substances List' (the same in detailed content and scope as per combined M-RSL including detection limits (4) on the same date as the publication of this commitment document, and annually thereafter update this combined M-RSL to reflect our full implementation of the precautionary principle and always applying the best current technology – i.e. the lowest reporting limits technology can achieve.

2. adapt our supplier contract requirements to ensure that our suppliers begin full detailed public disclosure of discharges of hazardous chemicals (beginning with, at least, the 11 priority chemical groups as per endnote (9) and detection limits (as per combined M-RSL and always applying the best current technology as per endnote (5) in our supply chain via full facility transparency (i.e. detailed location and individual data of each facility) of individual facility level disclosure of chemical-by-chemical use and discharges data, to be achieved via an incremental process, beginning with the following actions:

- i) With the publication of this commitment, we will also commit to have full testing evidence published by at least 50 % of all our global wet process suppliers' facilities or affiliates where hazardous chemicals are used, and their discharge data disclosed (as per full scope and content of combined M-RSL) by using an online platform via the Institute for Public and Environmental Affairs – Detox – platform\* and the data collection template (IPE Detox Platform).
- ii) by no later than 6 months after the publication of this commitment, we will also commit to have the full testing evidence published of at least 80 % of our global wet process facilities or affiliates where hazardous chemicals are used (- in addition to the facilities in i), prioritizing additional suppliers in the “global south”) and their discharge data disclosed (as per full scope and content of combined M-RSL) by using the IPE Detox platform and the data collection template agreed with Greenpeace.
- iii) By no later than 31 December 2015, 80% of our wet process facilities or affiliates where hazardous chemicals are used (as per i) and ii) above), will be publicly associated to our company *or, we will ensure that we supply full public evidence that at least 80 % of all of our global wet process suppliers are fully disclosing or are Detox committed companies.*
- iv) Tchibo will publicize the link to all data as per above timelines via the IPE Detox platform – as per the most recent Corporate Discharge Disclosure Data Form.
- v) Tchibo agrees to always ensure the discharge data disclosure is fully credible and not misleading the public and that it will always disclose via the IPE Detox platform.

## **2. 11 priority hazardous chemical groups elimination policy**

Fully aligned with our implementation of the precautionary principle across all of our operations environment-related operations, we recognise the intrinsic, or potential intrinsic hazardousness of all 11 priority hazardous chemical groups (9), and therefore acknowledge it is our priority to eliminate their use across our global supply chain and our operations. There are multiple supply-chain pathways for potential contamination (including chemical formulations) and we will enhance both training and auditing of our supply-chain and our operations, as well as ensure our suppliers have the latest information on the 11 priority hazardous chemical groups, highlighting where there is a risk that any of these chemicals may enter into the undocumented contamination of chemical supplier formulations.

In addition to these actions, Tchibo will enforce its ban on the 8 of the 11 priority hazardous chemical groups (Phthalates, Brominated and chlorinated flame retardants, Azo dyes, Organotin compounds, Chlorobenzenes , Chlorinated solvents, Chlorophenols, and Short chain chlorinated paraffins ) with the following actions:

- i. publish the results of an investigation into the current compliance to this requirement, reporting the findings to the public and simultaneously strengthening our supplier contract language to ensure only

chemical formulations free of at least these 8 priority hazardous chemical groups are utilized and also publish the full testing evidence supporting our delivery of this commitment of full elimination of any use of at least these 8 priority hazardous chemical groups

- ii. work with our supply chain and other global industry leaders, to ensure the most current technological limits of detection are reflected via the lowest detectable limits within our testing regimes.
- iii. publicly document how at least each of these 8 priority hazardous chemical groups have been substituted by safer alternatives and publish these case studies via the online Subsport.org platform within 6 months of the publication of this commitment.

### **3. PFCs - Perfluorocarbon / Polyfluorinated Compounds (10) elimination policy**

Consistent with the precautionary principle and the potential intrinsic hazardousness of all PFCs, Tchibo commits to eliminate any PFCs used in any of the products Tchibo produces and/or sells. The elimination of all PFCs used by any of the products we produce or sell will be supported by:

- i. Across our global supply-chain, eliminate all PFC use by no later than 01 July 2016;
- ii. document how PFCs have been substituted by safer alternatives and publish these case studies via the online Subsport.org platform by no later than 01 July 2016;
- iii. a rigorous system of control to ensure that no traces of PFCs find their way into our supply chain in line with the above;
- iv. work in partnership with our supply chain and other global industry leaders to accelerate the move to non-PFC technologies.

### **4. APEOs elimination policy**

Consistent with our full implementation of the precautionary principle across all our operations related to any affect on the environment, and the potential intrinsic hazardousness of all APEOs, Tchibo therefore acknowledges it is a priority to eliminate any APEOs use across our global supply chain and our operations. There are multiple supply-chain pathways for potential APEOs contamination (including chemical formulations) and will enhance both training and auditing of our supply-chain and our operations, as well as ensure all of our suppliers have the latest information on APEOs, highlighting where there is a risk that APEOs may enter into the undocumented contamination of chemical supplier formulations.

In addition to these actions, Tchibo will enforce its APEOs ban on any products we produce and/or sell with the following actions:

- i. Initiate an investigation into the current compliance to this requirement, reporting the findings to the public by the end of 1 July 2015;
- ii. Strengthening our supplier contract language to ensure only APEOs-free chemical formulations are utilized by the end of 1 July 2015; and
- iii. Work with our supply chain and other global industry leaders, to ensure the most current technological limits of detection are reflected via the lowest detectable limits within our testing regimes.

- iv. Publicly document how APEOs have been substituted by safer alternatives and publish these case studies via the online Subsport.org platform by no later than 01 July 2015.

## **5. Targets for Other Hazardous Chemicals**

As an important part of our implementation of the precautionary principle across all our operations, Tchibo commits to regularly review the list of chemicals used in our operations and our global supply-chain. Tchibo apply the latest scientific findings to periodically update our chemical policy, at least annually, to further restrict or ban chemicals, as new evidence on their impact becomes available.

In this context we will also set clear intermediate progress targets on the elimination of hazardous chemicals (beyond these 11 priority hazardous chemical groups). We will therefore provide a public detailed hazardous chemical-by-chemical schedule (aligned with our full implementation of the precautionary principle across any of our operations affecting the environment) for elimination (beyond the 11 priority hazardous chemical groups identified within this document) to be substituted with non-hazardous chemistry by no later than 01 September 2015 on the road to elimination of all hazardous chemical use by no later than 01 January 2020. This public detailed hazardous chemical-by-chemical schedule will be updated annually.

Tchibo commits to support and reinforce a credible sectoral chemical inventory and hazardous substance green list, aiming to establish this inventory, and the green list, based on a credible (11) intrinsically hazardous screening methodology, by no later than 01 July 2015.

The individual actions covered above will be reassessed by Tchibo at regular intervals – at least annually.

## **6. Responsible Design via closed-loop operations across global supply-chain and product life**

6-1. Tchibo will develop a global “take-back our products that we produce and / or sell” programme for customers by no later than 01 July 2015, as a first step to implementing a responsible “closed-loop” life cycle for all products we produce and / or sell; starting with textiles and apparel.

6-2. Tchibo will initiate a global “sustainable consumption” programme to encourage its customers to purchase more sustainable products and thereby reduce consumption of unnecessarily “disposable” products we produce and / or sell by no later than 31 December 2015

6-3. Tchibo will implement an Extended Producer Responsibility (EPR) system that should bring the achievement of two main environmentally-related goals: 1) Design improvements of products – the EPR system should provide incentives for manufacturers to improve products and systems surrounding the lifecycle products. 2) High use of product and material quality through effective collection and re-use or recycling – this goal can be sub-divided into three sub-divided into three sub-goals, which are a) effective collection, b) environmentally-sound treatment of collected products and c) high use of products and materials in the form of re-use and recycling.

## **7. Self reporting on the Detox Commitment**

The core responsibility principles for delivering on our commitment:

7-1. Tchibo is responsible for our global operations, all inputs we use and practices we employ, and the environmental outcomes created.

7-2. Tchibo must always proactively provide the public precise schedules for all our detailed and credible evidence (e.g. all hazardous chemical testing via the use of the combined M-RSL supporting the delivery of all aspects of our Detox commitment).

7-3. Tchibo is responsible to proactively, publicly and transparently provide full details as to any deviations from the delivery of any aspect of our Detox commitment, and to effectively resolve within no more than 30 days.

Within 6 months of this agreement, Tchibo will publish:

- Case studies of past hazardous chemical substitutions, and the steps we will take to develop a further number of substitution case studies (e.g. where we are currently substituting any of the 11 groups of hazardous chemicals as per below (9), with more non-hazardous chemicals) via the online Subsport.org platform.
- The steps outlining how we will take forward and lead on the development of the intrinsic hazards screening methodology (11).

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(1) Definition of responsible closed loop whole lifecycle design and production is comprehensive integrated operating processes that result in significant (>90%) reduction or complete elimination comprehensively all significant aspects of “negative” environmental impacts throughout the complete lifecycle from product creation to end-of-life reuse and recycling. Responsible design includes a comprehensive holistic process identifying all aspects of capturing the most responsible design, production, product use and closed-loop whole life reuse and recycling, regardless of the application. All aspects of this whole lifecycle are optimized for responsible environmental (e.g. energy, toxicity) and responsible socio-economic production value (e.g. the production working conditions) outcomes. Tchibo recognizes its responsibility to ensure this whole lifecycle process for the design of products and systems protects the well-being of the environment and supports the socio-economic well-being of workers and local communities across its global supply-chain. This so called Extended Product Responsibility (EPR) is an emerging practice that considers the entire life of a product, from design to disposal, to identify opportunities for resource conservation and pollution prevention.

(2) All hazardous chemicals mean all those that show intrinsically hazardous properties: persistent, bioaccumulative and toxic (PBT); very persistent and very bioaccumulative (vPvB); carcinogenic, mutagenic and toxic for reproduction (CMR); endocrine disruptors (ED), or other properties of equivalent concern, (not just those that have been regulated or restricted in other regions). This will require establishing – ideally with other industry actors – a corresponding list of the hazardous chemicals concerned that will be regularly reviewed.

(3) This means solutions are focused on elimination of use at source, not on end-of-pipe or risk management. This requires either substitution with non-hazardous chemicals or where necessary finding non-chemical alternative solutions, such as re-evaluating product design or the functional need for chemicals.

(4) This means taking preventive action before waiting for conclusive scientific proof regarding cause and effect between the substance (or activity) and the damage. It is based on the assumption that some hazardous substances cannot be rendered harmless by the receiving environment (i.e. there are no ‘environmentally acceptable’ / ‘safe’ use or discharge levels) and that prevention of potentially serious or irreversible damage is

required, even in the absence of full scientific certainty. The process of applying the Precautionary Principle must involve an examination of the full range of alternatives, including, where necessary, substitution through the development of sustainable alternatives where they do not already exist.

(5) Zero discharge means elimination of all releases, via all pathways of release, i.e. discharges, emissions and losses, from our supply chain and our products. "Elimination" or "zero" means 'not detectable, to the limits of the best current technology', and only naturally occurring background levels are acceptable.

(6) This means the commitment applies to the environmental practices of the entire company (group, and all entities it directs or licenses) and for all products produced or sold by Tchibo or any of its subsidiaries. This includes all its suppliers or facilities horizontally across all owned brands and licensed companies as well as vertically down its supply chain.

(7) Right to Know is defined as practices that allow members of the public access to environmental information – in this case specifically about the uses and discharges of chemicals based on reported quantities of releases of hazardous chemicals to the environment, chemical-by-chemical, facility-by-facility, at least year-by-year.

(8) One generation is generally regarded as 20-25 years.

(9) the 11 priority hazardous chemical groups are : 1. Alkylphenols 2. Phthalates 3. Brominated and chlorinated flame retardants 4. Azo dyes 5. Organotin compounds 6. Perfluorinated chemicals 7. Chlorobenzenes 8. Chlorinated solvents 9. Chlorophenols 10. Short chain chlorinated paraffins 11. Heavy metals such as cadmium, lead, mercury and chromium (VI).

(10) Polyfluorinated compounds, including fluorotelomers which can serve as precursors that degrade to form perfluorinated carboxylic acids (e.g. PFOA), and mixed halogenated polyfluorinated compounds.

(11) Any screening methodology that would meet the following necessary requirements is considered to be credible:

- i. The full criteria and methods applied and full data behind results must be open to public scrutiny
- ii. The screening methodology approach must take account of the hazards of accessory chemical and/ or breakdown products) which are generated through the use or release of any one particular chemical ingredient.
- iii. The screening methodology must recognize the importance of physical form e.g. nanomaterials, polymers and whole products where applicable
- iv. Where there are legitimate reasons for concern regarding the intrinsic hazards of a chemical, even if information is insufficient to verify those hazards, action must be taken to obtain sufficient information to enable adequate assessment of the chemical. When there is no information on the chemical the 'hazardous until proven non-hazardous' assumption should apply.

## Detox - Combined M-RSL - September 2014

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	
<b>1. Alkylphenols (APEO)</b>								
Octylphenol OP	Various	1	0.2	With Reference To DIN EN ISO 18857 And Followed by Liquid Chromatography – Mass Spectrometry (LC-MS) Analysis. NPEO <sub>(1+2)</sub> : GC/MS	With Reference To DIN EN ISO 18857 And Followed by Liquid Chromatography – Mass Spectrometry (LC-MS) Analysis. NPEO <sub>(1+2)</sub> : GC/MS	Solvent extraction DIN EN ISO 18857 LC/MS mod, resp. NPEO <sub>(1+2)</sub> : GC/MS	Solvent Extraction, GC-MS (AP) & LC-MS (APEO) analysis.	Phase out
4-(1,1,3,3-Tetramethylbutyl)-phenol	140-66-9							
Octylphenol	27193-28-8							
4-Octylphenol	1806-26-4							
Nonylphenol NP	various	1	0.2					
4-Nonylphenol	25154-52-3							
Nonylphenol	104-40-5							
Nonylphenol	90481-04-2							
4-Nonylphenol (branched)	84852-15-3							
Nonylphenol	1173019-62-9							
Nonylphenol Ethoxylates NPEO <sub>(1-2)</sub>	various	1	0.2					
Nonylphenol Ethoxylates NPEO <sub>(3-18)</sub>	various	1	0.2					
(Nonylphenoxy)-polyethylenoxid	9016-45-9							
4-Nonylphenol, ethoxylated	26027-38-3							
(NPEs 3-18) Poly(oxy-1,2-ethanediy),	68412-54-4							
4-Nonylphenol, branched, ethoxylated	127087-87-0							
Unbekanntes Farbmittel 94 (SIN list)	37205-87-1							
Octylphenol Ethoxylates OPEO <sub>(1-2)</sub>	various	1	0.2					
Octylphenol Ethoxylates OPEO <sub>(3-18)</sub>	various	1	0.2					
(OPEs 3-18) alpha-[4-(1,1,3,3-	9002-93-1							
4-tert-Octylphenoethoxylate	9036-19-5							
4-tert-Octylphenoethoxylate	68987-90-6							
<b>2. Phthalates</b>								
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. Extraction with toluene at pH6, GC/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.	Banned
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					
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							
DHNUP	68515-42-4							
DIHP	71888-89-6							
DPP	131-18-0		declaration of non-use				UNI EN 15777	

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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	
<b>3. Brominated and Chlorinated Flame retardants</b>								
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.	Banned
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	-	0.03					
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					
<b>Subgroup: OTHER FLAME RETARDANTS</b>								
TEPA	5455-55-1	declaration of non-use		Not tested			Solvent extraction and GC-MS / LC-MS analysis	Banned
TRIS	5412-25-9							
	1303-96-4 1303-43-4 12179-04-3							
Sodium tetraborate	215-540-4							
Boron trioxide	1303-86-2							
	10043-35-3							
Boric acid	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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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	
<b>4. Amines (Associated with Azo dyes)</b>								
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-aminobenzene)	Banned
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							
<b>Subgroup: CARCINOGENIC DYES</b>								
C.I Acid Red 26	3761-53-3	declaration of non-use		Not tested			Solvent extraction and GC-MS analysis	Banned
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							

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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							
<b>Subgroup: ALLERGINIC DISPERSE DYES</b>								
C.I. Disperse Blue 1	2475-45-8	declaration of non-use	Not tested	DIN 54231	Banned			
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							

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	
<b>5. Organotin compounds</b>								
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	Banned
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(Trippropyltin)	NA							
TeET(Tetraethyltin)	597-64-8							
TBTO	56-35-9							
DBTC	683-18-1							
TPT	668-34-8							
DBB	75113-37-0	declaration of non-use						

## Detox - Combined M-RSL - September 2014

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	
<b>6. PFCs</b>								
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.	Phase out
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					
PFTTrA	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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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	
<b>7. Chloro benzenes</b>								
Dichlorobenzenes	various	0.02	0.01	Liquid extraction GC-MS analysis.	Liquid extraction GC-MS analysis.	Solvent extraction GC-MS analysis.	Extraction / Derivation followed by GC-MS analysis	Banned
1,2-Dichlorobenzene	95-50-1							
1,3-Dichlorobenzene	541-73-1							
1,4-Dichlorobenzene	106-46-7							
Trichlorobenzenes	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	
<b>CHLORO-TOLUENES</b> (solvents and biocides. Production dyes. Chemical Intermediates. Antifelting)								
2-chlorotoluene	95-49-8	declaration of non-use					Solvent extraction and GC-MS analysis	Phase out
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							

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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	
<b>8. Chlorinated solvents</b>								
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	Banned (perchloroethylene phasing out)
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							

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	
<b>OTHER VOCs</b>								
Methyl-ethyl ketone	78-93-3		0,1 ppm				Solvent extraction and GC-MS analysis	Phase out
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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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	
<b>9. Chloro phenols</b>								
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	Banned
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	
<b>10. SCCP</b>								
SCCP C10-13	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.	Banned

Detox - Combined M-RSL - 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		
<b>11. Heavy metals</b>								
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)	Phase 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					
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		≤ 4 ppm (≤ 1 ppm for children)				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.	

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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	
<b>OTHERS</b>								
Cyanide	-	4	-		Digestion, ICP analysis.	Digestion, ICP analysis.	ISO 105-E04 acid perspiration extraction & ICP analysis. (Extractable)	Phase out
Formaldehyde (gas)	50-00-0		declaration of non-use, unless authorized in writing in special cases, with child limits ≤ 16 ppm, Adult <75 ppm				UNI EN ISO 14184-1	Phase out
<b>BIOCIDES</b>								
Aldrin	309-00-2							
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							
<b>Hexachlorobenzene #</b>	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							
<b>Pentachlorophenol #</b>	87-86-5							
Toxaphene	8001-35-2							
methamidophos	10265-92-6							
<b>methyl parathion</b>	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							
propetanfos	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							

declaration of non-use / <1ppm

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.

Phase out



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cyhalothrin	91465-08-6						
flumethrin	69770-45-2						
Azinophosmethyl	86-50-0						
Azinophosethyl	2642-71-9						
Bromophos-ehetyl	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, $\alpha$ -	959-98-8						
Endosulfan, $\beta$ -	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						

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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		
<b>ORTHO-PHENYLPHENOL</b>									
o-Phenylphenol (OPP)	90-43-7		adult limit <100ppm , child limit 50ppm					Phase out	
<b>NITROSAMINES</b>									
N-Nitrosodimethylamine (NDMA)	62-75-9		Lower than the detection limit of the method				UNI EN 14602		
N-Nitrosodiethylamine (NDEA)	55-18-5								
N-Nitrosodi-n-propylamine (NDPA)	621-64-7								
N-Nitrosodi-n-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 (NMPHA)	614-00-6								
N-nitroso-N-ethyl-N-phenylamine (NEPhA)	612-64-6								
<b>POLYAROMATIC HYDROCARBONS</b>									
Benzo-[a]-pyrene (BaP)	50-32-8		declaration of non-use				Solvent extraction and GC-MS analysis	Phase out	
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 (DBAha)	53-70-3								
<b>BIOCIDES – ANTI-MOULD</b>									
Dimethyl fumarate (DMF )	624-49-7		declaration of non-use				Solvent extraction and GC-MS/LC-MS analysis	Phase out	
N,N-Dimethyl formamide (DMF(A))	68-12-2						Extraction and GC-MS/LC-MS analysis		