

Owner
Hanna DurakuApproval Date
06/12/2019No.
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Security

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Approved by
Head of SustainabilityRelated
50087402

Instruction - Telia Company banned and restricted substances

This Group Instruction is related to, and aligned with, Telia Company Supplier Code of Conduct and Telia Company Policy on Environment.

1 PURPOSE

Telia Company has introduced the lists of banned and restricted substances (Black and Grey lists) for its need to identify and control the materials and substances used in the products and packaging which are used by Telia Company and its subsidiaries or delivered to the customers.

The objective for banning and restricting these substances in the products and our operations is to ensure that the products and our operations are safe for humans and cause no harm for the environment.

The list of banned substances (Black list) is based on global legal requirements and national legal obligations and Telia Company environmental policy. The list of substances to be restricted (Grey list) includes in addition to global and national legal obligations and Telia Company environmental policy, market requirements.

2 OBJECTIVES AND REQUIREMENTS

The purpose of The Telia Company Black and Grey lists for banning and restricting substances is to ensure that Telia Company follows its environmental policy, existing and anticipated environmental legislation and market requirements.

2.1 Banned substances (Black list)

In addition to legal bans of certain chemicals and materials the following substances must not be found in products and services to Telia Company, nor must they be found in contracting or the manufacturing processes of these products and services. This refers to any deliberate use of the substance specified but does not apply in cases where a substance constitutes of impurities of low concentration¹.

To be noted: All chemicals used in contracting are to be evaluated separately, according to specific procedures and risk assessments.

¹ The maximum allowed concentration by weight of the substances is <0,1% in homogeneous materials (in cables, connector pipes and joint plates, pigment in crystal glass, in lead petrol, in polymers and in electronic equipment if not stated otherwise).

Exemption: Maximum allowed concentration by weight of Cadmium: <0,01%.

For allowed concentrations of Chromium in Cement and Cadmium and Mercury in batteries, please contact Telia Company for additional information.



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Banned substances (Black list)				
<u>Group</u>	<u>Substance</u>	<u>CAS no²</u>	<u>Banned usage</u>	<u>Legislation</u>
	2-benzotriazole-2-yl-4,6-ditert-butyl-phenol	3846-71-7	All applications	REACH: Candidate list
	4,4'-diaminodiphenylmethane (MDA)	101-77-9	All applications	REACH: Candidate list
Arsenic/arsenic compounds ³		Several	In wood preservation substances	REACH: Annex XVII
Asbestos		Several	All applications	REACH: Annex XVII
Azocolourants and azodyes that can decompose to carcinogenic aromatic amines ⁴		Several	All applications	REACH: Annex XVII
Benzidine incl. salts, 4-aminobiphenyl incl. salts, thiocarbamide, phenyl -β- naphthyl amine		Several	All applications	REACH: Annex XVII
	Benzyl butyl phthalate (BBP)	85-68-7 201-622-7 (EC)	All applications	REACH: Annex XVII
	Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7 204-211-0 (EC)	All applications	REACH: Annex XVII
	Beryllium Oxide	1304-56-9	All applications	
Cadmium and cadmium compounds		Several	All applications except of batteries for special applications ⁵	REACH: Annex XVII
Chromium (VI) compounds	Chromium(VI) compounds: lead chromate in general, and chromium(VI) compounds in pigments	Several	All applications	REACH: Annex XVII
	Cobalt dichloride ⁶	7646-79-91	All applications	REACH: Candidate list
Creosote			All applications except for wood	REACH: Annex XVII

² EC number if available

³ Arsenic and arsenic compounds on trace element level is acceptable.

⁴ EU Directive 2002/61/EC

⁵ Exception: Nickel-cadmium batteries in stationary applications where other types of batteries is not suitable due to extreme temperatures or charging procedures. Approval is required by EU.

⁶ Note: Restricted under EC no 231-589-4


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			preservation (poles)	
	Dimethylfumarate (DMFu)	624-49-7	All applications	REACH: Annex XVII
	Formaldehyde	50-00-0	Preservative in wood ⁷ .	CoRAP + EC list no: 200-001-8
Lead/ Lead compounds		Several	All applications except for lead acid batteries and lead sheeted cable maintenance ⁸	REACH: Annex XVII
CFCs – Chlorofluorocarbons		Several	All applications	The Montreal Protocol and EC/1005/2009
Halons		Several	All applications	The Montreal Protocol and EC/1005/2009
HCFCs – Hydrochlorofluorocarbons		Several	All applications	The Montreal Protocol and EC/1005/2009
	Bromochloromethane	74-97-5	All applications	The Montreal Protocol and EC/1005/2009
	Carbon tetrachloride	56-23-5	All applications	The Montreal Protocol and EC/1005/2009
	Methyl bromide	74-83-9	All applications	The Montreal Protocol and EC/1005/2009
	Methylene chloride	75-09-2	All applications	REACH: Annex XVII
	n-bromopropane	106-94-5	All applications	The Montreal Protocol and EC/1005/2009
	Tetrachloroethylene	127-18-4	All applications	The Montreal Protocol and EC/1005/2009
	1,1,1-trichloroethane	71-55-6	All applications	The Montreal Protocol and EC/1005/2009
	Trichloroethylene	79-01-6	All applications	The Montreal Protocol and EC/1005/2009
	1,2,4-Trichlorobenzene (TBC)	120-82-1	All applications	The Montreal Protocol and EC/1005/2009

⁷ Formaldehyde level <0.124 mg/m³ air (E1-norm according to test method EN 717-1) or <3.5 mg/m³ air (test method EN 717-2).

⁸ EU RoHS directive accepts concentration by weight <0,1% in homogeneous materials such as cables, connector pipes and joint plates, as pigment in crystal glass, in lead petrol and as additives in polymers and solders in electronic equipment.

Stated exemptions in Annex III to the RoHS directive, 2011/65/EU, and its amendments can be used until Telio Company communicates otherwise. Suppliers must inform Telio Company in advance of the delivery regarding material content!

Telio Company takes a restrictive standpoint towards use of lead in solders in servers, storage and array systems, network infrastructure equipment for switching, signaling, transmission as well as network management for telecommunication. The RoHS exemption 7b may only be used in deliveries under specific situations agreed by Telio Company in advance.

Lead plates can be used in lead shielded cable repair if lead free alternatives do not exist.



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Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified		25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	All applications	REACH: Annex XVII
Isocyanates		Several, for instance in thermoplastics and urethanes	All applications except in manufacturing processes	REACH: Restriction proposals
Mercury/ Mercury compounds		Several	All applications	REACH: Annex XVII
Perfluorooctanoic acid (PFOA)	Pentadecafluorooctanoic acid Ammonium pentadecafluorooctanoate Sodium pentadecafluorooctanoate Potassium pentadecafluorooctanoate Silver pentadecafluorooctanoate Pentadecafluorooctanoyl fluoride Methyl pentadecafluorooctanoate Ethyl perfluorooctanoate	335-67-1 3825-26-1 335-95-5 2395-00-8 335-93-3 335-66-0 376-27-2 3108-24-5	All applications	REACH: Annex XVII
Nonadecafluorodecanoic acid and its sodium and ammonium salts (PFDA)	nonadecafluorodecanoic acid ammonium nonadecafluorodecanoate; sodium nonadecafluorodecanoate	Several, among them 607-720-00-X	All applications	REACH: Annex XVII ECHA: candidate list (CMR)
Perfluorooctane sulfonic acid and its derivatives (PFOS)		Several	All applications	REACH
	Nonylphenol	25154-52-3	All applications	REACH: Annex XVII
	Nonylphenol ethoxylate (Nonylphenolpolyglycol ethers)	9016-45-9	All applications	REACH: Annex XVII
Nonylphenolethoxylates Organostannic compounds			All applications	REACH: Annex XVII
	Acrylamide	1979-06-01	All applications	REACH: Annex XVII
PBB – Polybrominated biphenyls		Several	All applications	RoHS ECHA
PBDE – Polybrominated diphenylethers		Several	All applications ⁹	RoHS

⁹ Reactive appointed TBBP exemption to the ban.


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(including deca-BDE)				
Phthalate plasticizers	DEHP Dibutyl phthalate (DBP) Diisobutyl phthalate (DIBP) BBP	Several, such as: 84-74-2 201-557-4 84-69-5	All applications	REACH: Annex XIV and Annex XVII
Polychlorinated Biphenyls (PCB)		Several	All applications	EUR-Lex and ECHA
Polychlorinated Naphtalenes (PCN)		Several	All applications	CoRAP
Polychlorinated Terphenyls (PCT)		Several	All applications	REACH: Annex XVII
	Short Chained Chlorinated Paraffins (C10-C13)	85535-84-8	All applications	REACH: Candidate list and ECHA
	Tris (2-chloroethyl) phosphate	115-96-8	All applications	REACH: Candidate list and ECHA
Tri-substituted organostannic compounds (including Tributyl tin and Triphenyl tin compounds)		Several	All applications	ECHA
Pesticides / Herbicides		Several	Construction work and real estates	Herbicides such as Glyphosate is not to be used at Telia premises or during construction and maintenance or field work on behalf of Telia.
	Dieldrin		All applications	ECHA
	Lindane	Several	All applications	EU / Sweden: Banned according to the Stockholm Convention

2.2 Restricted substances (Grey list)

The following substances are under evaluation and should be avoided in all products and services, neither included in contracting nor manufacturing processes of products and services to Telia Company. This refers to any deliberate use of the substance specified but does not apply in cases where a substance constitutes of impurities of low concentration¹⁰. To be noted: All chemicals used in contracting are to be evaluated separately, according to specific procedures and risk assessments.

Please notice that the producer/supplier shall be able to report the content of all specified materials / substances listed below including chemicals specified in the REACH candidate list when requested by Telia Company.

¹⁰ The maximum allowed concentration by weight of the noted substances is <0,1% in homogeneous materials such as in cables, connector pipes and joint plates, pigment in crystal glass, in lead petrol, in polymers and in electronic equipment if not stated otherwise.

For the following substance the maximum allowed concentration is: Cadmium <0,01%.

For allowed concentrations of Chromium in Cement and Cadmium and Mercury in batteries, please contact Telia Company for additional information.



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Restricted substances (Grey list)			
<u>Group</u>	<u>Substance</u>	<u>CAS no¹¹</u>	<u>Reason for concern and reference</u>
	4,4'-Isopropylidendiphenol Bisphenol A (BPA)	80-05-7	REACH: Candidate list
	1,2-Benzene-dicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	REACH: Candidate list
	1,2-Benzene-dicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	REACH: Candidate list
Antimony and its compounds		Several	Toxic
Aromatic amines ¹²		Several	Carcinogenic
Beryllium and its compounds		Several	BeO: Carcinogenic. Beryllium alloys can form BeO when recycled.
	Bis(2-methoxyethyl) phthalate	117-82-8	REACH: Candidate list
Bismuth and its compounds		Several	Negative for recycling
Chlorinated polymers		Several	Can create toxic substances when recycled
Fluorocarbons – FC		Several	Global warming
Fluorohydrocarbons – HFC		Several	Global warming
	Formaldehyde	50-00-0	Carcinogenic
Halogenated flame retardants except brominated of the types PBB and PBDE which are prohibited ¹³ .		Several	Can create toxic substances when recycled
Lead/lead compounds in batteries. Certain applications are banned ⁴ .		7439-92-1	Toxic
Manganese and Manganese compounds (and dioxide)		7439-96-5 1313-13-9	Toxic
Medium chained chlorinated paraffin's C14-C17		Several	Toxic
Nickel and its alloys, except in steel alloys		Several	Allergenic
	Nitrogen trifluoride	7783-54-2	Global warming
Perchlorates		Several	Labeling requirements
Phthalate (Except the ones that is banned)		Several	Carcinogenic
Polycyclic Aromatic Hydrocarbons (PAH)		Several	Carcinogenic

¹¹ EC number if available

¹² Except for the ones that's banned according to 2002/61/EC

¹³ See Telia Company's "Black list"


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Poly Vinyl Chloride (PVC)		Several	Can create toxic substances when recycled + HCl in fire
Radioactive substances		Several	Carcinogenic
Selenium and selenium compounds		7782-49-2	Toxic
	Sodium dichromate	10588-01-9 7789-12-0	Carcinogenic, mutagenic and toxic to reproduction
	Sulfur hexafluoride, SF6	2551-62-4	Global warming
	N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine (77PD)	3081-14-9	Toxic
	N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine (6PPD)	793-24-8	Toxic
	N-(cyclohexylthio)phthalimide	17796-82-6	Toxic
	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	Toxic
Thermosetting Plastic's (Acrylate, Amino, Epoxy, Urethane-PUR incl. isocyanates and diisocyanates).	Such as but not limited to: '2,3-epoxypropyl methacrylate; glycidyl methacrylate, dibutyltin dilaurate and dibutyl[bis(dodecanoyloxy)]stannane	Examples: 607-123-00-4, 203-441-9 106-91-2 050-030-00-3	REACH: Annex XVII ECHA (CMR)
All substances on the REACH candidate list ¹⁴ that have not been specified above		Several	Several

The above objectives and requirements apply to the extent that they do not place Telia Company in violation of domestic laws and regulations.

3 ROLES AND RESPONSIBILITIES

This Group Instruction applies to Telia Company AB and its Subsidiaries¹⁵ and Joint Operations¹⁶ as their own binding instruction to all directors, members of the boards, officers and employees. In addition, Telia Company works towards promoting and adopting this instruction's principles and objectives in other associated companies where Telia Company does not have control but has significant influence.

Each Group Executive reporting to the CEO of Telia Company is responsible for ensuring that this Group Instruction is duly communicated and implemented, and that the employees within his/her area of responsibility are familiar with and follow this Group Instruction.

¹⁴ <http://echa.europa.eu/candidate-list-table>

¹⁵ All entities over which Telia Company AB has majority control.

¹⁶ The joint operations over which Telia Company AB has joint control and management responsibility.



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Each country CEO is responsible for ensuring that all relevant entities within the CEO's geographic location has adopted and implemented this Group Instruction.

4 BREACHES AGAINST THE INSTRUCTION

Any Telia Company employee who suspects violations of the Code of Responsible Business Conduct or this Group Instruction must speak up and raise the issue primarily to their line manager, and secondly to the Human Resources department, to the Ethics and Compliance Office, or through the Speak-Up Line. The Speak-Up Line is available on Telia Company's internal and external webpages.

Telia Company expressly forbids any form of retaliation. For specific requirements, please see our Group Instruction on Internal Reporting and Non-Retaliation.

Violations against the Group Instruction can lead to disciplinary action, up to and including termination.

5 TARGET GROUP

This Group Instruction is applicable and most relevant for the following target groups:

- Telia Company suppliers
- Product managers
- Product technical specialists
- Sales support, responding to customer RFI/RFQ
- Sourcing project managers
- Sourcing Managers
- Purchasing specialists
- Supplier Code of Conduct Auditors.

6 EXEMPTIONS

Compliance with this list does not exempt manufacturer/seller/supplier from any legal requirements, and it is the responsibility of manufacturer/seller/supplier to follow the latest legislative developments related to materials and substances. Further, if the manufacturer/seller/supplier has reason to believe that any substance, listed or otherwise, may create risk of harm to persons, the environment or products, the manufacturer/seller/supplier shall alert Telia Company.

A Subsidiary-specific corresponding instruction shall be compliant with this Group Instruction while adapting to the concerned business activities, local laws, local circumstances and language. If a deviation or exemption from this Group Instruction is deemed necessary, the Country CEO shall escalate the matter to the Group General Counsel.

7 GROUP GOVERNANCE FRAMEWORK

This Group Instruction is part of the Group Governance Framework, which includes without limitation:

- a) Code of Responsible Business Conduct, Purpose and Values, Strategy, Group Policies, and Instructions for the CEO as approved by the Board of Directors;
- b) Decisions made by the CEO, the Delegation of Obligations and Authority as approved by the CEO, Group Instructions as approved by the CEO or by the responsible Head of Group Function; and



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- c) Guidelines, best practices, process descriptions, templates or working routines developed within area of responsibility of Head of Group Function.

8 TERMS AND ABBREVIATIONS

Terms and abbreviations	Definition
REACH	Regulation of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals
RoHS	Restriction of Hazardous Substances Directive
CAS	Chemical Abstract Service
EC Number	European Community number
ECHA	European Chemical Agency

NOTE! For further information, also read the – Telia Company Supplier Code of Conduct and the Telia Company Policy Environment.

