

Work Instructions Technical Delivery Conditions			Number: AA-TL-035	Rev16 16.02.2018
Title: Substances Prohibition and Declaration List			Scope: Rittal International	
Author: J. Schnaubelt	Department: QM-L	Approved: Dr. Lang	Release date: 10/08/2004	



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0. Change history

Rev.	Author	Released on / by (DD/MM/YYYY)	Change	Reason for the change
01	Dr. Schlewing	27/08/2009 Dr. Lang	Inclusion of the requirements REACH ECHA (SVHC list)	New EU Regulation ECHA REACH (EC) 1907/2006
02	Dr. Schlewing	28/01/2010 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list	New legal obligation EU/ECHA Extended SVHC list 13/01/2010
03	E. Steller J. Schnaubelt	19/04/2011 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list Inclusion in AA-TL035 Inclusion in AA-TL035 Inclusion in AA-TL035 Inclusion in AA-TL035	New legal obligation EU/ECHA Extended SVHC list 15/12/2010 ChemVerbotsVO subst. banned Ozone layer Reg. (EC) 1005/2009 PCB/PCT substances banned POP substances banned PFOS substances banned
04	E. Steller J. Schnaubelt	15/07/2011 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list	New legal obligation EU/ECHA Extended SVHC list 20/06/2011
05	E. Steller J. Schnaubelt	04/04/2012 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list Inclusion of "RoHS 2" Inclusion "Conflict Minerals" Inclusion "Ship Recycling"	New legal obligation EU/ECHA 19/12/2011, 09/02/2012, 14/02/12 New legal obligation EU "RoHS 2" Directive 2011/65/EU New legal obligation USA "Dodd-Frank Act" Art. 1502, US IHM convention
06	E. Steller J. Schnaubelt	03/08/2012 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list	New legal obligation EU/ECHA Extended SVHC list 18/06/2012
07	V. Ganß J. Schnaubelt	07/02/2013 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list	New legal obligation EU/ECHA Extended SVHC list 19/12/2012
08	V. Ganß J. Schnaubelt	17/07/2013 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list Inclusion DMF	New legal obligation EU/ECHA Extended SVHC list 20/06/2013 EU legislation to DMF
09	V. Ganß J. Schnaubelt	18/02/2014 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list	New legal obligation EU/ECHA Extended SVHC list 16/12/2013
10	V. Ganß J. Schnaubelt	28/07/2014 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list	New legal obligation EU/ECHA Extended SVHC list 16/06/2014
11	V. Ganß J. Schnaubelt	03/02/2015 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list	New legal obligation EU/ECHA Extended SVHC list 17/12/2014

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Rev.	Author	Released on / by (DD/MM/YYYY)	Change	Reason for the change
12	V. Ganß J. Schnaubelt	10/07/2015 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list Inclusion of "RoHS 3"	New legal obligation EU/ECHA Extended SVHC list 15/06/2015 New legal obligation EU "RoHS 3" RL (EU) 2015/863
13	V. Ganß J. Schnaubelt	19/02/2016 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list Inclusion of IEC 62474	New legal obligation EU/ECHA Extended SVHC list 17/12/2015 IEC 62474 substance list
14	V. Ganß J. Schnaubelt	14/07/2016 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list	New legal obligation EU/ECHA Extended SVHC list 20/06/2016
15	M. Haas J. Schnaubelt	06/04/2017 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list	New legal obligation EU/ECHA Extended SVHC list 12/01/2017
16	M. Haas J. Schnaubelt	16/02/2018 Dr. Lang	Inclusion of the extended REACH ECHA SVHC list	New legal obligation EU/ECHA Extensions of the SVHC list 07/07/2017 and 15/01/2018

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1. Purpose

The manufacturing industry uses a large number of materials, process materials and base materials. These affect the environment, the safety and quality of the products both during their use and their disposal. In addition, many national, European and international legal norms prohibit or regulate the use of materials. Thus, it is important to have information about the use of materials in products available for delivery. These technical delivery conditions are intended to help to clarify the material content of components, materials and products. They can also be used as:

- Functional specification for the design and development
- Part of the general business conditions
- Information for customers
- Substitute for the answering of queries for this subject area

2. Fundamentals

This prohibition and declaration list specifies materials and material groups with the potential risks for persons and the environment. Due to changes in the law, an update became necessary to take into account the new legal guidelines, inter alia:

- IEC 62474 - Electrotechnical Substance List / Material Declaration
- REACH: EU directive 1907/2006/EC, VO (EG) 790/2009, VO (EU) 109/2012, VO (EU) 125/2012
- RoHS: EU directives 2002/95/EC, 2011/65/EU „RoHS 2“, Del. Dir. (EU) 2015/863 “RoHS 3”
"Restriction on the use of certain dangerous materials in electrical and electronic devices"
- ChemVerbotsVO (German Chemical Prohibition Regulation)
- ChemOzonSchichtVO (German Chemical And Ozone Layer Regulation)
- Convention on POPs (= Stockholm Convention) VO (EG) 850/2004
- The list of materials used in the automotive industry that require a declaration of compliance (VDA Z32-101, edition 07.2002)
- EU recycled automotive guidelines (2000/53/EG (ELV-End of Life Vehicles Directive))
- CoC Code of Conduct = Company guide for social responsibility especially referring to Conflict Minerals Policy - Dodd-Frank-Act Sec. 1502 US law and CTA "Act" - California Transparency in Supply Chains Act of 2010 (SB 657)
- StrlSchV: Radiation Protection Ordinance: Compliance with radioactive limits

This covers all materials, which, in particular

- Cause cancer
- Endanger reproduction
- Change genetic material
- Act sensitising
- Are (very) poisonous
- Endanger the environment

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3. Applications & explanations / Declaration “D” / Prohibition “P” / Registration “Z”

This prohibition and declaration list is binding for all suppliers as a technical delivery condition.

The supplier has to ascertain, for all deliveries, that the substance prohibitions have been adhered to and that the concentrations are within the permitted threshold limit values.

Substances whose declaration is compulsory are marked with a "D". The concentration of the substance must be declared if it exceeds the limit value. Substances that are subject to bans are marked with a "P". Because the substitution of substances has an impact on quality and usability, their replacement by other substances must be approved. Banned substances "P" must not be included in the delivered material with a concentration exceeding the limit value. The prohibition and limit value may refer to specific applications. It is not necessary to specify the concentration value if the concentration of the substance is below or equal to the limit value. In this case a confirmation of compliance with the regulation is sufficient (no declaration).

With “Z” characterized materials (registration-obligated materials as per REACH appendix XIV) may be used without specific authorization only up to the end of their individual time limits.

If the certain limits cannot be adhered to due to special quality and use requirements and Rittal has agreed with this, then a corresponding notification must also be provided by the supplier specifying which materials this affects. The notification must include the following information: Name of the substance, CAS or EC number, content in mass percentage in relation to the overall weight (w/w).

The current list of the REACH candidate list (ECHA SVHC list) must always be adhered to, regardless of whether the substances are listed in this AA-TL-035 Technical Delivery Conditions. Link: <https://echa.europa.eu/candidate-list-table>
If there is no threshold limit value specified, 0.1 mass percentage w/w must always be adhered to according to REACH Art. 33 within the meaning of the ECJ decision Sept. 10, 2015 (Ref. No. C-106/2014) for homogenous material.

Regarding Conflict Minerals Compliance the current, international CMRT Reporting Template must be adhered to:
Link EICC_CFSI_CMRT: <http://www.responsiblemineralsinitiative.org/conflict-minerals-reporting-template/>
Link US SEC Dodd-Frank Act : <http://www.sec.gov/News/Article/Detail/Article/1365171562058#.VRRpSPnF-So>

4. Scope

4.1 Legal information

These work instructions are valid even if the above legal norms do not apply in the country of production / manufacture / distribution.

This also applies to the use of factory supplies and operating supplies that adhere to or are attached to part of the goods being delivered (e.g. cooling lubricant). However, this regulation neither exempts the supplier from the obligation to check substance bans or restrictions on the use of hazardous substances to other statutory provisions, nor to provide information about this. On the specific obligations on information and registration within the supply chain in accordance with REACH (EC 1907/2006), attention in this context should be paid to Title IV, Articles 31-36, Information along the supply chain and Title V, Articles 37 and 39, Downstream users.

4.2 Period of validity

These work instructions are valid until they are replaced by a new, more up-to-date version.

5. Version

This prohibition and declaration list is based on the legal standards valid in February 2018 when it was created. These standards may be superseded by a newer version, in which case this document must be replaced accordingly.

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6. Associated Abbreviations and Definitions

6.1 General definitions

Products	Material or compound that has achieved a special form or surface during the manufacturing process that determines its function more than its chemical composition, as such or in added form.
Substances	Chemical elements or chemical compounds as they naturally occur or in manufactured form, including additives required to maintain stability and contamination resulting from the manufacturing process, with the exception of solvents that can be removed from the material without affecting its stability or changing its composition.
Compound	Blend, mixture or chemical solution consisting of two or more substances.

6.2 Details about the columns in the List (Sec. 8) until December, 2016

Column 1	Substance name or Substance Group
Column 2	Chemical Abstracts Number (CAS No.) or EC number for unique identification
Column 3	Hazard, Damage to Health
Column 4	Usage / Source
Column 5	Relevance (legal standard or prohibited materials lists)
Column 6	Legal declaration required: "D"/ legal prohibition: "P" / Prohibition with exceptions "PA" authorization requirement „ Z“

6.2.1 Details about the columns in the List (Sec. 8) from January, 2017, on

Column 1	Name (Substance name or Substance Group)
Column 2	EC no.: European Community number
Column 3	CAS no.: Chemical Abstracts Number
Column 4	Date of inclusion
Column 5	Relevance / Reason for inclusion
Column 6	Decision

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6.3 Associated abbreviations

BedGgstV	Regulation: Specifies which materials are allowed for food-contact applications objects
ChemG	Chemicals Law – law for protection against dangerous materials.
ChemVerbotsV	Chemicals Prohibition Decree – order concerning prohibitions and restrictions governing the marketing of dangerous materials, compounds and products in accordance with the Chemicals Law.
ChemOzonSchichtV	German Chemical and Ozone Layer Regulation
C	Caustic
C _x	Causes cancer, classification in accordance with EU-RL 67/548/EEC or TRGS 905.
CoC	Code of Conduct
D	Declaration required
E	Explosive
ECHA	European Chemicals Agency
EU-RL	European guidelines, including change and modification guidelines.
EG-GHS	Regulation (EG) Nr. 1272/2008 of the classification, marking and packing of materials and mixtures
F	Highly flammable
F+	Extremely flammable
GADSL	Global Automotive Declaration Substance List
GefmaterialV	Dangerous materials decree
GP	Green Passport – „Ship Recycling“ – inventory / substance list - Initial Norway IMO / IHM / Hongkong convention
IEC	International Electrotechnical Commission
JIG	Joint Industry Guide (mostly relevant for Japan)
M _x	Changes genetic material, classification
N	Dangerous to the environment
O	Oxidizing
Ozone Reg. (EC)	Ozone Regulation (EC) No. 1005/2009
P	Prohibition
PA	Prohibition with exceptions
PCT / PCB	Polychlorinated biphenyls and polychlorinated terphenyls ((PCB/PCT - Council Directive 96/59/EC of 16 September 1996)
PFOS	Perfluorooctanesulfonic acid or perfluorooctane sulfonate, directive 2006/122/EG, since 2009 Stockholm Convention, too.
POP	Stockholm Convention on <u>P</u> ersistent <u>O</u> rganic <u>P</u> ollutants is an international environmental treaty that aims to eliminate or restrict the production and use of persistent organic pollutants (POPs).
REACH	Registration, Evaluation and Authorisation of Chemicals VO (EG) 1907/2006
RoHS	Restriction of Hazardous Substances: EU directives 2002/95/EC, 2011/65/EU „RoHS 2“, Del. Dir. (EU) 2015/863 “RoHS 3”
StrlSchV	Radiation Protection Ordinance
SVHC	Substances of Very High Concern. List of candidates by ECHA. Restriction under REACH
T	Poisonous (in accordance with ChemG and EU-RL 67/548/EEC)
T+	Very poisonous (in accordance with ChemG and EU-RL 67/548/EEC)
TRGS	Technical rules for dangerous materials.
w/v	percent by weight based on the homogeneous material in RoHS
w/w	concentration “weight by weight“ for example, according to REACH
Xn	Damages health (in accordance with ChemG and EU-RL 67/548/EEC)
Xi	Irritant
Z	Substances subject to authorization REACH Annex XIV

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7. Notes and Exceptions

7.1 V2A stainless steel enclosures

Rittal stainless steel enclosures are supplied with different material specifications and may contain chromium and nickel as requested. However, these materials are not present in free form.

The customer must observe the tolerance values during the mechanical processing, drilling, grinding, etc.

7.2 KS plastic enclosures

Rittal plastic enclosures are manufactured from glass-reinforced unsaturated polyester. The glass fibres are enclosed in plastic and do not provide any danger, but can be released during the mechanical processing, drilling, grinding, etc.

The customer must observe the tolerance values for the fibre dust.

7.3 Rittal climate control cooling devices: Rittal "Pro Ozone" logo Regulation (EC) No 1005/2009 on substances that deplete the ozone layer

The Rittal "Pro Ozone" logo as symbol for the Rittal initiative for preserving the protective ozone layer is a worldwide-recognised standard for environment-oriented cooling technology. All Rittal cooling devices use "CFC-free" HFC refrigerants. They do not contain any chlorine, and have an ozone depletion potential (ODP) of zero. In particular, Rittal uses the following refrigerants: R134a, R407c, R410a. These refrigerants are not controlled substances covered by the Ozone Regulation (EC) No 1005/2009 and do not belong to the halon group of chemicals. Namely, no fluoride or chloride-based hydrocarbons are used.

7.4 Hazardous substances restrictions under RoHS

- EU directives 2002/95/EG, 2008/35/EG, 2008/385/EG, 2009/443/EG
- Directive 2005/618/EG: Limit values mass% per homogenous material
- Directive 2011/65/EU „RoHS 2“
- Del. directive (EU) 2015/863 "RoHS 3"

7.4.1 Lead Limit value 0.1 %

Exceptions (examples – not completely)

- Lead as alloying element in steel with a lead ratio up to 0,35 % w/v
- in aluminium with a lead ratio up to 0,4 % w/v
- in copper alloying with a lead ratio up to 4 % w/v
- Batteries (marking required)
- Electrical components that contain lead encapsulated in a glass or ceramic matrix, with the exception of glass in incandescent lamps.
- Lead in the glass for cathode ray tubes, electronic components and fluorescent tubes
- For servers, storage systems and storage-array systems
- For network infrastructure equipment for switching, signal processing, transmission and network management in the field of telecommunications
- Lead in ceramic electronic components (e.g. piezo-electronic components)

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7.4.2. Cadmium	Limit value	0.01 %
7.4.3 Chromate (VI)	Limit value	0.1%
7.4.4. Mercury	Limit value	0.1%

Exceptions (examples - not completely):

- Discharge lamps and instrument panel displays (marking "Hazardous Waste" required)
- Mercury in compact fluorescent lamps in a maximum quantity of 5 mg per lamp
- Mercury in rod-shaped fluorescent lamps for general uses while observing the following maximum quantities:
 - Halophosphate 10 mg
 - Triphosphate with normal lifetime 5 mg
 - Triphosphate with long lifetime 8 mg
- Mercury in rod-shaped fluorescent lamps for special purposes
- Mercury in other lamps not listed expressly in this appendix

7.4.5. Polybrominated biphenyls (PBB)	Limit value	0.1 %
7.4.6. Polybrominated diphenylethers (PBDE)	Limit value	0.1 %
7.4.7 Phthalate (DBP, DIBP, DEHP, BBP)	Limit value	0.1 %

7.5. IEC 62474 - Electrotechnical Substance List / Material Declaration

This standard specifies the requirements, the content and format of data exchange for material declarations within the supply chain. Although this international standard was developed for the electrotechnical industry, the requirements and the format of data exchange are also applicable to other industries.

<http://std.iec.ch/iec62474>

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8. List of Substances

Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
Acetaldehyde	CAS: 75-07-0 EC: 200-836-8	F+,C3, Xn	Cleavage product , Plastic products	GefmaterialV REACH 07/2009	D
Acetamide	CAS: 60-35-5	Xn, C3	Solvent additive , Plasticizer	EG-GHS-VER	D
Acrylamide	CAS: 79-06-1 EC: 201-173-7	T,C2, Xi, Xn	Production of polyacrylamide Plastics, Polyacrylamide, synthesis of polymers, gels, A component of the coating means in the paper surface refinement.	REACH 03/2010 SVHC	PA
Acrylonitrile	CAS: 107-13-1 EC: 203-466-5	F,T, N, C2, Xi	Production of polyacrylonitrile Elastomers	REACH 07/2009 ChemVerbotsV GefmaterialV	P
Aldrin	CAS: 309-00-2 EC: 206-215-8	T, N	Insecticide	Convention on POPs	P
Alkanes , Chloroalkanes C10 – C13, (Short Chain Chlorinated Paraffins)	CAS: 85535-84-8 EC: 287-476-5	F+, Xn	Natural gas, oil, plastics, fuels liquid gas, autogas, propellant for spray doses, diesel fuel, petroleum, fuel oil lubricating oil, anti-corrosion means, aviation petrol	REACH 10/2008 SVHC	P / D
Alkylphenols Nonylphenol Nonylphenoethoxylate	CAS: 104-40-5 / 25154-52-3	C, N	in the metalworking industry (boron and flotation means), to the production of lubricating oil additives, in the textile industry (preparation of wool, softener), to the production of epoxy resins, color production, Component in wash and cleaning agents	ChemVerbotsV	P
Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm) c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight			Insulation, Fire protection, Refractory ceramic fibres are used for high-temperature Insulation, almost exclusively in industrial applications (insulation of industrial furnaces and equipment, equipment for automotive and aircraft/ aerospace industry) and in fire protection (buildings and industrial process equipment).	REACH 12/2011 SVHC	PA
Ammonia depleting Substances	CAS: 7664-41-7 EC:231-635-3	Xn	Cleavage product , nitrogen fertiliser Cooling	EG-GHS-VER ChemVerbotsV	PA
Ammonium dichromate	CAS: 7789-09-5 EC: 232-143-1	E,T, N	Chromate colloid copying procedure, bleaching baths for Reversal development, screen printing forms,	REACH 06/2010 Ann XIV ChemVerbotsV	D
Aniline and its salts	CAS: 62-53-3 EC: 200-539-3	T, C1	Production of dyes sulfonamides, isocyanate plastic	GefmaterialV	D
Anthracene	CAS: 120-12-7 EC: 204-371-1	F,T, N	Production of dyes	REACH 10/2009 SVHC	P / D
Anthracene oil	CAS: 90640-80-5 EC: 292-602-7	Xn	Carbon black, impregnating, sealing, corrosion protection	REACH 01/2010 SVHC	PA
Anthracene oil, anthracene paste, distn. Lights	CAS: 91995-17-4 EC: 295-278-5	Xn	Carbon black, impregnating, sealing, corrosion protection	REACH 01/2010 SVHC	P / D
Anthracene oil, anthracene paste, anthracene fraction	CAS: 91995-15-2 EC: 295-275-9	Xn	Carbon black, impregnating, sealing, corrosion protection	REACH 01/2010 SVHC	P / D
Anthracene oil, anthracene low	CAS: 90640-82-7 EC: 292-604-8	Xn	Carbon black, impregnating, sealing, corrosion protection	REACH 01/2010 SVHC	P / D
Anthracene oil, Anthracene paste	CAS:90640-81-6 EC: 292-603-2	Xn	Carbon black, impregnating, sealing, corrosion protection	REACH 01/2010 SVHC	P / D
Antifouling coatings, constituents			See protection coatings, ester resins, modifi. hard resins, arsenic, hexachlorocyclohexane, mercury, chlorinated polypropylene and vinyl resins, organic tin compounds	GP ChemVerbotsV	PA
Antimony and its compounds	CAS: 7440-36-0 EC: 231-146-5	T	Alloys	GP	D
Antimony trioxide, diantimony trioxide	CAS: 1309-64-4 EC: 215-175-0	Xn C3	Flame retardant plastics	GP	D

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Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
Aromatic amines			Impurities in antioxidants, ubricants, elastomers, resins,	ChemVerbotsV	P
alpha-Bis(4-(dimethylamino)-phenyl)-4-(phenylamino)naphthalin-1-methanol (Solvent Blue 4)	CAS: 6786-83-0 EC: 229-851-8	N, Xi	In the production of printing and writing ink for coloring paper and mixtures.	REACH 06/2012 SVHC,	PA
4-aminobiphenyl or its salts	CAS 92-67-1 EC: 202-199-1	T, C1 Xn	Intermediate product to the production of Azo coloring materials	ChemVerbotsV	P
4,4'-bis(dimethylamino)benzo-phenone (Michler's ketone)	CAS: 90-94-8 EC: 202-027-5	T	Intermediate in the production of Triphenyl-methane paint and other materials. As an additive in paints and pigments in paint and coating products. As an additive in the manufacture of electronic compo-nents and scientific research and development.	REACH 06/2012 SVHC,	PA
benzidine or its salts	CAS: 92-87-5 EC: 202-199-1	T, Xn N,	Coloring and printing (Lines)	ChemVerbotsV	P
[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Blue 26)	EC: 219-943-6 CAS: 2580-56-5	Xn	In the production of ink, cleaning, coating materials, coloring paper, packaging, textiles, plastic products. In diagnostic and analytical applications.	REACH 06/2012 SVHC,	PA
4,4'-Bis(dimethylamino)-4''-(methylamino)trityl alkohol-naphthylamine	EC: 209-218-2 CAS: 561-41-1	Xn	Production of ink and other materials to write	REACH 06/2012 SVHC,	PA
	CAS: 91-59-8 EC: 202-080-4	T, N, Xn	Azo coloring materials	ChemVerbotsV	P
4-nitrobiphenyl	CAS: 92-93-3 EC: 202-204-7	T, N	nitro compounds	ChemVerbotsV	P
4-Methoxy-1,3-phenylenediamine	CAS: 615-05-4 EC: 210-406-1	T, N, Xn	Azo coloring materials	REACH 06/2009 SVHC ChemVerbotsV	P
N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	CAS: 101-61-1 EC: 202-959-2	T, N	Intermediate in the production of dyes, reaction chemicals in research and development	REACH 06/2012 SVHC, ChemVerbotsV	PA
Trimethylaniline, 2,4,5-	CAS: 137-17-7 EC: 205-282-0	T, N	Azo coloring materials	REACH 06/2009 SVHC ChemVerbotsV	P
2-Methoxyanilin o-Anisidin	CAS: 90-04-0 EC: 201-963-1	T	intermediate in the manufacture of AZO colourings and pharmaceuticals	REACH 12./2011 SVHC ChemVerbotsV	P
Arsenic and its compounds	CAS: 7440-38-2 EC: 231-148-6	T,N C1	Dyes and enamel glazes, Metal adhesive, A component of catalysts (for oil preparation); electrode component, coating material	GP ChemVerbotsV	PA
Arsenic acid	CAS: 7778-39-4 EC: 231-901-9	T, N	manufacture of arsenic compounds , manufacture circuit board	REACH 12/2011 SVHC ChemVerbotsV	PA
Asbestos	CAS: 1332-21-4	T	Friction linings Seals, insulating materials	ChemVerbotsV GefmaterialV REACH 07/2007C	P
Azo colourants (as defined in TRGS 614)		C1	C2 in dyes Carcinogenic amine components	TRGS 614 GP	P
PAH Polycyclic aromatic hydrocarbons			Rubber grasps at tools, ashes, waste oil, rubber products, motor-car tire. PAH arrive with burn of fossil sources of energy with the exhaust gases into the air.	GADSL	P / D
Benzo (a) pyrene	CAS: 50-32-8 EC: 200-028-5	T, M2 N, C2	Product of incomplete burn	ChemverbotsV	P / D
Benzo (e) pyren	CAS: 192-97-2 EC: 205-892-7	T, N	Component of plasticizer	ChemverbotsV	P / D
Benzo (a) anthracene	CAS: 56-55-3 EC: 200-280-6	T, N	Component of plasticizer	ChemverbotsV	P / D
Benzo (b) fluoranthene (BbFA)	CAS: 205-99-2 EC: 205-911-9	T,N	Component of plasticizer	ChemverbotsV	P / D
Benzo (j) fluoranthene (BbjA)	CAS: 205-82-3 EC: 205-910-3	T,N	Component of plasticizer	ChemverbotsV	P / D
Benzo (k) fluoranthene (BbKA)	CAS: 207-08-9 EC: 205-916-6	T,N	Component of plasticizer	ChemverbotsV	P / D

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Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
Chrysen (CHR)	CAS: 218-01-9 EC: 205-923-4	T,N	production of UV filters, sensitizers and coloring materials.	ChemverbotsV	P
Dibenzo (a,h) anthracene (DbAHA)	CAS 53-70-3 EC: 200-181-8	T,N	Component of plasticizer	ChemverbotsV	P
Benzol – Benzen (excluded in fuels)	CAS: 71-43-2 EC: 200-753-7	F,T	Fuels, solvent (industrial procedures in closed systems)	ChemVerbotsV	P
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	CAS: 68515-42-4 EC: 271-084-6	T	Chemicals industry	REACH 12/2011 SVHC ChemVerbotsV	P
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	CAS: 71888-89-6 EC: 276-158-1	T	Plasticizer in PVC	REACH 06/2011 SVHC	D
BBP Benzylbutylphthalate	CAS: 85-68-7 EC: 201-622-7	T,N,C2	Plasticizer, elastomers, plastics, Thermo-plastics, floor mats on PVC basis, surface coating (automobiles), packing materials, ad-hesives and electricity installation materials.	REACH 10/2008 Ann. XIV „RoHS 3“: (EU) 2015/863	Z / PA
Beryllium and its compounds	CAS: 7440-41-7 EC: 231-150-7	T+	in alloys, metal alloys, Contacts and feather/spring materials, high temperature materials, ceramic parts, glass,	GP	D
Beryllium Oxide	CAS: 1304-56-9 EC: 215-133-1	T, T+,Xi	in nuclear reactors, to the production of airplane spark plugs, crucibles, molds, Insulating material for radar eyes, lamps for fluorescence	REACH 06/2007 ChemVerbotsV	P
Biopersistent fibers		Xn,T+	Artificial mineral fibres from inorganic raw materials: Continuous (glass fibers), Mineral wool, Ceramic fibres (aluminium silicate), Superfine fibers (special fibers),	ChemVerbotsV	P
Lead	CAS: 7439-92-1 EC: 231-100-4	T, N	alloying element, brazing solder	RoHS	PA
Lead azide	CAS: 13424-46-9 EC: 236-542-1	E, T, N Xn	initial detonators	REACH 12/2011 SVHC ChemVerbotsV	PA
Lead dipicrate	CAS: 6477-64-1 EC: 229-335-2	E, T, N Xn	initial detonators	REACH 12/2011	PA
Lead hydrogen arsenate	CAS: 7784-40-9 EC: 232-064-2	T,N	Fungicide, pesticide	REACH 10/2009 SVHC	P / D
Lead carbonat waterless-neutral	CAS: 598-63-0 EC: 209-943-4	T,N	basic lead carbonate, dye, sealing coat	ChemverbotsV	P
Lead hydroxid carbonate	CAS: 1319-46-6 EC: 215-290-6	T,N	restoration	ChemverbotsV	P
Lead sulphate	CAS: 7446-14-2 and 15739-80-7	T,N	as substrate for lithografische color lacquers and tar coloring materials	ChemverbotsV	P
Lead(II) bis(methanesulfonate)	CAS: 17570-76-2 EC: 401-750-5	T, N	Coating process for electronic parts (boards)	REACH 06/2012 SVHC, ChemVerbotsV	PA
Lead chromate	CAS: 7758-97-6 EC 231-846-0	T,N	Pigments, synthetic coloring materials in ship lacquers.	REACH 01/2010 Ann. XIV	PA / Z
Lead chromate molybdat sulfatred (Colour Index: Pigment red 104)	CAS:12656-85-8 EC: 235-759	T, N	Carbon black, Impregnate, a sealing, corrosion protection	REACH 01/2010 ANN. XIV	Z
Lead sulfochromate (Colour Index: Pigment yellow 34)	CAS 1344-37-2 EC 215-693-7	T, N	Pigments, synthetic coloring materials in rubber, plastics, colors	REACH 01/2010 Ann. XIV	Z
Lead arsenate	CAS: 3687-31-8 EC: 222-979-5	T, N	Production of arsenic trioxide, in raw materials for the production of copper, lead and precious metal	REACH 12/2011 SVHC ChemVerbotsV	PA
Lead 2,4,6-trinitro-m-phenylene dioxide	CAS: 15245-44-0 EC: 239-290-0	E, T, N, Xn	initial detonators for pyrotechnics, ammunition	REACH 12/2011 SVHC ChemVerbotsV	PA
Boric acid	CAS : 10043-35-3 / 11113-50-1 EC : 233-139-2/234-343-4	T	Disinfectant, preservative, flame protection means, employment in nuclear power stations with pressurized water reactors,	REACH 06/2010 SVHC	D
Diboron trioxide	CAS: 1303-86-2 EC: 215-125-8	T	In glass, glass fibers, ceramic, flame retardants, catalysts, metallurgy, adhesives, colors, washing and cleaning agents, biocides and insecticides.	REACH 06/2012 SVHC, ChemVerbotsV	PA

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Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
Cadmium and its compounds	CAS: 7440-43-9 EC: 231-152-8	T+,N, C2	Surface protection, stabilizers, lake pigments, surface protection, engage ,glasses	ChemVerbotsV RoHS, GP	P
Chloroaniline	CAS: 106-47-8 EC: 203-401-0	T, N, C2	Hardener and cross-linking agent in polymers and epoxy-based resins, plastics	EG-GHS-Ver 1999/45/EG	D
1-chlorine-2, 3-epoxy-propane	CAS:106-89-8 EC: 203-439-8	T,C2	Residual monomers in epoxy-based resins, Residue in epoxy-based resin	EG-GHS-Ver 1999/45/EG	D
2,2'-dichloro-4,4'-methylenedianiline	CAS: 101-14-4 EC: 202-918-9	T, N, Xn	Production of polyurethanes, hardener	REACH 12/2011 SVHC ChemVerbotsV	D
Chlorinated biphenyls, see: PolyChlorinated Biphenyls (PCB)	CAS: 1336-36-3 EC: 215-648-1	Xn, N	Insulating fluids, capacitors, transformers, Flame retardant in plastics, Plastic parts, also for electronic devices	GP ChemverbotsV	PA
Chlorinated hydrocarbons (CHC)			Flame retardant, Plastics	EU-RL2002/45 ChemVerbotsV	P
1,1 Dichloroethylene	CAS: 75-35-4 EC: 200-864-0	F, Xn	Source material, polyvinylidene chloride	ChemVerbotsV	PA
1,2,-Dichloroethane	CAS: 107-06-2 EC: 203-458-1	F, T;Xn, Xi	Vinyl chloride monomer (VCM) production , Solvents for resins	ChemVerbotsV REACH 12/2011 SVHC	PA / D
cis-1,2-Dichlorethen	CAS: 156-59-2 EC : 205-859-7	F,Xn	Solvent for waxes, resins, fats, lacquers and polymers. For the production of other solvents and chlorinated compounds,	ChemVerbotsV	P
1,3-Dichlorpropen	CAS: 542-75-6 EGC: 208-826-5	T, N, Xn, Xi	By-product for the production For the production of Allylchlorid,	ChemVerbotsV	P
Dichlormethan	CAS : 75-09-2 EC: 200-838-9	Xn	Remover for lacquers, degreasers and extraction agents, solvent for resins, fats, plastics and bitumen, refrigerant	ChemVerbotsV	P
Hexachlorbuta-1,3-dien	CAS : 87-68-3 EG: 201-765-5	T, N	Hydraulic fluid, solvent for elastomers, cooling agents in transformers, adsorbents for gas impurities, biocide, plant protection agent, intermediate product with the production of fluorine-containing lubricant	ChemVerbotsV	P / D
Pentachloroethane	CAS: 76-01-7 EC: 200-925-1	T, N C3	Solvent and solvent mixtures	ChemVerbotsV	PA
1,1,2,2 Tetrachloroethane	CAS: 79-34-5 EC: 201-197-8	T+,N	Solvent, coolant	GP ChemverbotsV	PA
1,1,1,2 Tetrachloroethane	CAS: 630-20-6 EC: 211-135-1	Xn	Impregnating agent, wood stains, spraying paint	GP ChemVerbotsV	PA
1,1,2 Trichloroethane	CAS: 79-00-5 EC: 201-166-9	Xn	Solvent for chlorinated rubber	GP ChemVerbotsV	PA
1,1,1 Dichloro-diphenyl-trichloroethane DDT	CAS:50-29-3 EC: 200-024-	T, C3, N	Pesdizides, solvent in dyes and adhesives	ChemVerbotsV Convention on POPs	P
Trichloroethene	CAS : 79-01-6 EC : 201-167-4	T	Cleaning and degreaser in the metallurgy, solvent in adhesives, dry-cleaning in the textile industry,	REACH 06/2010 Ann. XIV	PA / D
Tetrachlorethen	CAS: 127-18-4 EC: 204-825-9	Xn, N	Solvent, cleaning	ChemVerbotsV	PA
Tetrachloromethane (tetrachloromethane)	CAS: 56-23-5 EC: 200-262-8	T,N, C3	Solvent, cleaning	GefStoffV	PA / D
Trichloromethane (chloroform)	CAS: 67-66-3 EC: 200-663-8	Xn	Solvent	ChemVerbotsV	PA
Calcium arsenate	CAS: 7778-44-1 EC: 231-904-5	T,N	pesticide, in raw materials for the production of copper, lead, precious metal	REACH 12/2011 SVHC ChemVerbotsV	PA
Chromium (VI) salts	CAS: 14977-61-8 EC: 239-056-8	O,T C2,N	Chromium pigments, chromated surfaces, pigments, coatings	RoHS	P
Chromium (III) compounds Dichromium tris(chromate)	CAS: 24613-89-6 EC: 246-356-2	O, T,C, N	Corrosion inhibitors Luftfahrt, Raumfahrt, Stahlproduktion	GP, REACH 12/2011 SVHC ChemVerbotsV	PA

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Chromium (VI) compounds	CAS: 18540-29-9	T, N	Chromium-containing cements, Surface treatment , in wood preservative, Alloying components,	RoHS, ChemVerbotsV	P
Chromium trioxide	CAS:1333-82-0 EC: 215-607-8	O, T+, N	In the electroplating, in wood preservatives, for the production of chrome (IV) – oxide, Potassium dichromate and ammonium dichromate, as strong oxidizing agent (Jones oxidation).	REACH 12/2010 SVHC	D
Chromic acid and Oligomers	CAS: 7738-94-5 EC:231-801-5	O,T+, N	As oxidizing agents in chemistry.	REACH 12/ 2010 SVHC	D
Dichromic acid and Oligomers	CAS: 13530-68-2 EC: 236-881-5	T, N	As oxidizing agents in chemistry.	REACH 12/ 2010 SVHC	D
Chromium-containing cements				ChemVerbotsV	P
Cobalt(II)-chloride	CAS: 7646-79-9 EC: 231-589-4	T, N, Xn	Humidity indicators, drying agent, blue gel drying bags	REACH 12/2011 ChemVerbotsV	P
Cobalt(II)-sulphate	CAS: 10124-43-3 EC: 233-334-2	T, N	Production of pigments and glazes in the porcelain painting, Photography, for ceramic(s),	REACH 12/ 2010 SVHC	D
Cobalt(II)-nitrate	CAS: 10141-05-6 EC: 233-402-1	T, N	production of highly pure cobalt and coloured pigments	REACH 12/ 2010 SVHC	D
Cobalt(II)-carbonate	CAS: 513-79-1 EC: 208-169-4	T, N	As catalyst and pigment one uses. Is contained in ceramic(s) glazes as coloring material (blue).	REACH 12/ 2010 SVHC	D
Cobalt(II)-acetate	CAS: 71-48-7 EC: 200-755-8	T, N	Bleaching and desiccator for lacquers, varnish and catalyst with the production of adipic acid.	REACH 12/ 2010 SVHC	D
Chlordane	CAS :57-74-9 EC :200-349-0	Xn, N	in the agriculture to the ground and seeds treatment, in the grain, potato and vegetable growing, wood preservative	Convention on POPs	P
Chlordecone (KEPONE)	CAS: 143-50-0 EC: 205-601-3	T, N	Insect extermination means	Convention on POPs	P
Conflict Minerals Tantalum, Tin, Gold, Tungsten	Dodd-Frank Act, Sec. 1502, USA: Legal CMRT reporting obligations regarding the certified sourcing of the four "Conflict Minerals" within the supply chain			US Conflict Minerals Law	D
4,4'-Diaminodiphenylmethane (MDA)	CAS: 101-77-9 EC: 202-974-4	T	Hardener for plastics, polymers	REACH 10/2009 SVHC	Z / D
Diarsenic pentaoxide	CAS: 1303-28-2 EC: 215-116-9	C1	Fungicide	REACH 10/2009 SVHC	Z / PA / D
Diarsenic trioxide	CAS: 1327-53-3 EC: 215-481-4	T+,N, C1	Production of glass tanning process, leather, fungicide	REACH 10/2009 SVHC	Z / PA / D
DBP Dibutyl phthalate	CAS: 84-74-2 EC: 201-557-4	T, C2, N	Plasticizer Seals, sealing foams, plastics	REACH 10/2009 „RoHS 3“: (EU) 2015/863	Z / PA
DBP; DIBP; DEHP; BBP = This 4 Phthalates cumulative limit 1000 ppm (= 0.1%) w/w percent by weight homogeneous material = Relevance: IBM ; Danish Order No. 1113 of 26/11/2012 ; Delegated Directive „RoHS 3“ (EU) 2015/863					Z / PA
Dimethoxy ethyl phthalate DMEP	CAS: 117-82-8 EC: 204-212-6	T	Plasticizer Seals , plastics	REACH 12/2011 ChemVerbotsV	PA
Dieldrin	CAS : 60-57-1 EC : 200-484-5	T+, N	Pesticide	Convention on POPs	P
DINP Diisononyl phthalate	CAS: 28553-12-0 EC: 249-079-5	C2	PlasticizerSeals, sealing foams, plastics	BedGgstV	P
DIDP Diisodecylphthalat	CAS: 26761-40-0 EC: 247-977-1 CAS: 68515-49-1 EC: 271-091-4		is used as plasticizer for PVC, especially for applications in the higher temperature range: used (for example in cable cars).Forbidden in children & baby items!	BedGgstV	P
DNOP Dioctyl phthalate	CAS: 117-84-0 EC: 204-214-7		Plasticizer Seals, foams, plastics	REACH 06/2009 SVHC	P
DIBP Diisobutyl phthalate	CAS: 84-69-5 EC: 201-553-2	T	Plasticisers in PUR foams, Plasticizer in plastics, laquers, adhesives	REACH 01/2010 „RoHS 3“: (EU) 2015/863	Z / PA
2,4-Dinitrotoluene	CAS: 121-14-2 EC: 204-450-0	T, N, Xn	Plasticiser in PUR foams, Gelatinizing-plasticizing agent,	REACH 01/2010 SVHC	D / Z
Disodium tetraborate, anhydrous (Sodium tetraborate)	CAS : 1303-96-4 / 12179-04-3 EC : 215-540-4		in soap, water softeners, detergents, disinfectants, cleaning and bleaching agents, insecticides, wood preservatives and flame retardants	REACH 06/2010 SVHC	D
DEGME Diethylene Glycol Monomethyl Ether	CAS: 111-77-3 EC: 203-906-6	Xn	Underbody protection at vehicles, seam from seals, sound absorption	ChemVerbotV GefmaterialV	PA
DEGDME Diethylene glycol dimethyl ether	CAS: 111-96-6 EC: 203-924-4	T	Solvent, Solvents in batteries contained in diesel fuel	REACH 12/2011 ChemVerbotsV	PA

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Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
DEGBE Diethylene Glycol Monobutyl Ether	CAS: 112-34-5 EC: 203-961-6	Xi	Fire-extinguishing foam, in means for surface cleaning Plasticizer Seals, sealing foams, plastics	ChemVerbotV GefmaterialV	PA
DEHP Up to (2-ethyl(hexyl)phthalate)	CAS: 117-81-7 EC: 204-211-0	T, C2	Plasticizer , elastomers, plastics	REACH 10/2008 „RoHS 3“: (EU) 2015/863	Z / PA
DMF Dimethylfumarat	CAS: 624-49-7 EC: 210-849-0	Xn	Biocide used in packaging against mold infestation of shoes and (seat-) Furniture.	REACH 09/2012 Ann. XVII EU 2009/251/EG	P
Endrin	CAS : 72-20-8 EC : 200-775-7	T+, N	Cotton and cultivation of grain: Insecticide	Convention on POPs	P
1,2-dimethoxyethane; thylene glycol dimethyl ether (EGDME)	CAS: 110-71-4 EC: 203-794-9	F, T	Solvents, additive in the production of chemicals, electrolyte solution for lithium batteries.	REACH 06/2012 SVHC, ChemVerbotsV	PA
Ethylene glycol-ether acetate	CAS: 111-15-9 EC: 203-839	T, Xn	Plasticizer, plastics	REACH 06/2009 SVHC	D
Ethylene glycol-methyl ether	CAS: 109-86-4 EC: 203-713-7	T	Plasticizer, plastics	ChemVerbotsV REACH 12/2010 SVHC GefStoffV	PA
2-Ethoxyethanol	CAS: 110-80-5 EC: 203-804-1	T	Solvent	REACH 12/2010 SVHC	D
Chlorofluorocarbons (CFCs), Halons or other ozone depleting substances (HCFC, HFC, HBFC) Halons (CFCs, HBFCs, HCFCs)		N	Foaming agents (PU), polyurethane foams (PU), Cooling agent, fire-extinguishing agent, refrigerant insulating foams Coolants, air conditioning systems	Ozone layer Reg. ChemOzonSchichtV	P
Bromochlorodifluoromethane (Halon 1211)	CAS: 353-59-3 EC: 206-537-9	N	Extinguishing agent, fire extinguishing systems	Ozone layer Reg. ChemOzonSchichtV	P
Bromotrifluoromethane (Halon 1301)	CAS: 75-63-8 EC: 200-887-6	N	Extinguishing agent, Extinguishing systems, e.g. in aircrafts	Ozone layer Reg. ChemOzonSchichtV	P
Bromomethane	CAS: 74-83-9 EC: 200-813-2	T, Xn, Xi, N,	Fungicide, nematicide, insecticide, pharmaceutical	Ozone layer Reg. ChemOzonSchichtV	P
Bromchlormethan (Halon 1011)	CAS: 74-97-5 EC: 200-826-3	Xn; N	Fungicide, nematicide, insecticide, pharmaceutica	Ozone layer Reg. ChemVerbotsV ChemOzonSchichtV	P
Dibromotetrafluoroethane (Halon 2402)	CAS: 124-73-2 EC: 204-711-9	T, Xn, N, Xi	Extinguishing agent, Extinguishing systems	Ozone layer Reg. ChemVerbotsV ChemOzonSchichtV	P
Formamide	EC: 200-842-0 CAS: 75-12-7	T	intermediate product, solvents, chemical reaction (in the pharmaceutical industry), laboratory chemicals, in the agrochemical, plasticizers.	ChemVerbotsV REACH 06/2012 SVHC,	PA
Formaldehyde	CAS: 50-00-0 EC: 200-001-8	T, C3	In plastics, adhesives and foamed polymers, Residual in plastics	REACH 05/2011 SVHC ChemVerbotsV	PA
Formaldehyde, oligomeric reaction products with aniline	CAS: 25214-70-4 EC: 500-036-1	T,	Hardener for the production of epoxy resins, adhesive,	REACH 12/2011 SVHC ChemVerbotsV	PA
Heptachlor	CAS : 76-44-8 EC : 200-962-3	T,N	Insecticide, plant protection agent	Convention on POPs	P
Hexachlorbenzol	CAS.118-74-1 EC : 200-273-9	T,N	Insecticide, ectoparasiticide treatment of sheep, applied directly on sheep or on raw wool	Convention on POPs	P
Hexachlorocyclohexane Incl. lindane	CAS : 58-89-9 EC : 200-401-2 CAS : 319-84-6 EC : 206-270-8 CAS : 319-85-7 EC : 206-271-3 CAS : 608-73-1 EC : 210-168-9	T, N, Xn	In the agriculture as insecticide, in wood preservatives, Antifouling colours, Coatings, colours	Convention on POPs	P
Hexabromobiphenyl	CAS: 36355-01-8 EC: 252-994-2		Flame protection means in plastics and textiles	Convention on POPs	P

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Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
Hexabromcyclododecan HBCD , all isomers	CAS: 25637-99-4 3194-55-6 134237-51-7 134237-50-6, 134237-52-8 EC: 247-148-4 221-695-9		Flame retardant in plastics, elastomers, polymers, plastic	REACH 10/2009 Ann. XIV / SVHC EU ban 22.03.2016	P
Hexachloroethane	CAS : 67-72-1 EC: 200-666-4	Xn	Production and processing of non-ferrous metals.	ChemVerbotsV	P
Hydrazine	CAS: 302-01-2 EC: 206-114-9	T, N, C	Residual monomers in plastics, colourants and adhesives, in colours	ChemVerbotsV GefStoffV REACH 06/2011 SVHC	PA
Isocyanate Polymethylene Polyphenyl Isocyanate (PAPI)	CAS 9016-87-0	Xn, Xi	Important intermediate product for the production from adhesives, foam materials of PU, elastomers, and high-quality lacquers to the use in the automobile industry, for airplane or tramcar lacquer finishes.	ChemVerbotsV GefStoffV	PA
Potassium chromate	CAS : 7789-00-6 EC : 232-140-5	T, N	A cooling lubricant component, preservative in cutting lubricants,	REACH 06/2010 Ann. XIV	P
Potassium dichromate	CAS : 7778-50-9 EC : 231-906-6	T, N, O	in the tannery, the electroplating, in the photo-graphy, in noble printing processes, particularly in the photolithography and rubber printing	REACH 06/2010 Ann. XIV	P
Basic Violet 3 (C.I. 42555): [4-[4,4'-bis(dimethylamino) benzhydrylidene] cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride	CAS: 548-62-9 EC: 208-953-6	T, N	to the dyeing of paper, ink cartridges and pens,	ChemVerbotsV REACH 06/2012 SVHC	PA
Methanol	CAS: 67-56-1 EC: 200-659-6	T F	Solvent	ChemVerbotsV GefStoffV	PA
2-Methoxyethanol	CAS: 109-86-4 EC: 203-713-7	T, Xn	Solvent for lacquers, colors and resins	REACH 12/2010 SVHC	PA
Methylacrylamidomethoxy-acetate	CAS: 77402-03-0 EC: 401-890-7	T, Xn, Xi	Production of polymers, residues in plastics	ChemVerbotsV GefStoffV	PA
1-Methyl-2-pyrrolidone	CAS: 872-50-4 EC: 212-828-1	R, Xi	Solvent for polymers and some organic materials, reducing polyacrylonitrile, terephthalic acid polyester polymers	REACH 06/2011 SVHC	PA
Mirex	CAS: 2385-85-5 EC: 219-196-6	Xn, N	Insecticide active substance	Convention on POPs	P
Monomethyldichlorodiphenyl methane	CAS: 81161-70-8		Production residues of polymers, Residues	ChemVerbotsV GefStoffV	PA
Monomethyl dibromodiphenyl methane	CAS: 99688-47-8 EC: 402-210-1	N, Xn	Production residues of polymers, Residues	ChemVerbotsV GefStoffV	PA
Monomethyltetrachlorodiphenyl methane	CAS: 76253-60-6 EC: 278-404-3	N	Production residues of polymers, Residues	ChemVerbotsV GefStoffV	PA
musk xylene 5 Tert-butyl-2,4,6-trinitro-m-xylene	CAS: 81-15-2 EC: 201-329-4	E, Xn, N	Fragrances, cleaning products	REACH 06/2009 Ann. XIV	Z
Sodium azide	CAS: 26628-22-8 EC: 247-852-1	T+, N	Additive , algae growth inhibitor in cooling liquids	EG-GHS-VER	D
Sodium chromate	CAS : 7775-11-3 EC : 231-889-5	T, N	to the production of pigments, rust preventives, in the, dyeing factory, in the things printing as if pickle and oxidizing agents,	REACH 06/2010 SVHC	D
Sodium dichromate, dehydrate	CAS: 7789-12-0 EC: 234-190-3	T, N, O	Galvanic	REACH 10/ 2009 SVHC, GP, RoHS	P / D
2-Naphthylamine and its salts	CAS: 91-59-8 EC: 202-080-4	T, N, Xn	Antioxidants in polymers	ChemVerbotsV GefStoffV	P
Nickel and Nickel compounds	CAS: 7440-02-0 EC: 231-111-4	T	Metals, metal alloys, Danger from dusts, aerosols, weld smoke, Ni alloys	GP	D
Nitrocellulose	CAS: 9004-70-0	E	Gas generators	EG-GHS-VER	D
4-Nitro-biphenyl	CAS: 92-93-3 EC: 202-204-7	C ² , T, N		ChemVerbotsV GefStoffV	P
N-toly-n-xylo-p- phenylenediamine	CAS: 70290-05-0			JIG	PA
N,N-Dimethylacetamide	CAS: 127-19-5 EC: 204-826-4	T, Xn	Solvent, remover, extracting agent, catalyst	REACH 12/2011 SVHC ChemVerbotsV	PA

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Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
PAH Polycyclic Aromatic Hydrocarbons	s. Benzo			GADSL	P / D
Pitch, coal tar, high temp.	CAS: 65996-93-2 EC: 266-028-2	Xn	Electrodes, corrosion protection	REACH 01/2010 SVHC	D
Pentachlorobenzene	CAS: 608-93-5 EC: 210-172-5	F,Xn,N	Plant protection and disinfectant	Convention on POPs	P
PCP Pentachlorophenol	CAS: 87-86-5 EC: 131-52-2	T, N	Fungicide, wood preservative	ChemVerbotsV,	P
Phenol	CAS: 108-95-2 EC: 203-632-7	T,C,Xn, Xi	Residual monomers in synthetic resins,Residues in plastics	EG-GHS-VER	P / D
Phenolphthalein	CAS: 77-09-8 EC: 201-004-7	T	pH-indicator pharmacy,	REACH 12/2011 SVHC ChemVerbotsV	PA
4-(1,1,3,3-Tetramethylbutyl)phenol	CAS: 140-66-9 EC: 205-426-2	Xi, N	for production of phenolic resins plastics and plastic coatings, Colors, lacquers, adhesives	REACH 12/2011 SVHC	D
Phenylenediamine	CAS: 25265-76-3		Dyes plastics	VDA-list 232-101 (Automotive manufacture)	D
Perfluorooctance sulfonate (PFOS)	CAS : 45298-90-6 CAS: 1763-23-1		Chromium plating, electrical industry, in the photography, in older fire-extinguishing foams (AFFF), in hydraulic fluids for the air and space travel, textiles, carpets, paper - oil and water resistant	ChemVerbotsV Convention on POPs PFOS ban	P
Polybrominated diphenylethers (PBDE)				Convention on POPs, RoHS	P
Polybrominated biphenyls (PBB)	CAS: 59536-65-1			Convention on POPs, RoHS	P
Tetra- bromodiphenyl ether	CAS: 40088-46-9			Convention on POPs, RoHS,	P
Penta- bromodiphenyl ether PentaBDE	CAS: 32534-81-9 EC: 251-084-2	Xn, N		Convention on POPs, RoHS	P
Hexa-bromodiphenyl ether	CAS: 36483-60-0	T	Flame retardant in plastics Plastic parts, also for electronic devices	Convention on POPs, RoHS	P
Hepta-bromodiphenyl ether	CAS: 68928-80-3	T		Convention on POPs, RoHS	P
Octabromodiphenyl ether OctaBDE	CAS 32536-52-0 EC: 251-087-9	T		ChemVerbotsV Convention on POPs, RoHS	P
Decabromodiphenyl ether DecaBDE	CAS: 1163-19-5 EC: 214-604-9	T		REACH 12/2012 Convention on POPs RoHS 2008: EU ECJ decision	P
Polychlorinated Biphenyls (PCB)	CAS: 1336-36-3 EC: 215-648-1		Insulation fluid in electrical systems, switch boards, transformers and condensers, as softening agent for wood and paper impregnation	ChemVerbotsV	P
Polychlorinated naphthalene (PCN)	CAS: 38289-27-9		retardants, Plasticizer,	JIG	P
Polychlorinated terphenyls (PCT)	CAS: 61788-33-8 EC: 262-968-2		Insulating fluids, transformers Hydraulic fluid, liquid for heat transmission	ChemVerbotsV, GP,	P
Mercury and its compounds	CAS: 7439-97-6 EC: 231-106-7	T+, N	Gas-discharge lamps, switches Fluorescent lamps, energy-saving lamps	ChemVerbotsV GefmaterialV , RoHS	PA
Radioactive substances			Ionisation source, smoke detectors, measurement devices	GP	D

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Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
SF ₆ : Sulfur hexafluoride Hydrogen sulphide depleting subst.	CAS: 2551-62-4 CAS: 7783-06-4	F+,T+, N	Cleavage products, Insulating gas	EG-GHS-VER	D
Selenium and its compounds	CAS: 7782-49-2 EC: 231-957-4	T	Alloying additives, free-cutting steels, Cu, Rectifiers, vulcanization accelerator, Cu alloys	GP	D
Styrene (vinyl benzene)	CAS: 100-42-5 EC: 202-851-5	Xn	Residual monomers in plastics, residues	ChemVerbotsV GefmaterialV	D
Styreneoxide (epoxy-styrene)	CAS: 96-09-3 EC: 202-476-7	T, Xn, Xi, C2	Residual monomers, e.g. in SMC, residues	ChemVerbotsV GefmaterialV	D
Strontiumchromat	CAS: 7789-06-2 EC: 232-142-6	T, N, Xn	corrosion prevention. used in alloys, for the aircraft industries , production of chrome pigments	REACH 06/2011 SVHC	PA
TBTO Bis(tributyltin)oxide	CAS: 56-35-9 EC: 200-268-0	T, Xn, N, Xi, C1	Fungicide, Textiles, coatings	REACH 10/2008 SVHC	PA
Tar oils , in particular Creosote	CAS: 8001-58-9 EC: 232-287-5	T	Wood preservative, the tar oils or components out Tar oils contain and products, which consist totally or partly of wood or timber materials and were treated with wood preservatives.	ChemVerbotsV	P
Creosote oil	CAS: 61789-28-4 EC: 263-047-8			GefStoffV	
Distillates (coal tar), naphthalene oil	CAS: 84650-04-4 EC: 283-484-8			REACH 01/2010 SVHC	
Creosote oil, acenaphthene	CAS: 90640-84-9 EC: 292-605-3	T	Wood preservative, the tar oils or components out Tar oils contain and products, which consist totally or partly of wood or timber materials and were treated with wood preservatives.	ChemVerbotsV GefStoffV REACH 01/2010 SVHC	P
High-simmering distillates (coal tar)	CAS 95996-91-0 EC: 266-026-1	T			
Anthracene oil	CAS: 90640-80-5 EC: 292-602-7	T			
Tar acid, coal, raw	CAS: 65996-85-2	T			
Creosote, wood	CAS: 8021-39-4 EC: 232-419-1	T, C			
Low temperature-coal tar-alkaline, extracts of residues	CAS:122384-78-5 EC: 310-191-5	T			
1,1,1-Trichloroethane Tetrachloromethane	CAS: 71-55-6 CAS: 56-23-5	XN, N	Cleaning compound	ChemRRV Ann. 1.4	P
Tetraboron disodium heptaoxide, hydrate	CAS: 12267-73-1 EC: 235-541-3	T	Glass and ceramic(s) production, glass fibers cleaning agent, detergent, biocides	REACH 06/2010 SVHC ChemVerbotsV	P
TBBA Tetrabromobisphenol A	CAS: 79-94-7 EC: 201-236-9	N	Flame retardant Polymers, plastic	EG-GHS-VER 1999/45/EG	P
Tetrachloromethane	CAS: 56-23-5 EC: 200-262-8	T, C3,N	See: Chlorinated hydrocarbons degreasing or cleaning agents	ChemVerbotsV	P
Thallium and its compounds	CAS: 7440-28-0 EC: 231-138-1	T+	Sensors, electronic devices	GP	D
Thioperoxide carbonic diamide	CAS: 137-26-8 EC: 205-286-2	Xn, N	Fungicide	EG-GHS-VER 1999/45/EG	P
Toluidine (o-toluidine)	CAS: 95-53-4 EC: 202-429-0	T, Xi, N, C2	Production of dyes	ChemVerbotsV GefmaterialV REACH 06/2009 SVHC	P
Toluene	CAS: 108-88-3 EC: 203-625-9	F, Xi, Xn	adhesives, spray paint.	ChemVerbotsV	P
Toxaphen	CAS: 8001-35-2 EC: 232-283-3	T, N	Pesticide (cultivation of cotton, grain, fruits, and vegetables)	Convention on POPs	P
Trichlorobenzene, 1,2,4,-	CAS: 120-82-1	Xn, N	Heat transmission means, termite poison, Solvent in the processing of polyester fibers, additive in oils and lubricants, intermediate product with the production of herbicides,	Convention on POPs	P
Trichlorophenol and its salts (2,4,6-trichlorophenol)	CAS: 88-06-2 EC: 201-795-9	Xn, N, C3	Fungicide, bactericide	EG-GHS-VER 1999/45/EG	P
Trichloropropane (1,2,3-trichloropropane)	CAS: 96-18-4 EC: 202-486-1	T, Xn	Solvent, cross-linking agent , tri-functional cross-linking agent for polysulphide elastomers	REACH 06/2011 SVHC ChemVerbotsV	P

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Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
Triethyl arsenate	CAS: 15606-95-8 EC: 427-700-2	T,N	Glass production, wood preservative, anti-decay agent	REACH 10/2008 SVHC	PA / D
1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	CAS: 112-49-2 EC: 203-977-3	T	Solvents in the manufacture of chemicals, brake fluid, for the repair of motor vehicles.	REACH 06/2012 SVHC ChemVerbotV	P
TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione)	CAS: 2451-62-9 EC: 219-514-3	T	Hardener for resins and coatings, printing paste for the production of electronic components and insulation material, resin shapes, lamination process, screen printing, adhesive, stabilizers	REACH 06/2012 SVHC ChemVerbotV	P
Trimethylphosphate and its related compounds	CAS: 512-56-1 EC: 208-144-8	T	Flame retardant, plastics	ChemVerbotsV GefmaterialV	P
Triphenylphosphate or its related compounds	CAS: 115-86-6 EC: 204-112-2	N	Flame retardant, plastics	EG-GHS-VER 1999/45/EG	D
Tris(2-chloroethyl)phosphate	CAS: 115-96-8 EC: 204-118-5	T, N Xn	Add. Plasticisers, Flame retarding, Plasticizer with flame retarding properties in acrylic resins, PUR, coatings.	REACH 01/2010 Ann. XIV	D / Z
2,4,6 Tri-tert-butylphenol	CAS: 732-26-3		Petrochemical products	GADSL	D
β-TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	CAS: 59653-74-6 EC: 423-400-0	T	Harder for resins and coatings, printing paste for the production of electronic components, and insulation material, resin shapes, lamination process, screen printing, adhesive, stabilizers	REACH 06/2012 SVHC ChemVerbotV	P
Vinyl chloride	CAS: 75-01-4 EC: 200-831-0	F+, T, C3	Residual monomers in polymers, Residues	ChemVerbotsV	P
Zinc and its compounds	CAS: 7440-66-6 EC: 231-175-3	N	Rust prevention, in metal alloys, rust protection colours, metal alloys, Zn pressure casting	GP	D
Pentazinc chromate octahydroxide	CAS: 49663-84-5 EC: 256-418-0	T, N	corrosion prevention,	REACH 12/2011 SVHC ChemVerbotsV	P
Potassium hydroxyoctaoxidizincatedichromate	CAS: 234-329-8 EC: 11103-86-9	T, N, Xn	corrosion prevention	REACH 12/2011 SVHC ChemVerbotsV	P
Organic tin compounds general trialkyltin and triaryltin compounds Monoalkyltin and dialkyltin compound Di-μ-oxo-di-n-butylstanninohydroxyboran DBB	CAS: 75113-37-0 EC: 401-040-5	T, Xn N, Xi	Biocides , Catalyst in PUR foams and stabilizer in PVC	REACH GP ChemVerbotsV	P
Zirconia Aluminosilicate Refractory Ceramic Fibres (RCF) are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm). c) alkaline oxide and alkali earth oxide (Na ₂ O+K ₂ O+CaO+MgO+BaO) content less or equal to 18% by weight			Insulation, Fire protection – RCF Refractory ceramic fibres are used for high temperature Insulation, almost exclusively in industrial applications (insulation of industrial furnaces and equipment, equipment for automotive and aircraft/ aerospace industry) and in fire protection (buildings and industrial process equipment).	REACH 12/2011 SVHC	PA

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REACH SVHC list: 54 substances were included - ECHA 12/2012

Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
Pyrochlore, antimony lead yellow	CAS: 8012-00-8 EC: 232-382-1	N,T, C1+3	Used in coatings and paints, thinners, paint removes, ink and toners	REACH 12/2012 SVHC	PA
6-methoxy-m-toluidine (p-cresidine)	CAS: 120-71-8 EC: 204-419-1	T	Used as intermediate in manufacture of fine chemicals	REACH 12/2012 SVHC	PA
Henicosfluoroundecanoic acid	CAS: 2058-94-8 EC: 218-165-4			REACH 12/2012 SVHC	PA
Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans-stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry]	CAS: 25550-51-0 19438-60-9 48122-14-1 57110-29-9 EC: 247-094-1 243-072-0 256-356-4 260-566-1	Xn	Industrial use resulting in manufacture of another substance (use of intermediates), use of monomers for manufacture of thermoplastics, use of process regulators for polymerisation processes in production of resins, rubbers, polymers, as laboratory reagent	REACH 12/2012 SVHC	PA
Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry]	CAS: 85-42-7, 13149-00-3, 14166-21-3 EC: 201-604-9, 236-086-3, 238-009-9	Xn	Use as hardener for epoxy resins, manufacture of resins, use as intermediate in chemical synthesis or process, manufacture of chemicals (including petroleum products), industrial use of monomers for manufacture of thermoplastics	REACH 12/2012 SVHC	PA
Dibutyltin dichloride (DBTC)	CAS: 683-18-1 EC: 211-670-0	T, N	Industrial use resulting in manufacture of another substance (use of intermediates) Use as an additive for the production of rubber tyres	REACH 12/2012 SVHC	PA
Lead bis(tetrafluoroborate)	CAS: 13814-96-5 EC: 237-486-0	T, N	Use in metal surface treatment products, including galvanic and electroplating products, non-metal-surface treatment products, in laboratory chemicals	REACH 12/2012 SVHC	PA
Lead dinitrate	CAS: 10099-74-8 EC: 233-245-9	O,T,N, Xi	Used in the manufacture of fine chemicals, manufacture of computer, electronic and optical products, electrical equipment	REACH 12/2012 SVHC	PA
Silicic acid, lead salt	CAS: 11120-22-2 EC: 234-363-3		Used in glass and ceramic articles	REACH 12/2012 SVHC	PA
4-Aminoazobenzene	CAS: 60-09-3 EC: 200-453-6	T,N,Xi	Raw material, used strictly controlled as intermediate, for the production of a pigment	REACH 12/2012 SVHC	PA
Lead titanium zirconium oxide	CAS: 12626-81-2 EC: 235-727-4		Used in the manufacture of computer, electronic and optical products, electrical equipment	REACH 12/2012 SVHC	PA
Lead monoxide (lead oxide)	CAS: 1317-36-8 EC: 215-267-0	T, N	Manufacture of computer, electronic and optical products, electrical equipment, used in general manufacturing, e.g. machinery, equipment, vehicles, other transport equipment, electrical batteries and accumulators, used in crystal glass production, in manufacture of rubber protection	REACH 12/2012 SVHC	PA
o-Toluidine	CAS: 95-53-4 EC: 202-429-0		Use as laboratory reagent	REACH 12/2012 SVHC	PA
3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	CAS: 143860-04-2 EC: 421-150-7			REACH 12/2012 SVHC	PA

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Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD); the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008]	CAS: 68784-75-8 EC: 272-271-5		Used in coatings and paints, thinners, paint removes	REACH 12/2012 SVHC	PA
Trilead bis(carbonate)dihydroxide	CAS: 1319-46-6 EC: 215-290-6	T, N	Use as an intermediate, use in the semiconductor industry	REACH 12/2012 SVHC	PA
Furan	CAS: 110-00-9 EC: 203-727-3	F, T	Use for manufacture of other chemicals	REACH 12/2012 SVHC	PA
N,N-dimethylformamide	CAS: 68-12-2 EC: 200-679-5	T	Use as laboratory reagent and intermediate	REACH 12/2012 SVHC	PA
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]			Used in coatings and paints, thinners, paint removes, in adhesives, sealants	REACH 12/2012 SVHC	PA
4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]			Used in coatings and paints, thinners, paint removes, in adhesives, sealants	REACH 12/2012 SVHC	PA
4,4'-methylenedi-o-toluidine	CAS: 838-88-0 EC: 212-658-8	T, N	Use as an intermediate	REACH 12/2012 SVHC	PA
Diethyl sulphate	CAS: 64-67-5 EC: 200-589-6		Use as an intermediate in the chemical industry	REACH 12/2012 SVHC	PA
Dimethyl sulphate	CAS: 77-78-1 EC: 201-058-1	T+	Use as an intermediate in the chemical industry	REACH 12/2012 SVHC	PA
Lead oxide sulfate	CAS: 12036-76-9 EC: 234-853-7		Use in manufacture of plastics products, including compounding and conversion	REACH 12/2012 SVHC	PA
Lead titanium trioxide	CAS: 12060-00-3 EC: 235-038-9	Xn	Use in manufacture of computer, electronic and optical products, electrical equipment	REACH 12/2012 SVHC	PA
Acetic acid, lead salt, basic	CAS: 51404-69-4 EC: 257-175-3	T, N	Use as laboratory reagent, use in manufacture of computer, electronic and optical products, electrical equipment	REACH 12/2012 SVHC	PA
[Phthalato(2-)]dioxotrilead	CAS: 69011-06-9 EC: 273-688-5		Use in manufacture of plastics products, including compounding and conversion	REACH 12/2012 SVHC	PA
N-methylacetamide	CAS: 79-16-3 EC: 201-182-6	T	Use as laboratory reagent	REACH 12/2012 SVHC	PA
Dinoseb (6-sec-butyl-2,4-dinitrophenol)	CAS: 88-85-7 EC: 201-861-7	T, N	Use in the manufacture of bulk, large scale chemicals (including petroleum products), manufacture of plastics products, including compounding and conversion	REACH 12/2012 SVHC	PA
1,2-Diethoxyethane	CAS: 629-14-1 EC: 211-076-1	Xi	Used as an intermediate in chemical industry and as solvent	REACH 12/2012 SVHC	PA

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Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
Tetralead trioxide sulphate	CAS: 12202-17-4 EC: 235-380-9		Use in the manufacture of rubber products, in manufacture of computer, electronic and optical products, electrical equipment, use in batteries	REACH 12/2012 SVHC	PA
N-pentyl-isopentylphthalate	CAS: 776297-69-9 EC: -			REACH 12/2012 SVHC	PA
Dioxobis(stearato)trilead	CAS: 12578-12-0 EC: 235-702-8		Use in the manufacture of plastics products for industrial and consumer use	REACH 12/2012 SVHC	PA
Tetraethyllead	CAS: 78-00-2 EC: 201-075-4		Use as an additive in motor and aviation gasoline	REACH 12/2012 SVHC	PA
Pentalead tetraoxide sulphate	CAS: 12065-90-6 EC: 235-067-7		Use in electrical batteries and accumulators, in plastic articles, use in manufacture of computer, electronic and optical products, electrical equipment	REACH 12/2012 SVHC	PA
Pentacosafuorotridecanoic acid	CAS: 72629-94-8 EC: 276-745-2			REACH 12/2012 SVHC	PA
Tricosafuorododecanoic acid	CAS: 307-55-1 EC: 206-203-2	Xi, C		REACH 12/2012 SVHC	PA
Heptacosafuorotetradecanoic acid	CAS: 376-06-7 EC: 206-803-4	C		REACH 12/2012 SVHC	PA
1-bromopropane (n-propyl bromide)	CAS: 106-94-5 EC: 203-445-0	F, T	Use in washing and cleaning products (including solvent based products), extraction agents	REACH 12/2012 SVHC	PA
Methoxyacetic acid	CAS: 625-45-6 EC: 210-894-6	T	Use as an intermediate in manufacture of fine chemicals	REACH 12/2012 SVHC	PA
4-methyl-m-phenylenediamine (toluene-2,4-diamine)	CAS: 95-80-7 EC: 202-453-1	T, N	Use as an intermediate in manufacture of chemicals (incl. petroleum products)	REACH 12/2012 SVHC	PA
Methyloxirane (Propylene oxide)	CAS: 75-56-9 EC: 200-879-2	F, T	Use as intermediate, use in the manufacture of substances, industrial use for manufacture of thermoplastics, manufacture of chemicals (including petroleum products)	REACH 12/2012 SVHC	PA
Trilead dioxide phosphonate	CAS: 12141-20-7 EC: 235-252-2		Use in plastic articles, electrical batteries and accumulators	REACH 12/2012 SVHC	PA
o-aminoazotoluene	CAS: 97-56-3 EC: 202-591-2	T	Use in paints and varnishes	REACH 12/2012 SVHC	PA
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	CAS: 84777-06-0 EC: 284-032-2		Use in cosmetic articles	REACH 12/2012 SVHC	PA
4,4'-oxydianiline and its salts	CAS: 101-80-4 EC: 202-977-0	T, N	Monomer in imported polymer, use as intermediate in manufacture of chemicals	REACH 12/2012 SVHC	PA
Orange lead (lead tetroxide)	CAS: 1314-41-6 EC: 215-235-6	O, T, N	Use in the manufacture of batteries, rubber and plastic articles, ceramic and crystal glass products, used for repair of television sets, computer monitors and other devices containing cathode ray tube, used in coatings and paints, thinners, paint removes	REACH 12/2012 SVHC	PA
Biphenyl-4-ylamine	CAS: 92-67-1 EC: 202-177-1			REACH 12/2012 SVHC	PA
Diisopentylphthalate	CAS: 605-50-5 EC: 210-088-4		Used in the manufacture of propellants and explosives and to coat them to regulate rate of burn	REACH 12/2012 SVHC	PA
Fatty acids, C16-18, lead salts	CAS: 91031-62-8 EC: 292-966-7		Use in manufacture of plastic products, including compounding and conversion	REACH 12/2012 SVHC	PA

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Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	CAS: 123-77-3 EC: 204-650-8	Xn	Use in manufacture of plastic products, manufacture of construction chemicals, manufacture of coatings and inks, use as laboratory reagent	REACH 12/2012 SVHC	PA
Sulfurous acid, lead salt, dibasic	CAS: 62229-08-7 EC: 263-467-1		Manufacture of plastics products, including compounding and conversion	REACH 12/2012 SVHC	PA
Lead cyanamidate	CAS: 20837-86-9 EC: 244-073-9			REACH 12/2012 SVHC	PA
REACH SVHC list: 6 substances were included - ECHA 06/2013					
4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]			In wash solutions, textiles	REACH 06/2013 SVHC	PA
Ammonium pentadecafluorooctanoate (APFO)	CAS: 3825-26-1 EC: 223-320-4	C, Xi	Used in insulators for electric wires, fire fighting foam and outdoor clothing	REACH 06/2013 SVHC	PA
Cadmium	CAS: 7440-43-9 EC: 231-152-8	T+, F, N Xn	Many common industrial uses as it is a key component in battery production, is present in cadmium pigments, coatings and is commonly used in electroplating	REACH 06/2013 SVHC	PA
Cadmium oxide	CAS: 1306-19-0 EC: 215146-2	T+, N, Xn	Use as a glass additive and as catalyst in hydrogenation and dehydrogenation of organic synthetic chemistry	REACH 06/2013 SVHC	PA
DPP Dipentyl phthalate	CAS: 131-18-0 EC: 205-017-9	T, N	As plasticizers in PVC products, children's toys	REACH 06/2013 SVHC	PA
Pentadecafluorooctanoic acid (PFOA)	CAS: 335-67-1 EC: 206-397-9	Xn	Used in insulators for electric wires, fire fighting foam and outdoor clothing, carpet-care liquids, home textiles, industrial floor wax and wax removers, sealants	REACH 06/2013 SVHC	PA
REACH SVHC list: 7 substances were included - ECHA 12/2013					
Cadmium sulphide	CAS: 1306-23-6 EC: 215-147-8	T, N	Part of production of anorganic pigments, additive of production of electronic parts	REACH 12/2013 SVHC	PA
Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	CAS: 1937-37-7 EC: 217-710-3		Kann als Pigment in Textil- und anderen Farben eingesetzt werden	REACH 12/2013 SVHC	PA
Dihexyl phthalate	CAS: 84-75-3 EC: 201-559-5		Plasticizers for cellulose and vinyl plastics	REACH 12/2013 SVHC	PA
Imidazolidine-2-thione; (2-imidazoline-2-thiol)	CAS: 96-45-7 EC: 202-506-9	T	Common use as vulcanization accelerator in chloroprene- and polyacrylate rubber articles	REACH 12/2013 SVHC	PA
Trixylyl phosphate	CAS: 25155-23-1 EC: 246-677-8		Multiple use as a chemical in industry (flame retardant, implemental for metal treatment engineering, lubricants, hydraulic oil, plasticizers)	REACH 12/2013 SVHC	PA
Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	CAS: 573-58-0 EC: 209-358-4	T	Use as a pigment in textile dyes and other paints	REACH 12/2013 SVHC	PA
Lead di(acetate)	CAS: 301-04-2 EC: 206-104-4	T, N	Common industrial use in coatings and paints, thinners, paint remover, filling compounds, putties, modelling compound	REACH 12/2013 SVHC	PA

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Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
REACH SVHC list: 4 substances were included - ECHA 06/2014					
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear (DIHP)	CAS: 68515-50-4 EC: 271-093-5		Used as lubricant in steering fluid and as plasticizers in plastics and coatings	REACH 06/2014 SVHC	PA
Sodium perborate; perboric acid, sodium salt	CAS: - EC: 239-172-9	T, Xn, Xi, O	Used as intermediate in chemical reactions and as bleaching agent mainly in household and professional detergents.	REACH 06/2014 SVHC	PA
Sodium peroxometaborate	CAS: 7632-04-4 EC: 231-556-4	T, Xn, Xi, O	Used as bleaching agent in laundry detergents and machine dishwashing products as well as in household cleaners. Used in some special laboratory chemicals.	REACH 06/2014 SVHC	PA
Cadmium chloride	CAS: 10108-64-2 EC: 233-296-7		Cadmium chloride is used for preparation of other chemicals, in laboratory, and also for photocopying, dyeing and electroplating.	REACH 06/2014 SVHC	PA
REACH SVHC list: 6 substances were included - ECHA 12/2014					
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	CAS: 3846-71-7 EC: 223-346-6		UV stabilizer, UV absorbers, UV screening agent	REACH 12/2014 SVHC	PA
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	CAS: 15571-58-1 EC: 239-622-4		Use in the plastics processing, Industrial use	REACH 12/2014 SVHC	PA
reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)			<ul style="list-style-type: none"> Heat stabilisation of PVC Use in the plastics processing Industrial use 	REACH 12/2014 SVHC	PA
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	CAS: 25973-55-1 EC: 247-384-8		UV stabilizer, UV absorbers, UV screening agent	REACH 12/2014 SVHC	PA
Cadmium fluoride	CAS: 7790-79-6 EC: 232-222-0	T+, N	Production of glass, High-temperature dry film lubricant, optical electronics, Solar panels	REACH 12/2014 SVHC	PA
Cadmium sulphate	CAS: 10124-36-4 EC: 233-331-6	T+, N	Component for the preparation of inorganic cadmium compounds, Raw material for the surface treatment of metals, Lab chemicals	REACH 12/2014 SVHC	PA
REACH SVHC list: 2 substances were included - ECHA 06/2015					
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	CAS: 68515-51-5 CAS: 68648-93-1 EC: 271-094-0 EC: 272-013-1		Plasticisers and lubricants, including use in adhesives, coatings, building material, cable compounding, polymer foils, PVC compounds and artist supply (e.g. modelling clay and finger paints).	REACH 06/2015 SVHC	PA
5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual stereoisomers of [1] and [2] or any combination thereof]	CAS: - EC: -		Fragrances	REACH 06/2015 SVHC	PA
REACH SVHC list: 5 substances were included - ECHA 12/2015					
Perfluorononan-1-oiic-acid and its sodium and ammonium salts	CAS: 375-95-1 CAS: 21049-39-8 CAS: 4149-60-4 EC: 206-801-3		Processing aid for fluoropolymer manufacture/lubricating oil additive/surfactant for fire extinguishers/cleaning agent/textile antifouling finishing agent/polishing surfactant/waterproofing agents and in liquid crystal display panels	REACH 12/2015 SVHC	PA
Nitrobenzene	CAS: 98-95-3 EC: 202-716-0		Manufacture of other substances	REACH 12/2015 SVHC	PA
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	CAS: 36437-37-3 EC: 253-037-1		UV-protection agents in coatings, plastics, rubber and cosmetics	REACH 12/2015 SVHC	PA
2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	CAS: 3864-99-1 EC: 223-383-8		UV-protection agents in coatings, plastics, rubber and cosmetics	REACH 12/2015 SVHC	PA
1,3-propanesultone	CAS: 1120-71-4 EC: 214-317-9		Intermediate for the preparation of Fine and bulk chemicals; Electrolyte fluid of lithium ion batteries	REACH 12/2015 SVHC	PA

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REACH SVHC list: 1 substance was included - ECHA 06/2016					
Substance / Substance Group	CAS/EC-Nr.	Hazard	Usage / Source	Relevance	D / P / PA / Z
Benzo[def]chrysene	CAS: 50-32-8 EC: 200-028-5	T, N, F	Benzopyrene is a polyaromatic hydrocarbon (PAH) found in coal tar. Benzopyrene is a known carcinogen.	REACH 06/2016 SVHC	PA

REACH SVHC list: 4 substances were included - ECHA 01/2017					
Name	EC no.	CAS no.	Date of inclusion	Relevance / Reason for inclusion	Decision
4,4'-isopropylidenediphenol	201-245-8	80-05-7	12/01/2017	Toxic for reproduction (Article 57c)	ED/01/2017
Bisphenol A; BPA					
4-heptylphenol, branched and linear substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof	-	-	12/01/2017	Equivalent level of concern having probable serious effects to environment (Article 57 f)	ED/01/2017
Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts Nonadecafluorodecanoic acid EC no.: 206-400-3 CAS no.: 335-76-2 Decanoic acid, nonadecafluoro-, sodium salt EC no.: - CAS no.: 3830-45-3 Ammonium nonadecafluorodecanoate EC no.: 221-470-5 CAS no.: 3108-42-7	-	-	12/01/2017	Toxic for reproduction (Article 57c) PBT (Article 57 d)	ED/01/2017
p-(1,1-dimethylpropyl)phenol	201-280-9	80-46-6	12/01/2017	Equivalent level of concern having probable serious effects to environment (Article 57 f)	ED/01/2017

REACH SVHC list: 1 substance was included - ECHA 07/2017

<u>Perfluorohexane-1-sulphonic acid and its salts</u> PFHxS	-	-	07/07/2017	vPvB (Article 57e)	ED/30/2017
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REACH SVHC list: 7 substances were included - ECHA 01/2018

<u>1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16.9,02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"TM)</u> covering any of its individual anti- and syn-isomers or any combination thereof	-	-	15/01/2018	vPvB (Article 57e)	ED 01/2018
<u>Benz[a]anthracene</u>	200-280-6	56-55-3, 1718-53-2	15/01/2018	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)	ED 01/2018
<u>Cadmium carbonate</u>	208-168-9	513-78-0	15/01/2018	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated exposure (Article 57(f) - human health)	ED 01/2018

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Name	EC no.	CAS no.	Date of inclusion	Relevance / Reason for inclusion	Decision
<u>Cadmium hydroxide</u>	244-168-5	21041-95-2	15/01/2018	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated exposure (Article 57(f) - human health)	ED 01/2018
<u>Cadmium nitrate</u>	233-710-6	10022-68-1, 10325-94-7	15/01/2018	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated exposure (Article 57(f) - human health)	ED 01/2018
<u>Chrysene</u>	205-923-4	218-01-9, 1719-03-5	15/01/2018	Carcinogenic (Article 57a) PBT (Article 57d) vPvB (Article 57e)	ED 01/2018
<u>Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) with ≥0.1% w/w 4-heptylphenol, branched and linear (4-HPbl)</u>	-	-	15/01/2018	Endocrine disrupting properties (Article 57(f) - environment)	ED 01/2018

9. Additional Links

[Rittal REACH Compliance](#)

[Rittal RoHS Compliance](#)

[Rittal CMRT Conflict Minerals Reporting Template](#)

[Rittal Company-statement ErP climate-control](#)

[Rittal Company-statement ErP-VO fans](#)

[Self-disclosure Ozone layer regulation](#)

[Asbestfreiheit-Selbstauskunft](#)

10. Associated documents

- IEC 62474 <http://std.iec.ch/iec62474>
- POP Konvention
http://www.bmub.bund.de/fileadmin/bmu-import/files/pdfs/allgemein/application/pdf/pop_konvention.pdf
Verordnung (EG) Nr. 850/2004 des Europäischen Parlaments und des Rates vom 29. April 2004