

# **Material Compliance Regulation**

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## 1. Introduction

This material compliance regulation is aimed at ensuring compliant material handling of substances and products in the development, production, retailing and use.

This material compliance regulation describes the requirements of Techem Energy Services GmbH and its affiliated companies, with respect to all known substances that are prohibited, regulated and declarable by law in their current form.

The failure of this regulation to reflect possible changes in the law does not release suppliers from their duty to take these legal changes into account and comply with the latest statutory requirements as amended from time to time.

Suppliers are required to procure the respective latest guidelines, regulations and standards for themselves.

The material compliance requirements are equally applicable with all other product requirements, that are contractually defined.

The Material Compliance regulation requires that all products and their packaging meet the requirements specified in this Material Compliance regulation in order to ensure that the products are placed on the market in compliance with the regulations.

Articles, products, materials and raw materials of unknown origin and / or composition or raw materials of which no essential material data are available must not be used.

These articles, products, materials and raw materials become components of Techem Group products which are used in both private and commercial environments.

The technical data sheets and samples of all the raw, packaging and auxiliary materials used need to be provided to Techem Group and/or its subsidiaries upon request for an initial inspection. Techem Group reserves the right to subject materials to tests and laboratory studies.

The supplier of Techem Group is obliged to provide the material information required to verify the compliance with statutory requirements and this regulation free of charge.

The supplier is required to verify that the material compliance regulation is provided in its latest version every 6 months as a minimum. Amended material compliance regulations replace their previous versions and become applicable with immediate effect. Suppliers will not be informed of changes in the material compliance regulation by Techem Group.

Die Techem Group makes the material compliance regulation available on its website.

The present material compliance regulation was created by tec4U - Solutions GmbH, Saar-Lor-Lux-Strasse 13, D-66115 Saarbrücken. The regulation may be used and/or reproduced by Techem Group and parties involved in the supplier chain. Use of the regulation outside the supplier chain in whole or in parts must be approved by tec4U-Solutions GmbH.



## 2. Terms and abbreviations

#### Substance:

Means a chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition (REACh Art. 3 Para. 1).

*Examples of chemical compounds* organic: ethanol, aldehydes metallic: iron, copper, tin mineral: clay, silicic acid

#### Preparation/Mixture:

Means a mixture or solution composed of two or more substances.

Examples of preparations: Batch: Seed Mixture: Alloy Solution: Octane in gasoline

#### Homogeneous material:

means one material of uniform composition throughout or a material, consisting of a combination of materials, that cannot be disjointed or separated into different materials by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes (RoHS Art. 3 Para. 20). Examples of homogeneous materials are individual types of plastics, ceramics, glass, metals, alloys, synthetic resins and coatings.

#### Intentionally added:

Generally known as the intentional use of a substance contained in a product to produce a particular appearance or quality.

#### Battery or accumulator (rechargeable battery):

A source of electrical energy consisting of one or several (non-rechargeable) primary cells or one or several (rechargeable) secondary cells, which is produced by the direct conversion of chemical energy.

#### **Packaging:**

Products manufactured from any material for the purpose of protection, handling, supply and presentation of goods which may range from the raw material to the processed product and which are passed on by the manufacturer to the user or consumer. All "disposable articles" used for the same purpose must also be considered as packaging (see EU Packaging Directive Para. 3 (1)).

#### **Packaging components:**

Parts of the packaging that can be separated by hand or by simple mechanical processes. Additional elements which are directly attached or attached to a product and which fulfill a packaging function are considered to be packaging unless they are an integral part of the product.

#### **Prohibited substances:**

Prohibited (banned) substances may not be contained in articles, components, materials, preparations, auxiliaries and supplies above the limit given in this document. These substances may only be contained as naturally



occurring contaminations; they may not be added intentionally. Contaminations with these substances shall be given qualitatively.

#### **Declarable substances:**

The substances classified as declarable are undesirable in several applications and shall be declared if above the given limit. The lists substances shall be given for each article, component, material, preparation, auxiliary or supply material. Content limits for the individual substances are specified in the document. Declaration is not necessary below these limits.

#### Use:

Means that the limit of the substance applies material or part in which the substance is contained to achieve a required function.

#### Article:

Means an object which during production is given a special shape, surface or design which determines its function to a greater degree than does its chemical composition.

#### Latest application date:

An application for authorization shall be submitted by this date (date is at least 18 months before the sunset date), so that the substance can continue to be used. (Deadline)

Information on the application for authorization and formal procedure can be found at:

https://echa.europa.eu/de/applying-for-authorisation

#### Sunset date:

After this date it is prohibited to place on the market and to use a substance listed in Annex XIV of the REACh Regulation, unless an authorization has been granted.

#### CAS number:

The CAS number (also called the CAS registration number and CAS registry number, CAS = Chemical Abstracts Service) is an international naming standard for chemical substances. A unique CAS number exists for each chemical substance registered in the CAS database (including biosequences, alloys, polymers).



#### Sources/assistance:

Platform for European ordinances, directives and resolutions in all existing versions and official European languages – with the year of publication and publication number needing to be entered in the search mask <a href="http://eur-lex.europa.eu/">http://eur-lex.europa.eu/</a>

Support section of the European Chemicals Agency (ECHA): <a href="https://echa.europa.eu/support/guidance">https://echa.europa.eu/support/guidance</a>

REACh-CLP biocide helpdesk – national information office of the federal government: <u>https://www.reach-clp-biozid-helpdesk.de/DE/Helpdesk/Helpdesk\_node.html</u>

REACh helpdesk – German Federal Environment Agency: <a href="http://www.reach-info.de">http://www.reach-info.de</a>

REACH@Baden-Württemberg https://www.reach.baden-wuerttemberg.de/

Platform for German laws: <u>https://www.gesetze-im-internet.de/</u>



## 3. Techem Group list of legally regulated substances

3.1. Substance regulations and prohibitions – relevant for all products

The statutory substance requirements described in section 3.1 apply to all materials, preparations and products. The application framework is precisely described in the selected law.

3.1.1. Regulation (EC) No. 1907/2006 (REACh) – List of substances included in Annex XIV of REACh ("Authorization List")

Regulation (EC) No. 1907/2006 (in short "REACH") came into force on 01.06.2007.

The inclusion of a substance from the list of substances of very high concern in Annex XIV of the REACh regulation will subject it to an authorization requirement at the end of the procedure. After a transition period, the substance may then only be used with an authorization or its use is prohibited.

Please see section 2, Definitions and Abbreviations, for explanations of the terms "latest application date" and "sunset date".

You can download the latest REACh Annex XIV from the following link:

https://echa.europa.eu/de/authorisation-list

3.1.2. Regulation (EC) No. 1907/2006 (REACh) – Annex XVII – List of restricted substances

Annex XVII of the REACh Regulation regulates or prohibits precisely defined substances in individual applications.

You can download the latest REACh Annex XVII from the following link:

https://echa.europa.eu/de/substances-restricted-under-reach



#### 3.1.3. Directive 2011/65/EU – RoHS

Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS directive) came into force on 02 January 2013.

The RoHS substance regulations concern maximum concentrations in the homogenous material of every product.

## Table 1: Substance regulations of the RoHS directive

Substance	Maximum concentration	
	in homogeneous material	
Cadmium and cadmium compounds	0.01%	
Hexavalent chromium and hexavalent chromium compounds		
Lead and lead compounds		
Mercury and mercury compounds		
Polybrominated diphenyl ethers (PBDE)		
Polybrominated biphenyls (PBB)	0.10%	
Bis(2-ethylhexyl) phthalate (DEHP)		
Butyl benzyl phthalate (BBP)		
Dibutyl phthalate (DBP)		
Diisobutyl phthalate (DIBP)		



## 3.1.4. Chemikalien-Verbotsverordnung – ChemVerbotsV

The "Verordnung über Verbote und Beschränkungen des Inverkehrbringens gefährlicher Stoffe, Zubereitungen und Erzeugnisse" is a federal German law that prescribes special national requirements in addition to the REACh regulation. Since REACh is considered a regulation directly in the EU member states, an amendment to the ChemVerbotsV was adopted in 2016, which combines the requirements of the REACh and CLP regulation with German chemicals law. The national requirements for the following substances and groups of substances are also specified:

#### Table 2: ChemVerbotsV substance and substance groups

Substance/Mixture		
Formaldehydy		
Dioxine and Furane		
Pentachlorphenole		
Biopersistent fibers		

The special requirements and the exceptions listed can be found in the legal text.

The requirements of the new Chemikalien-Verbotsverordnung came into force on January 1st, 2019.

#### http://www.gesetze-im-internet.de/chemverbotsv\_2017/index.html

#### 3.1.5. Regulation (EU) No. 2019/1021 on persistent organic pollutants (POP)

Amongst other aspects, this EU regulation implements the Stockholm Convention on Persistent Organic Pollutants. The Stockholm Convention, aka POP Convention, is an agreement of prohibition and restriction measures that are binding under international law for specific long-lived organic pollutants. The convention thus prohibits or restricts the production, use and sale of 22 hazardous chemicals.

Further information on the Stockholm Convention and substances listed therein is available from the official website at the following link:

#### http://chm.pops.int/

The text of the European implementation is available from the platform of the European Union:

http://eur-lex.europa.eu/



## 3.1.6. Produktsicherheitsgesetz (ProdSG)

The Produktsicherheitsgesetz (ProdSG) is the successor of the original Equipment and Product Safety Act (EPSA) and has been in force since 01 December 2011. It is the central piece of legislation for the safety of devices, products and systems.

The ProdSG and product safety regulations enacted on the basis of its § 8 serve to implement a sum total of 11 European single market directives and Directive 2001/95/EC on General Product Safety in German law.

This law applies wherever products are made available in the market, exhibited or used for the first time in the course of a commercial activity. According to § 3, a product may only be placed on the market if it "does not present any risk for the safety and health of persons under normal or reasonably foreseeable conditions of use".

Besides these European aspects, the PSA also has parts of purely German origin, such as the regulations for the **GS mark** in section 5.

https://www.gesetze-im-internet.de/prodsg\_2021/index.html



3.2. Substance regulations and prohibitions – relevant for products from various scopes

In contrast to the substance regulations in section 3.1, suppliers need to check here if their products fall under the scope of the respective requirement. Suppliers unable to clarify this independently need to consult Techem Group.

## 3.2.1. Directive 2006/66/EG - Battery directive

Directive 2006/66 / EC - of the European Parliament and of the Council of September 6, 2006 on batteries and accumulators as well as used batteries and accumulators and repealing Directive 91/157 / EEC limits the use of mercury and cadmium in batteries and accumulators.

## **Table 3: Substande restrictions Battery directive**

Substance	Maximum concentration in article	Application Limitations
Mercury and Mercury compounds	0.0005%	Batteries and accumulators
Cadmium and Cadmium compounds	0.002%	Device batteries and - accumulators

#### 3.2.2. Directive 94/62/EC – packaging directive

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste limits the concentration of heavy metals in packaging.

#### **Table 4: Packaging substance restrictions**

Substance and substance groups	Maximum concentration in packaging or packaging compounds in ppm mass fraction
Lead, cadmium, mercury, and chromium VI	100 *

\*Cumulative



## 3.2.3. Trinkwasserverordnung (TrinkwV 2001)

The Water Quality Regulation for Human Consumption must be complied with (Trinkwasserverordnung -TrinkwV 2001). Fittings for potable water need to meet the following standards:

• DIN 12502-3:2004 – especially Part 6

Effect of water and/or material parameters and changes in the water quality if potable water comes into contact with metallic materials

• DVGW W 270

Growth of micro-organisms on materials intended for use in drinking water systems – testing and evaluation

• DVGW test basis VP 550

Hose fittings for the non-permanent transport of drinking water; requirements and testing

• DIN 2001-2:2018-01

Drinking water supply from small units and non-stationary plants - Part 2: Non- stationary units - Guidelines for drinking water, planning, construction, operation, and maintenance of units

• Evaluation criteria for plastics and other organic materials in contact with drinking water (KTW-BWGL). Evaluation criteria of the Federal Environment Agency for materials in contact with drinking water, e.g. evaluation criteria for metallic materials



## 3.3. Declarable substances

#### 3.3.1. SVHC Candidate list

The latest version of the official SVHC candidate list as per REACh Regulation (No. 1907/2006/EC) can be retrieved from the address:

#### http://echa.europa.eu/chem\_data/authorisation\_process/candidate\_list\_table\_en.asp

Article 33 of the REACh Regulation requires the following from every supplier:

(1) Any supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0,1 % weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance.

Substances of very high concern (SVHC candidate list) in

- Components
- Replacement parts
- Accessories
- Packaging

If substances of very high concern published in the so-called candidate list as per Article 59(1) of Regulation No. 1907/2006/EC make up more than 0.1 % weight by weight of the delivered products, the contractor is required to provide all the information as per Article 33(1) with the delivery without prompting. This also applies where such a substance is only included in the candidate list during the ongoing supply relationship.

Private consumers must be provided with this information free of charge upon request within 45 days.

Pursuant to the decision by the European Court of Justice, the concept "once a product, always a product" applies. As soon as a product exceeds the concentration limit of 0.1 %, the presence of this SVHC candidate substance must be communicated.



## 3.3.2. Conflict Minerals (CM) – Dodd-Frank Act

The Dodd-Frank Act is a U.S. regulation signed in July 2010 that requires companies listed on the U.S. stock exchange to refrain from using raw materials from conflict regions. Since then, companies that use a conflict mineral must submit a separate report on its origin. Conflict minerals within the meaning of the law are tungsten, coltan, wolframite and gold, from which the following four metals - known as 3TG - are produced:

- Gold
- Tin
- Tantalum
- Tungsten

Should Techem Group receive inquiries from its customers regarding the origin of conflict minerals, it will forward these inquiries to its suppliers.

Reference to further information:

https://www.sec.gov/News/Article/Detail/Article/1365171562058

As declaration medium the Excel document of the

http://www.responsiblemineralsinitiative.org/

preferred



## 3.4. Auxiliary production materials and operating materials

3.4.1. Safety data sheets (SDS)

Safety data sheets (SDS) are the central communication element for hazardous substances and mixtures in the supply chain. To be distinguished are MSDS (material safety data sheets) and TDS (technical data sheets).

The SDS provides important information on the following features:

- Identity of the product
- Attendant risks
- Safe handling
- Prevention measures
- Emergency measures

The requirements for the contents and formats of safety data sheets (SDS) are defined in Article 31 and Annex II of the REACh Regulation (EC) No. 1907/2006.

The supplier of a substance/mixture is responsible for the safety data sheet being factually correct and completely filled in.

The safety data sheet needs to be provided to Techem Group on paper, in electronic form or as a download option free of charge no later than on the day of the first delivery.

Suppliers provide updated SDS immediately (Art. 31 (9)) if

- new information able to affect the risk management measures becomes available
- an authorization is issued or withdrawn
- a restriction has been imposed

The corrected version needs to be provided to Techem Group, and its subsidiaries insofar as supplied within the last 12 months.