

Material Compliance Requirements

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1 Introduction

This Material Compliance standard serves the purpose of ensuring compliant handling of substances and articles in development, manufacturing, trading, and use.

This Material Compliance standard describes the requirements of Techem GmbH and its affiliated companies regarding all known legally prohibited, regulated, and declarable substances in their current form.

If any legislative changes are not yet reflected in this standard, this does not release the supplier from the obligation to consider such changes and to comply with the current, applicable legal requirements at all times.

The supplier is obliged to obtain the latest version of the applicable directives, laws, and standards independently.

The Material Compliance requirements apply on an equal footing with other product requirements.

This Material Compliance standard requires that all products and their packaging comply with the requirements of this Material Compliance standard in order to ensure compliant placing of the products on the market.

Products and raw materials of unknown origin and/or composition, or raw materials for which no sufficient material data are available, must not be used.

In individual cases, upon request, the technical data sheets for all raw materials and auxiliaries used must be submitted to Techem GmbH for initial sampling. Techem GmbH reserves the right to carry out tests and laboratory analyses on materials in individual cases.

The supplier to Techem GmbH is obliged to provide, free of charge, the material information required to verify compliance with the legal requirements and this standard.

Techem GmbH provides the Material Compliance Requirements via its website.

The supplier is obliged to check at least every 6 months whether an updated version of the Material Compliance standard is available. With the revision of the Material Compliance Requirements, it replaces the previous version and is valid with immediate effect.

Techem GmbH suppliers are not notified of changes or version updates to this standard.

2 Terms and Abbreviations

Sunset date:

After this date, placing on the market and use of a substance listed in Annex XIV of Regulation (EC) No. 1907/2006 is prohibited unless an authorisation has been granted.

Intentionally added:

Generally understood as the intentional use of a substance contained in an article in order to create a specific property, appearance, function, or quality.

Application deadline (Latest application date):

By this date, an application for authorisation must have been submitted under Regulation (EC) No. 1907/2006 (date at least 18 months before the sunset date) so that the substance may continue to be used (deadline).

Information on the authorisation application and the formal process for an authorisation request can be found at:

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

Application:

This means that the substance limit value relates to the material or part in which the substance is present in order to achieve the intended functionality.

Battery:

A device that supplies electrical energy generated by direct conversion of chemical energy, has internal or external storage, and consists of one or more non-rechargeable or rechargeable battery cells, modules, or packs; and a battery includes a battery that has been prepared for re-use or repurposing, has been repurposed, or has been remanufactured (see Regulation (EU) 2023/1542, Art. 3(1)(1)).

Restricted Substances:

Restricted substances must not be present as substances, in mixtures, or in articles above the applicable limit values.

CAS Number:

The CAS number (also CAS Registry Number; CAS = Chemical Abstracts Service) is an international identification standard for chemical substances. Each chemical substance registered in the CAS database (including bio sequences, alloys, polymers) has a unique CAS number.

Declarable Substances:

Substances classified as declarable are undesirable in certain applications and must be declared above the specified limit values. The listed substances must be stated for each article, component, material, substance preparation, process aid, or operating material. Below these limit values, the declaration requirement does not apply.

Endocrine Disruptors:

Endocrine disruptors (ED) are chemicals or mixtures of chemicals that interfere with the natural biochemical mode of action of hormones and thereby cause adverse effects (e.g., disruption of growth and development, negative effects on reproduction, or increased susceptibility to specific diseases).

Article:

An object which during production is given a special shape, surface, or design which determines its function to a greater degree than its chemical composition (see Regulation (EC) No. 1907/2006, Art. 3(1)(3)).

Mixture:

A mixture or solution composed of two or more substances (see Regulation (EC) No. 1907/2006, Art. 3(1)(2)).

Examples of mixtures:

- Blend: Seeds
- Mixture: Alloy
- Solution: Octane in gasoline

Portable Battery:

A battery that is sealed, weighs 5 kg or less, is not specifically designed for industrial use, and is neither an electric vehicle battery, an LV battery, nor a starter battery (see Regulation (EU) 2023/1542, Art. 3(1)(9)).

Homogeneous Material:

A material of uniform composition throughout, or a material consisting of a combination of materials, that cannot be disjoined or separated into different materials by mechanical actions such as unscrewing, cutting, crushing, grinding, or abrasive processes (see Directive 2011/65/EU, Art. 3(1)(20)).

Examples of homogeneous materials:

- Plastics
- Ceramics
- Glass
- Alloy
- Coating

Industrial Battery:

A battery that is specifically designed for industrial use, that after preparation for re-use or preparation for repurposing is intended for industrial use, or any other battery that weighs more than 5 kg and is neither an LV battery, an electric vehicle battery, nor a starter battery (see Regulation (EU) 2023/1542, Art. 3(1)(13)).

Persistence (Chemistry):

In biology and environmental chemistry, persistence refers to the resistance - typically of organic chemical compounds - to chemical-physical and biological degradation.

Substance:

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 (see Regulation (EC) No. 1907/2006, Art. 3(1)(1)).

Examples of substances:

- Organic: Ethanol, aldehyde
- Metallic: Iron, copper, tin
- Mineral: Clay, loam

Partial Declaration:

In a partial declaration, the presence of declarable or restricted chemical compounds and elements above the relevant limit value is specifically requested. A partial declaration does not allow conclusions about the actual composition of the item.

Packaging:

Products made of any materials for the containment, protection, handling, delivery, and presentation of goods, which can range from raw materials to processed products and are passed on from the producer to the user or consumer. All disposable items used for the same purpose are also considered packaging (see Directive 94/62/EC, Art. 3(1)(1)).

Packaging Components:

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

Contamination:

The addition or presence of chemicals to or in another substance to such an extent that it becomes unsuitable for the intended purpose.

Full Declaration:

A full declaration means that all chemical compounds and elements present above a declaration threshold must be stated. The total of all stated compounds and elements must add up to 100%.

3 Sources / Guidance

Platform for European regulations, directives, and decisions, in all existing versions and official European languages – in the search mask, the publication year and publication number must be entered

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

Support section of the European Chemicals Agency (ECHA):

<https://echa.europa.eu/support/guidance>

REACH-CLP-Biocides Helpdesk – National information office of the German Federal Government:

<http://www.reach-clp-biozid-helpdesk.de/de/Startseite.html>

REACH Helpdesk – German Environment Agency (UBA):

<http://www.reach-info.de>

REACH@Baden-Württemberg

<https://www.reach.baden-wuerttemberg.de/>

Platform for German laws

<https://www.gesetze-im-internet.de/>

4 Techem GmbH – List of Legally Restricted Substances

4.1 Substance Restrictions – Relevant for All Products

The substance-law requirements described in this section apply to all substances, mixtures, and articles.

4.1.1 Regulation (EC) No. 1907/2006 REACH – Annex XIV – List of Substances Subject to Authorisation

The inclusion of a substance from the list of substances of very high concern in Annex XIV of the REACH Regulation results, at the end of the procedure, in an authorisation requirement for this substance. After a transitional period, the substance may only be used with an authorisation, or its use is restricted.

Explanations of the terms application deadline and sunset date can be found in sections 2 “Terms and Abbreviations” and 3 “Sources / Guidance”.

You can access the current Annex XIV of the REACH Regulation via the following link:

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

4.1.2 Regulation (EC) No. 1907/2006 REACH – Annex XVII – List of Restricted Substances

Annex XVII of the REACH Regulation lists substances that are restricted by legislators in defined applications.

You can access the current Annex XVII of the REACH Regulation via the following link:

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

4.1.3 RoHS Directive 2011/65/EU and 2015/863/EU (RoHS III)

Directive 2011/65/EU of the European Parliament and of the Council restricts the use of certain hazardous substances in electrical and electronic equipment. In Germany, this directive is implemented by the Electrical and Electronic Equipment Substance Regulation (ElektroStoffV). Delegated Directive (EU) 2015/863 supplements Directive 2011/65/EU (RoHS 2 Directive) to restrict the use of certain hazardous substances in electrical and electronic equipment. With this amendment, four additional substances were included in Annex II, increasing the number of restricted substances from originally six to a total of ten.

The substance restrictions of the ElektroStoffV refer to the maximum concentrations in the homogeneous material.

Table 1: Substance restrictions

Substance groups / Substances	Maximum concentration in homogeneous material
Cadmium and cadmium compounds	0,01 wt. %
Hexavalent chromium (Cr VI) and Cr VI compounds	0,10 wt. %
Lead and lead compounds	
Mercury and mercury compounds	
Polybrominated diphenyl ethers (PBDE)	
Polybrominated biphenyls (PBB)	
Di(2-ethylhexyl) phthalate (DEHP)	
Butylbenzylphthalate (BBP)	
Dibutylphthalate (DBP)	
Diisobutylphthalate (DIBP)	
Bis(2-ethylhexyl)phthalate (DEHB)	
Benzylobutylphthalate (BBP)	
Dibutylphthalate (DBP)	
Diisobutylphthalate (DIBP)	

If it is necessary to use exemptions from Annexes III and IV of the RoHS Directive in order to achieve compliance, Techem GmbH requires these exemptions to be named and assigned accordingly.

The current exemptions and their status can be accessed via the following link: https://environment.ec.europa.eu/topics/waste-and-recycling/rohs-directive/rohs-directive-implementation_en

4.1.4 Chemicals Prohibition Ordinance – ChemVerbotsV

The Ordinance on Prohibitions and Restrictions on the Placing on the Market of Hazardous Substances, Mixtures and Articles under the Chemicals Act is a German federal regulation that stipulates specific national requirements in addition to Regulation (EC) No. 1907/2006. It also defines national requirements for the following substances and groups of substances:

Table 2: Substance restrictions in accordance with the Chemicals Prohibition Ordinance

Substances / Mixtures
Formaldehyde
Dioxins and furans
Pentachlorophenol
Biopersistent fibres

The current requirements and the listed exemptions can be found in the legal text. [ChemVerbotsV - unofficial table of contents](#)

4.1.5 Regulation (EU) 2019/1021 on persistent organic pollutants (POPs)

This EU Regulation implements the Stockholm Convention on persistent organic pollutants. The Stockholm Convention is an agreement on internationally binding bans and restrictions for certain persistent organic pollutants. Accordingly, the Convention prohibits or restricts the manufacture, use, and trade of hazardous substances, mixtures, and articles.

Further information on the Stockholm Convention can be found on the official website at the following link:

<http://chm.pops.int/>

4.1.6 Product Safety Act (ProdSG)

The Product Safety Act (ProdSG) is the central legal provision for product safety. Since December 13th, 2024, it has been substantively replaced by the EU General Product Safety Regulation (EU) 2023/988, but it remains in force as the national enforcement framework.

Products may only be made available on the market in the course of a business activity if they do not endanger health and safety. Under Section 3 this is permitted if the protected interests listed in Section 8(1) are not endangered during intended or foreseeable use.

Making available on the Union market is equivalent to any supply of a product, whether for payment or free of charge, for distribution, consumption, or use in the course of a business activity.

https://www.gesetze-im-internet.de/prodsg_2021/

4.1.7 Regulation (EU) No. 2023/988 – General Product Safety Regulation

Regulation (EU) 2023/988 (General Product Safety Regulation) became applicable on December 13th, 2024. It replaces Directive 2001/95/EC, which is implemented in Germany through the Product Safety Act (ProdSG).

Products may only be placed on the Union market if, under normal or reasonably foreseeable conditions of use, they present no risk or only minimal risks compatible with the product's use,

and which are considered acceptable and consistent with a high level of protection for consumers' health and safety.

Making available on the market means any supply of a product, whether for payment or free of charge, for distribution, consumption, or use on the Union market in the course of a business activity.

4.2 Substance Restrictions – Applicable to Products from Different Scope Areas

The supplier must check whether the regulations mentioned in this chapter apply to their products. If the supplier is not able to clarify this independently, they must inform Techem GmbH without delay.

4.2.1 Regulation (EU) 2023/1542 – Battery Regulation 2023

The Regulation on batteries and waste batteries, repealing Directive 2006/66/EC and amending Regulation (EU) 2019/1020, entered into force on August 17th, 2023. Annex I of the Regulation restricts the use of mercury, cadmium, and lead.

Table 3: Maximum concentration for batteries

Substances	Maximum concentration in the article	Use Restrictions
Mercury and mercury compounds	0,0005 %	Batteries (in devices and vehicles)
Cadmium and cadmium compounds	0,002 %	Portable batteries (in devices and vehicles)
Lead and lead compounds	0,01 %	Portable batteries

4.2.2 Batteries Law Implementing Act – BattDG

It governs national responsibilities and the implementation of Regulation (EU) 2023/1542.

Registration (Ch. 1 §5): Obligation to register manufacturers, importers and authorised representatives before placing batteries on the market, their categorisation, and the requirement to appoint an authorised representative for manufacturers without a registered office in Germany.

- **Producer responsibility (Ch. 2, Sec. 2):** Obligation to organise and finance the take-back and disposal of batteries.
- **Take-back (Sec. 3 §14, Sec. 4 §18):** Requirements for the free take-back of waste batteries by retailers and collection structures, irrespective of the purchase of new products.
- **Information and reporting obligations (Ch. 4 et seq.):** Requirements for reporting data and quantities (placed on the market and take-back/recovery quantities) to the competent authorities.

The current requirements and the listed exemptions can be found in the legal text.

<https://www.gesetze-im-internet.de/battdg/>

4.2.3 Regulation (EU) 2025/40 – Packaging and Packaging Waste Regulation (PPWR)

The Packaging and Packaging Waste Regulation (PPWR), Regulation (EU) 2025/40, applies to all packaging and packaging materials first placed on the market in the EU, regardless of material type, packaging function, or distribution channel. The Regulation will apply directly from August 12th, 2026, and replaces the previous Packaging Directive 94/62/EC.

The PPWR applies to the entire life cycle of packaging and contains detailed requirements on substances, design, and sustainability, with the aim of achieving a circular economy, reducing packaging, and harmonising the internal market.

In accordance with Article 3(1) of the PPWR role definitions, packaging must undergo a conformity assessment, including with regard to

- requirements under substances legislation
- material properties
- reusability, use of recyclates
- packaging minimisation
- future labelling obligations.

The German Packaging Act (VerpackG) remains in force as the national implementing act for the PPWR and governs enforcement, responsibilities, and sanctions, provided these do not conflict with the PPWR.

In Germany, the reporting obligation via the packaging register (LUCID) remains in place. Every company that places packaging on the market for the first time must register there and report its packaging quantities. Companies must also participate in the dual system for packaging disposal, such as “Der Grüne Punkt”.

Table 4: Substance-related requirements

Substance	Limit value	Documentation
Lead (Pb)	Total max. 100 mg/kg	
Cadmium (Cd)		
Mercury (Hg)		
Hexavalent chromium (Cr VI)		
PFAS (per individual substance)	max. 25 ppb	
PFAS total	max. 250 ppb	
Total fluorine (incl. polymeric PFAS)	50 ppm	
	>50 ppm	Proof of origin of the fluorine

The current requirements and the listed exemptions can be found in the legal text. [Regulation - EU - 2025/40 - EN - EUR-Lex](#)

4.2.4 EU Drinking Water Directive

The EU Drinking Water Directive (EU) 2020/2184 sets binding limit values for drinking water as well as hygiene and substance requirements for materials and products in contact with drinking water (use in drinking water, hot water, or distribution systems). Manufacturers must demonstrate compliance with the assessment bases (e.g., test reports, declaration of conformity). The directive will, in the medium term, define which materials are permitted to come into contact with drinking water via positive lists of the European Chemicals Agency (ECHA).

The directive sets EU-wide minimum requirements for

- Hygiene requirements for materials that come into contact with drinking water
- Introduction of EU-wide positive lists for starting substances (ECHA)
- Migration and release limit values from materials
- Conformity and evidence obligations for manufacturers

The corresponding limit values are documented below:

Table 5: Microbiological limit values (Annex I – Part A)

Parameter	Limit value
Escherichia coli (E. coli)	0 / 100 ml
Intestinal enterococci	0 / 100 ml

Table 6: Material Compliance / Chemical Limits (Excerpt – Annex I, Part B)

Substance	Limit value	Documentation
Lead (Pb)	5 µg/l (<i>transition: 10µg/l, final µg/l by Jan 12th, 2036</i>)	Migration test
Nickel (Ni)	20 µg/l	Migration test
Copper (Cu)	2,0 mg/l	Migration test
Nitrate	50 mg/l	
Nitrite	0,5 mg/l	
Acrylamide	0,10 µg/l (<i>relating to the release from materials</i>)	Migration test
Epichlorhydrin	0,10 µg/l	Migration test
Polycyclic aromatic hydrocarbons (PAK)	0,10 µg/l (Benzo[a]pyren)	Migration test
PFAS (total)	0,50 µg/l	
PFAS total (alternatively)	0,50 µg/l	

Table 7: Indicator parameters (Excerpt – Annex I – Part C)

Parameter	Limit value / Requirement
pH value	6,5 – 9,5
Conductivity	2.500 µS/cm (at 20 °C)
Chlorid	250 mg/l
Aluminium	200 µg/l
Ammonium	0,50 mg/l
Clostridium perfringens (incl. spores)	0/100 ml (if risk-relevant)

The current requirements and the listed exemptions can be found in the legal text.

[Directive - 2020/2184 - EN - EUR-Lex](#)

4.2.5 Ordinance on the Quality of Water Intended for Human Consumption (Drinking Water Ordinance – TrinkwV)

The TrinkwV governs the quality of water intended for human consumption in Germany and legally implements the EU Drinking Water Directive.

Contains **largely identical limit values**, supplemented by **national specifications and transitional provisions**:



- Recognition of national hygiene certificates (e.g., UBA guidelines)
- National monitoring and enforcement rules
- Integration into infection protection and water law

In Germany, the national positive lists are maintained by the German Environment Agency (UBA) within the assessment bases pursuant to Section 15 TrinkwV until the EU positive lists (ECHA) become valid after the respective transitional period. They become binding two years after publication.

Germany applies a stricter PFAS total limit value of 0.10 µg/l. For the chemical parameter lead, a limit value of 0.01 µg/l (10 µg/l) currently applies. With the amendment of the TrinkwV to implement Directive (EU)2020/2184, it was determined that this limit value will be lowered from January 12th, 2028, to 0.005 mg/l (5 µg/l). At European level, this applies only from 2036.

The current requirements and the listed exemptions can be found in the legal text. [TrinkwV - unofficial table of contents](#)

4.3 Declarable Substances

4.3.1 SVHC Candidate List

The current version of the official SVHC Candidate List under REACH (Regulation 1907/2006/EC) can be accessed at any time at:

<https://echa.europa.eu/de/candidate-list-table>

Under Article 33 of the REACH Regulation, every supplier is obliged to do the following:

Any supplier of an article containing a substance meeting the criteria of Article 57 and identified in accordance with Article 59(1) in a concentration above 0.1% by mass (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
- Spare parts
- Accessories
- Packaging

If the delivered articles contain substances of very high concern above 0.1 wt.% that are published in the so-called Candidate List pursuant to Art. 59(1) of Regulation (EC) No 1907/2006, the contractor is obliged to provide, without being requested, with the delivery all



information pursuant to Art. 33(1) of Regulation (EC) No 1907/2006. This also applies if such a substance is added to the Candidate List only during the ongoing supply relationship.

This information must be provided to private consumers free of charge upon request within 45 days.

According to the ruling of the European Court of Justice, the concept "Once an article, always an article" applies. As soon as an article exceeds the concentration limit of 0.1% by mass, the presence of this SVHC candidate substance must be communicated.

If you supply articles containing SVHC candidate substances above 0.1 wt.%, we expect, in addition to your Article 33 notification, that you provide your SCIP dossier number.

4.3.2 Conflict Minerals (CM) – Dodd-Frank Act

The US Dodd-Frank Act, adopted in 2010, Sec. 1502, obliges companies listed on US stock exchanges to review their own supply chain to determine whether conflict minerals are used to manufacture their products. If any of the conflict minerals are found, the origin must be disclosed in this report. Conflict minerals within the meaning of the law are tin, tungsten, tantalum, and gold (synonym 3TG). The DRC and its bordering neighbouring countries are defined as a conflict and high-risk area.

If Techem GmbH receives inquiries from your customers regarding the origin of conflict minerals, it will forward these inquiries to its suppliers.

Note on further information about the Dodd-Frank Act:

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

The Excel document of the

<http://www.responsiblemineralsinitiative.org/>

is preferred as the declaration medium.

4.4 Process Aids and Operating Materials

4.4.1 Safety Data Sheets (SDS)

The safety data sheet is the central element of communication in the supply chain for hazardous substances and mixtures. It provides important information on the following aspects:

- Identity of the product
- Hazards that may arise
- Safe handling
- Preventive measures
- Measures in case of danger.

The requirements for the content and format of the safety data sheet are governed by Article 31 and Annex II of the REACH Regulation (EC) No. 1907/2006.

The supplier of a substance/mixture is responsible for ensuring that the safety data sheet is technically correct and completed in full.

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

Suppliers update the SDS without delay (Art. 31(9)) if

- new information is available that may affect risk management measures,
- an authorisation has been granted or refused,
- a restriction has been imposed.

The corrected version must be made available to the customer if the customer has been supplied within the last 12 months.