

KNF Material Compliance Standard

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1 Introduction

This material compliance standard is designed to ensure material compliance in the handling of substances and parts in their development, production, distribution and use.

This material compliance standard describes the requirements of the KNF Group and its affiliates concerning all known legally prohibited, regulated and declarable substances in the current form.

The failure of this standard to map possible legal changes yet does not release the supplier from the need to comply with these legal changes and the latest statutory requirements as amended from time to time.

Suppliers are obliged to procure the latest applicable guidelines, laws and standards for themselves.

The material compliance requirements are as applicable as other product requirements.

The material compliance standard requires all products and their packaging to conform with its specifications to ensure their placement on the market in accordance with the regulations.

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

Upon request, the KNF Group needs to be provided with the technical data sheets of all the included raw and auxiliary materials for a first article inspection on a case-by-case basis. The KNF Group reserves the right to subject materials to tests and laboratory analyses on a case-by-case basis.

The suppliers of the KNF Group are obliged to provide the material information required to audit their compliance with legal specifications and this standard, free of charge.

The KNF Group makes its material compliance standard available on its website.

Suppliers are required to check the material compliance standard for updates every six months as a minimum. Updated material compliance standards replace their preceding versions and become applicable with immediate effect.

The suppliers of the KNF Group will not be informed of changes or new versions of this standard.

This material compliance standard was created in cooperation with tec4U - Solutions GmbH, Saar-Lor-Lux-Strasse 13, D-66115 Saarbrücken. The standard can be used and/or copied by KNF Group companies and parties involved in the supplier chain. Its use outside the supplier chain in whole or in parts requires permission by the KNF Group and tec4U – Solutions GmbH.

2 Definitions and abbreviations

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 REACH section 3.1).

Examples for chemical compounds

Organic: ethanol, aldehyde

Metal: iron, copper, tin

Mineral: clay, loam

Preparation:

A batch, mixture or solution composed of two or more substances (mixture and preparation are synonyms).

Examples for preparations:

Batch: seeds

Mixture: alloy

Solution: octane in gasoline

Homogenous material:

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 (see RoHS section 3.20). Examples for homogenous materials are individual types of plastic, ceramic, glass, metal, alloy, synthetic resin and coating.

Intentionally added:

Generally known as the intentional use of a substance contained in a part to achieve a specific attribute, appearance or quality.

Battery or accumulator:

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

Packaging:

All products made of any materials of any nature for the containment, protection, handling, delivery and presentation of goods, from raw materials to processed goods, from the producer to the user or the consumer. 'Non-returnable' items used for the same purposes shall also be considered to constitute packaging (see EU Packaging Directive section 3.1)

Packaging components:

Parts of the packaging that are separable by hand or simple mechanical processes. Additional elements that are directly hanging on or fastened to a product and serve a packaging function are regarded as packaging unless they are an integral part of the product.

Restricted substances:

Prohibited substances must not be contained in products, components, materials, preparations, process materials and operating supplies in excess of the limits detailed in this document. These substances must only be contained as natural impurities and not be added intentionally. Contaminations with these substances need to be qualitatively stated.

Declarable substances:

Substances classified as declarable are undesirable in a number of applications and must be declared above the stated limits. The listed substances must be declared for every product, component, material, substance preparation, process material and operating supply. Content limits for the individual substances are specified in this document. No declaration is required below these limits.

Application:

Means that the substance limit applies to the material or component wherein the substance is contained to achieve a desired functionality.

Article:

Object provided with a specific form, surface or design in the production process that determines its function to a greater extent than its chemical composition.

Latest application date:

Date by which an authorization application must be provided according to the REACH Regulation (at least 18 months before the sunset date) so that the substance can also be used in future (deadline).

Information on the authorization application and formal process of applying for authorizations is available at:

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

Sunset date:

Date after which the placing on the market and use of a substance listed in Annex XIV of the REACH Regulation is prohibited in the absence of an authorization.

CAS Number:

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

Sources/support:

Platform for European laws, 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

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

Support section of the European Chemicals Agency (ECHA):

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

REACH CLP Biocide Helpdesk – national information center operated by the German Federal Government:

https://www.reach-clp-biozid-helpdesk.de/DE/Home/Home_node.html

REACH Helpdesk – German Federal Environment Agency:

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

REACH@Baden-Württemberg

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

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

3 KNF Group list of legally regulated substances

3.1 Substance regulations and prohibitions – required for all parts

The statutory substance requirements detailed in this section 3.1 apply to all substances, mixtures and parts. The application context is detailed precisely in the respective law.

3.1.1 Regulation (EC) No. 1907/2006 REACH – Annex XIV – List of substances subject to authorization

Regulation (EC) No. 1907/2006 (or "REACH" for short) came into effect 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 makes its use subject to authorization at the end of the procedure. After a transition period, the substance must only be used with an authorization or its use is prohibited altogether.

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

The latest version of Annex XIV to the REACH Regulation is available here:

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

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

Annex XVII to the REACH Regulation regulates or prohibits specified substances in individual applications/applications defined by the legislator.

The latest version of Annex XVII to the REACH Regulation is available here:

<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 08 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS Directive) came into effect on 02 January 2013.

The RoHS substance regulations relate to the maximum concentration in the homogenous material of each part.

Table 1: Substance regulations of the RoHS Directive

Substance groups	Maximum concentration in the homogenous material in percent
Cadmium and cadmium compounds	0.01%
Hexavalent chromium (Cr6+) and Cr6+ compounds	0.10%
Lead and lead compounds	
Mercury and mercury compounds	
Polybrominated diphenyl ethers (PBDE)	
Polybrominated biphenyls (PBB)	
Di(2-ethylhexyl) phthalate (DEHP)	
Butyl benzyl phthalate (BBP)	
Dibutyl phthalate (DBP)	
Diisobutyl phthalate (DIBP)	

If any of your products are RoHS compliant only by using a valid exemption, you must notify us of this exemption with item reference.

3.1.4 ACPEIP (China RoHS)

The legislation ACPEIP (Administration on the Control of Pollution Caused by Electronic Information Products) regulates the marketing of electrical and electronic products (EEPs) on the Chinese market. The limit values are specified by the industry standard SJ/T 11363-2206.

The limit values for heavy metals and flame retardants correspond to those of Directive 2011/65/EU.

Substance groups	Maximum concentration in the homogenous material in percent
Cadmium	0,01%
Hexavalent chromium (Cr6+)	0,10%
Lead	
Mercury	
Polybrominated diphenyl ethers (PBDE)	
Polybrominated biphenyls (PBB)	

3.1.5 Chemicals Prohibition Ordinance - ChemVerbotsV

The Ordinance on Prohibitions and Restrictions of the Marketing of Dangerous Substances, Preparations and Products according to the Chemicals Act is a German law stipulating specific national requirements over and beyond the REACH Directive. As REACH is directly applicable in EU member states as a directive, an amendment of the ChemVerbotsV that combines the requirements of the REACH and CLP Directives with German chemicals law was passed in the year 2016. This serves the additional stipulation of national requirements for the following substances and substance groups:

Table 2: ChemVerbotsV substances and substance groups

Substances/Mixtures
Formaldehyde
Dioxins and furans
Pentachlorophenol
Bio-persistent fibers

Please see the wording of the law for the requirements and listed exceptions, which came into force on 01/01/2019.

http://www.gesetze-im-internet.de/chemverbotsv_2017/

3.1.6 Regulation (EC) No. 2019/1021 on persistent organic pollutants (POP)

This EU regulation inter alia implements the Stockholm Convention on Persistent Organic Pollutants. The Stockholm Convention is an agreement of prohibitive and restrictive measures for specific persistent organic pollutants that are binding under international law. The Convention thus restricts and/or prohibits the production, use and trading of hazardous chemicals.

Further information on the Stockholm Convention is available from the official website at the following link:

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

The text of the European implementation can be found on the EU platform:

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

3.2 Substance regulations and prohibitions – required for products from various scopes of application

In contrast to the substance regulations in section 3.1, suppliers are here required to check if their products come under the respective requirement's scope. Should a supplier be unable to clarify this on their own, they will need to consult the KNF Group.

3.2.1 Directive 2006/66/EG – Battery Directive

Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC restricts the use of mercury and cadmium in batteries and accumulators.

Table 3 Substance regulations of the Battery Directive

Pure substances	Maximum concentration in the part in percent	Application restrictions
Mercury and mercury compounds	0.0005%	Batteries and accumulators
Cadmium and cadmium compounds	0.002%	Appliance batteries and accumulators

3.2.2 Directive 94/62/EC – Packaging Directive

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

Table 4: Substance restrictions in packaging

Pure substances and substance groups	Maximum concentration in packaging or packaging components in ppm by weight
Lead, cadmium, mercury and chromium VI	100*

*cumulative

3.2.3 Regulation (EU) No. 833/2014 and Council Regulation (EU) 2023/1214

The (EU) No. 833/2014 is a regulation of the European Union that deals with restrictive measures against certain individuals and entities. These measures were introduced to respond to specific actions or situations considered a threat to the territorial integrity, sovereignty, and independence of Ukraine.

A key focus of this regulation is on restricting financial transactions, imposing travel restrictions, and freezing the assets of specific individuals and organizations associated with the mentioned threats. Essentially, these are sanctions in the context of the Ukraine crisis imposed by the EU. Through the extension 2023/1214, additional sanctions were imposed, including, among other things, iron and steel products that, starting from September 2023, must not be of Russian origin. When importing iron and steel products listed in Annex XVII (HS codes 7207-7229; 73 goods) from third countries falling within the scope of Article 3g(1)(d) of Regulation (EU) No. 833/2014, evidence of the origin countries of the products is required. Suppliers of KNF are therefore obliged to comply with this requirement and to maintain it in their supply chains accordingly.

3.2.4 Conflict Minerals (Dodd-Frank Act Sec. 1502)

Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act required the Securities and Exchange Commission (SEC) to issue new disclosure and reporting obligations for U.S. publicly traded companies concerning minerals that directly or indirectly finance or benefit armed groups in the Democratic Republic of the Congo (DRC) or in adjoining countries ("conflict minerals" which have been classified as "3TG" are Tin, Tantalum, Tungsten and Gold). In August 2012, the SEC adopted rules implementing these requirements.

KNF is not a publicly traded company, smelter, fabricator, or a miner of minerals or raw minerals. We are not subject to the SEC Conflict Minerals disclosure requirements rule and we are not required to fulfill this U.S. law. Nevertheless, KNF, through its global position and social responsibility, strives to comply with the requirements of the Dodd-Frank Act (Sec. 1502) to the extent possible. KNF requires detailed information on potential conflict minerals and their origin from suppliers in order to be able to pass these on to reporting customers in the course of business activities. Suppliers must properly complete, a latest revision, Conflict Minerals Reporting Template (CMRT) if their products contain the following raw materials or if this cannot be ruled out:

- Tin
- Tantalum
- Tungsten
- Gold

The Conflict Minerals Statement must be in the form of the fully completed Conflict Minerals Reporting Template (CMRT) of the Responsible Minerals Initiative (RMI)

The Conflict Minerals Reporting Template (CMRT) can be obtained from the following link:

<http://www.responsiblemineralsinitiative.org/reporting-templates/cmrt/>

3.2.5 Toxic Substance Control Act (TSCA)

The United States Environmental Protection Agency (EPA) has restricted five substances in the Toxic Substances Control Act (TSCA) Section 6 (h).

The sale of chemicals, mixtures and parts containing the restricted substances is regulated in the United States. There are currently many different transition periods and some exemptions depending on the substance.

Table: TSCA restricted substances

Substance	CAS-Number
Decabromodiphenyl ether (decaBDE)	1163-19-5
Pentachlorothiophenol (PCTP)	133-49-3
Hexachlorobutadiene (HCBd)	68937-41-7
2,4,6 tris (tert butyl)phenol (2,4,6 TTBP)	732-26-3
Hexachlorobutadiene (HCBd)	87-68-3

In addition to the restrictions, communication obligations come into force in the presence of any one of the five substances, which are comparable to the obligations under Article 33 of the REACH Regulation.

The requirements which came into force between 01 and 08 March 2021, as well as the listed exceptions, can be found in the legal text.

<https://www.epa.gov/chemicals-under-tsca>

3.2.6 Proposition 65 – Safe Drinking Water and Toxic Enforcement Act, 1986

The Safe Drinking Water and Toxic Enforcement Act, 1986 (also known as California Proposition 65) is a California law enacted in 1986 that promotes clean drinking water. It is further intended to prevent carcinogens, as well as substances that can cause deformities, from entering consumer products.

"No person shall, in the course of his or her business, whether knowingly or unknowingly, expose others to a chemical that, based on current knowledge, may cause cancer or result in neonatal malformations without providing consumers with clear, conspicuous, and reasonable notice of that risk." - California Proposition 65, The Safe Drinking Water and Toxic Enforcement Act, 1986.

KNF Group would like to be notified of the presence of Proposition 65 substances in supplied items by the supplier.

3.3 Declarable substances

3.3.1 SVHC Candidate List

The latest version of the official SVHC Candidate List as per REACH (Regulation 1907/2006/EC) is always retrievable at the following address:

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

Article 33 of the REACH Regulation requires every supplier to ensure the following:

(1) Any supplier of a part 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 part 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) contained in

- Components
- Replacement parts
- Accessories
- Packaging

If supplied articles contain SVHCs published in the so-called Candidate List as per section 59.1 of Regulation 1907/2006/EC in proportions exceeding 0.1 % by weight, the supplier is required to include all the information as per section 33.1 of Regulation 1907/2006/EC with the delivery unprompted. This also applies if such a substance has only been included in the Candidate List during the ongoing supply relationship.

Upon request, private consumers need to be supplied with this information within 45 days free of charge.

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

If you supply articles with SVHC candidate substances greater than 0.1% (w/w), we expect you to submit your SCIP dossier number in addition to your Article 33 notification.

3.4 Auxiliary production materials and supplies

3.4.1 Safety data sheets (SDS)

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

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

The requirements for safety data sheet contents and formats are set out in Article 31 and Annex II of the REACH Regulation (EC) No. 1907/2006.

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

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

Suppliers need to immediately update (section 31 (9)) the SDS as soon as

- new information becomes available that is able to affect risk management measures
- an authorization has been granted or rejected
- a restriction has been passed

The corrected version must be provided to clients who have been supplied with deliveries during the last twelve months.

4 Changelog

Ver.	Changes	Date
00	Document created	26.03.2021
01	Added: SCIP, Prop 65, TSCA, signature field.	20.01.2022
02	Added: 3.1.4 ACPEIP (China RoHS 2)	24.02.2023
03	Added: (EU) No. 833/2014 and (EU) 2023/1214	23.11.2023

5 Declaration of the contractor

We hereby confirm the following:

We have received a copy of the "Material Compliance Standard" and hereby agree to comply with these principles and requirements in addition to our obligations under the Supply Agreements.

Date: _____ **Name:** _____ **Signature:** _____

This document must be signed by authorized representatives of the Contractor.