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1 Purpose

This Mafell Standard (MS), entitled Material Compliance, serves the purpose of ensuring the safe handling within the European Union of substances and articles that may be used or incorporated in a product of Mafell AG.

It describes the requirements of Mafell AG relating to all known prohibited, regulated and disclosable substances in their current form.

The Material Compliance requirements rank alongside the other product requirements.

The MS Material Compliance is a compendium of the statutory provisions. In case the Standard does not yet reflect any statutory amendments, the supplier is not released from the obligation to give consideration to such amendments and to comply with the current statutory provisions as revised from time to time. The supplier is obliged to procure for itself the current directives, regulations, laws and standards.

Products and raw materials of unknown origin and/or composition, and raw materials for which adequate material data are not available, are not to be used.

In individual cases, Mafell AG is to be furnished on request with the technical data sheets of all used raw materials and additives for initial sampling. Mafell AG reserves the right in individual cases to subject materials to testing and laboratory analysis.

Mafell AG publishes this Standard on its website.

Upon its revision, the latest version of the Standard replaces the preceding version and takes effect immediately. Mafell AG does not notify suppliers of amendments to the Standard.

2 Application scope

This Standard applies to all substances and articles procured for the manufacture of our products, for direct distribution by Mafell AG, or for the manufacture of our customers' products.

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3 Definitions

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 (cf. REACH Regulation Art. 3 (1)).

Examples of chemical compounds

Organic: Water, formaldehyde, ethanol

Metallic: Iron, copper, tin

Mineral: Iron sulfide, sodium chloride, silicic acid

Preparation:

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

Examples of preparations:

(Granular) mixture: Sand

(Gaseous) mixture: Air

Solution: Octane in gasoline

Homogeneous material:

A 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 (cf. RoHS Art. 3 (20)). Examples of homogeneous materials include individual types of plastics, ceramics, glasses, metals, alloys, synthetic resins and coatings.

Intentionally added:

Generally understood to mean the intentional use of a substance contained in an article to produce a particular property, appearance or quality.

Battery or accumulator:

Any source of electrical energy generated by direct conversion of chemical energy and consisting of one or more primary battery cells (non-rechargeable) or one or more secondary battery cells (rechargeable).

Packaging:

All products made of any materials of any nature to be used 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 (cf. EU Packaging Directive Art. 3 (1)).

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Packaging components:

Parts of the packaging that can be separated by hand or simple mechanical procedures. Additional elements that are directly suspended from or fastened to a product and fulfil a packaging function shall be deemed to constitute packaging unless they are an integral part of the product.

Prohibited substances:

Prohibited substances must not be contained in articles, components, materials, preparations, or auxiliary and operating materials in quantities exceeding the limit values specified in this document. These substances can be present only in the form of naturally existing impurities; they must not be intentionally added. Qualitative information must be provided for impurities containing such substances.

Disclosable substances:

Substances classified as disclosable are undesirable in some applications and must be disclosed if they exceed the indicated limit values. The listed substances must be stated for every article, component, material, preparation, and auxiliary or operating material. Quantity limits are specified in this document for the individual substances. No disclosure is required below these limit values.

Application:

This means that the limit value for the substance refers to the material or part in which the substance is contained in order to achieve a desired functionality.

Article:

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

Latest application date:

The date by which, according to the REACH Regulation, an application for authorisation must be received (at least 18 months before the sunset date) if the substance is to remain in use (deadline). Information about the application for authorisation and the formal expiry of a request for authorisation is provided here:

<https://echa.europa.eu/applications-for-authorisation-consultation>

Sunset date:

The date after which the placing on the market or use of a substance listed in Annex XIV of the REACH Regulation is prohibited unless authorisation has been granted.

CAS number:

The CAS number (also CAS registration number or CAS registry number; CAS stands for Chemical Abstracts Service) is a numeric identifier recognised as an international standard for

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identifying chemical substances. Each chemical substance (including biosequences, alloys and polymers) registered in the CAS database has a unique CAS number.

4 Competences

4.1 For Mafell:

Development and design:

Ensuring that the requirements in this Standard relating to directives, regulations and standards are regularly updated.

Compliance of the materials defined by the development department (indicated in drawings) with the standards, directives and regulations.

Purchasing:

Ensuring that, in case of new inquiries, this Standard is brought to the attention of suppliers and effectively incorporated in outline agreements.

Conducting regular inquiries to obtain from suppliers a self-declaration of material compliance pursuant to REACH and RoHS in respect of the articles/substances/preparations supplied to Mafell.

Ensuring the recording of data based on received disclosures.

QM:

Specifying any necessary testing and laboratory analyses and the measures arising from same.

Mafell product marketing/sales, industrial segment:

Notification of customers.

Production:

Ensuring that the additives used comply with the requirements of this Standard.

4.2 For the supplier:

The supplier is obliged to provide free of charge the information relating to materials required for the purpose of verifying compliance with the statutory provisions and this Standard.

The supplier is obliged regularly to check that it holds the most recently updated version of this Standard.

5 List of regulated substances

5.1 Substance regulations and prohibitions – relevant for all products

The requirements relating to substances described under item 5.1 apply to all substances – that are incorporated in products of Mafell AG by same or at its instigation,

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– that are intended for incorporation in products of Mafell AG.

5.1.1 Regulation (EU) No. 1907/2006 REACH – Annex XIV – List of substances subject to authorisation

The recording in Annex XIV of the REACH Regulation of a substance contained in the list of substances of very high concern triggers the mandating of authorisation for the substance concerned at the end of the procedure. After a transitional period the substance can be used only if authorised, otherwise its use is prohibited.

The terms 'latest application date' and 'sunset date' are explained in Section 3 Definitions.

The current Annex XIV of the REACH Regulation can be retrieved here:

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

5.1.2 Regulation (EU) No. 1907/2006 REACH – Annex XVII – List of substances subject to restrictions

Annex XVII of the REACH Regulation imposes rules on, or prohibits, precisely defined substances in individual applications.

The current Annex XVII of the REACH Regulation can be retrieved here:

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

5.1.3 Chemicals Prohibition Regulation – ChemVerbotsV

The regulation concerning bans and restrictions relating to the placing on the market and supply of dangerous substances, mixtures and articles pursuant to the German Chemicals Act is a federal law that prescribes specific national requirements supplementary to the REACH Regulation. Given that REACH, as a Regulation, applies directly in the EU Member States, in 2016 an amendment of ChemVerbotsV was adopted to harmonise the requirements of the REACH and CLP Regulations with German chemicals legislation. It additionally defines the national requirements for the following substances and groups of substances:

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Table 1: ChemVerbotsV substances

Substances / mixtures
Formaldehyde
Dioxins and furans
Pentachlorophenol
Biopersistent fibres

Refer to the text of the regulation for the special requirements and specified exceptions. The requirements of the new Chemicals Prohibition Regulation entered into force on 1 January 2019.

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

5.1.4 Regulation (EC) 2019/1021 – persistent organic pollutants (POPs)

Among other things, this EU Regulation implements the Stockholm Convention on Persistent Organic Pollutants. The Stockholm Convention, also known as the POP Convention, is an agreement on measures that are binding under international law to prohibit and restrict certain long-lasting organic pollutants. The convention prohibits or restricts the production, use, and trade of 22 hazardous chemicals.

Further information on the Stockholm Convention is available here on the official website:

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

5.1.5 Packaging Directive

The EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE 94/62/EC of 20 December 1994 on packaging and packaging waste restricts the concentration of heavy metals in packaging, changed by Directive (EU) 2018/852.

Table 2: Substance restrictions in packaging

Pure substance and substance groups	Maximum sum of concentration in packaging or packaging components in ppm by weight
Lead, cadmium, mercury and hexavalent chromium	100

5.2 Substance regulations and prohibitions – relevant for products depending on scope

In contrast to the substance regulations in Section 5.1, the supplier must check whether its products fall within the scope of the particular requirement. This depends on the place of incorporation and use of the delivered product in the products of Mafell AG. If the supplier is unable to clarify this issue independently, he must consult with Mafell AG.

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5.2.1 Directive on waste electrical and electronic equipment (WEEE)

DIRECTIVE 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 04 Juli 2012 on waste electrical and electronic equipment

Annex VII of the WEEE Directive:

Selective treatment for materials and components of waste electrical and electronic equipment referred to in Article 8 (2)

As a minimum the substances specified below have to be removed from any separately collected WEEE.

For this reason the supplier must furnish information concerning the content of such substances incorporated in products of Mafell AG.

polychlorinated biphenyls (PCB) containing capacitors in accordance with Council Directive 96/59/EC of 16 September 1996 on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCB/PCT) (1),

mercury containing components, such as switches or backlighting lamps,

batteries,

printed circuit boards of mobile phones generally, and of other devices if the surface of the printed circuit board is greater than 10 square centimetres,

toner cartridges, liquid and paste, as well as colour toner,

plastic containing brominated flame retardants,

asbestos waste and components which contain asbestos,

cathode ray tubes,

chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC) or hydrofluorocarbons (HFC), hydrocarbons (HC),

gas discharge lamps,

liquid crystal displays (together with their casing where appropriate) of a surface greater than 100 square centimetres and all those back-lighted with gas discharge lamps

external electric cables,

components containing refractory ceramic fibres as described in Commission Directive 97/69/EC of 5 December 1997 adapting to technical progress for the 23rd time Council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances (2).

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components containing radioactive substances with the exception of components that are below the exemption thresholds set in Article 3 of and Annex I to Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation (3),

electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume).

These substances, mixtures and components shall be disposed of or recovered in compliance with Directive 2008/98/EC.

5.2.2 RoHS Directive

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) entered into force on 2 January 2013.

The requirements of the RoHS Directive are implemented in Germany in the regulation concerning hazardous substances in electrical and electronic equipment (ElektroStoffV) of 13 August 2004.

ROHS 2 2011/62/EU entered into force on 3. January 2013 in the EU.

Lists of substances exempted from the restrictions are contained in Annex III and Annex IV to the Directive; any amendments are published in the Official Journal of the European Union. The RoHS substance regulations refer to the maximum concentration levels in the homogeneous material of every article.

Table 3: RoHS Directive substance regulations

Substance groups	Maximum concentration in homogeneous material in percent
Cadmium and its compounds	0.01%
Hexavalent chromium (Cr6+) and its compounds	0.1%
Lead and its compounds	0.1%
Mercury and its compounds	0.1%
Polybrominated diphenyl ethers (PBDE)	0.1%
Polybrominated biphenyls (PBB)	0.1%
Added from 22.07.2019	
Bis (2-ethylhexyl) phthalate (DEHP)	0.1%
Butyl benzyl phthalate (BBP)	0.1%
Dibutyl phthalate (DBP)	0.1%
Diisobutyl phthalate (DIBP)	0.1%

The additions from 22.07.2019 were published with Directive (EU) 2015/863.

5.2.3 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.

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Table 4: Battery Directive substance regulations

Pure substances	Maximum concentration in article in percent	Restrictions on use
Mercury and its compounds	0.0005%	Batteries and accumulators
Cadmium and its compounds	0.002%	Portable batteries and accumulators

5.2.4 Safety data sheets (SDS)

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

- Product identification
- Hazards
- Safe handling
- Prevention measures
- Measures in the event of danger

The requirements concerning the content and format of the safety data sheet are set forth in Article 31 of and Annex II to REACH Directive (EC) No. 1907/2006.

The supplier of a substance/mixture is responsible for ensuring that the safety data sheet is compiled correctly from a technical perspective and completely.

The safety data sheet is to be made available to Mafell AG on paper, electronically, or as a download free of charge not later than on the date of the first delivery.

Suppliers shall update the safety data sheet without delay on the following occasions (Art. 31 (9)):

- as soon as new information which may affect the risk management measures becomes available
- once an authorisation has been granted or refused
- once a restriction has been imposed

The amended version must be provided to Mafell AG if it has been supplied with the relevant substance/mixture within the preceding 12 months.

Incoming safety data sheets are forwarded to the industrial safety officer and the head of production.

5.2.5 SVHC candidate list

The current version of the official SVHC candidate list pursuant to REACH (Regulation (EC) No. 1907/2006) can be retrieved at any time from the following address:

http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp

Article 33 of the REACH Regulation imposes the following obligations on all suppliers:

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(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 (as per SVHC candidate list) in

- components
- spare parts
- accessories
- packaging

If the supplied articles contain substances of very high concern disclosed in the candidate list pursuant to Art. 59 (1) of Regulation (EC) No. 1907/2006 in a concentration above 0.1% (w/w), the contractor is obliged to provide at the time of delivery, and without being requested, all information pursuant to Art. 33 (1) of Regulation (EC) No. 1907/2006. This also applies if such a substance is first recorded in the candidate list only during the current supply relationship.

The information must be provided to private consumers free of charge on request within 45 days.

According to a decision of the European Court of Justice, the principle ‘once an article, always an article’ applies. As soon as an article exceeds the concentration limit of 0.1%, the presence of the SVHC candidate substance must be reported.

5.2.6 Regulation on minerals originating from conflict-affected areas

The object of the Regulation is to prevent the use of, at present, four substances, namely tin, tantalum, tungsten and gold originating from conflict-affected areas.

We are fulfilling our due diligence obligation, to which we are subject from 1 January 2021, by notifying our suppliers of this Regulation, who question their importers about the specified substances. (The initial focus here is on the importers who import these substances into the EU – Regulation (EC) No. 2017/821.)

6 Further applicable documents

Alongside this Standard, the Standard Business Conditions (AGB) of Mafell AG, contractual arrangements, and the drawings describing the articles also apply.

7 Updates

The design and development department is responsible for updating this Mafell Standard in collaboration with the members of the standardisation team.

8 Annexes

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