

## Factory Standard

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Reference

Author (STKZ/FKZ/Name)

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GTZ//N/Lemke  
GTZ/UR/Rohde  
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Title

**Restricted substances**

Issued by (STKZ/FKZ)

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Approved by

**GTZ/N**

### Summary

The legal and non-legal application prohibitions/limitations for certain substances described in this Factory Standard are to protect the environment and human health during their use and disposal. These limitations apply to materials/components, accessories and finished products.

Observing the Miele Factory Standard does not release from the responsibility to abide by applicable laws and guidelines.

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## 1 Purpose

This Factory Standard describes the legal and non-legal application prohibitions/limitations for certain substances in materials/components, accessories and finished products. It is absolutely essential for suppliers to Miele/Imperial to fully comply with the application prohibitions/limitations taking into consideration the obligation to provide information in accordance with Point 5. Non-compliance with these requirements endangers the validity and acceptance of the conformity declarations given by Miele/Imperial to national, European or international monitoring authorities.

For materials/components, accessories and final products which come into contact with foodstuffs or are covered by the drinking water ordinance, compliance must be confirmed independently from this Miele Factory Standard (MWN), in accordance with the requirements of the Miele/Imperial functions.

## 2 Valid for

This Factory Standard applies to Miele/Imperial and suppliers.

## 3 Other relevant documents

1907/2006/EC REACHV	Registration, Evaluation, Authorisation and Restriction of Chemicals
2011/65/EU RoHSRL	Guideline on the restriction of the use of certain hazardous substances in electrical and electronic equipment (Restriction of Hazardous Substances Directive)
2006/66/EC BattRL	Guideline regarding batteries and accumulators, and old batteries and accumulators
94/62/EC PackRL	Guideline about packaging and packaging waste
2007/639/EC	Decision from the EU Commission establishing a common format for the submission of data and information pursuant to Regulation (EC) No 850/2004 of the European Parliament and of the Council on persistent organic pollutants
1005/2009/EC V	Regulation on substances that deplete the ozone layer
DIN EN ISO 11469	Plastics – Generic identification and marking of plastic products
DIN EN 62321	Procedures for determining levels of regulated substances in electro-technical products
2009/251/EC	Decision from the EU Commission dated 17.03.09 regarding the obligation of member states to ensure that products that contain biocide dimethyl fumarate are not brought into circulation or

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made available on the market

PAK-Leitfaden DKE/DIN/VDE  
EK 1 374-08 Rev. 2 Permitted maximum levels for polycyclic aromatic hydrocarbons  
(PAH) in electrical machines

ZEK 01.4-08 Testing and evaluation of polycyclic aromatic hydrocarbons  
(PAH) with GS mark approval

All national requirements, for example permitted maximum levels for PAH, for which no official English translation is available are to be obtained from the source applicable to the supplier in such cases in the appropriate language.

## 4 Application limitations for substances

### 4.1 Legal application limitations

To protect the environment and health of persons involved in future waste processing, the following listed substances may only be present in materials/components, accessories and final products supplied to Miele/Imperial in quantities less than the limits given. The given limits refer to the percentage by weight of the homogeneous material (handling in accordance with DIN EN 62321). For fibres, the limit refers to the percentage by weight of the material.

- Lead and its compounds..... Limit 0.1 percent by weight = 1 g/kg
- Cadmium and its compounds..... Limit 0.01 percent by weight = 0.1 g/kg
- Polybrominated bi-/diphenyls ..... Limit 0.1 percent by weight = 1 g/kg
- Polybrominated diphenyl ether..... Limit 0.1 percent by weight = 1 g/kg
- Mercury and its compounds ..... Limit 0.1 percent by weight = 1 g/kg
- Chromium VI and its compounds ..... Limit 0.1 percent by weight = 1 g/kg
  
- Asbestos (all modifications) ..... Limit 0.1 percent by weight = 1 g/kg
- Asbestos substitutes, ..... Limit 0.1 percent by weight = 1 g/kg  
all types of ceramic-fibre substitutes which are  
suspected to have carcinogenic potential in accordance with the internationally accepted definition given by the IARC, Lyon (International Agency for Research on Cancer).  
<http://monographs.iarc.fr/ENG/Classification/index.php>
- Biopersistent fibres ..... Limit 0.1 percent by weight = 1 g/kg
- Dimethyl fumarate Limit = 0.1 mg/kg
- Polychlorinated bi-/diphenyls (PCB) ..... Limit = 50 mg/kg

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### 4.2 Further application prohibitions/limitations regulated by Miele/Imperial:

To protect the health of persons during use or operation of finished products, the following listed substances may not be used or may only be present in materials/components, accessories and final products supplied to Miele/Imperial in quantities less than the limits given. The given limits refer to the percentage by weight of the homogeneous material (handling in accordance with DIN EN 62321).

The substances listed at Point 4.2 may only be used when the normal substitutes are technically unsuitable or economically unacceptable. These substances must be named and specially approved by Miele/Imperial with regard to the further development of legal prohibitions/application limitations. The requirements listed in the application prohibitions at 4.2.1 and application limitations at 4.2.2 refer only to substances knowingly added. In this regard, the entire supply chain is to be taken into consideration.

Beyond the legal requirements, use of the "candidate substances" (REACH) is to be avoided. If it is not possible to avoid these substances, then they must be named and specially approved by Miele/Imperial with regard to the potential development of legal prohibitions/application limitations.

#### 4.2.1 Application prohibitions

- Azo dyes..... Those that, due to the cracking of one or more azo-group amines and then via further chemical reactions, could produce nitrosamine
- Chloroparaffin ..... and its compounds
- Dioctyltin ..... including all modifications
- Dibutyltin..... including all modifications
- Nitrosamines..... or substances that react to produce nitrosamines
- Red phosphorous ..... If it has not been specially chemically bound or treated with a hydrolysis-stable coating or been further processed

#### 4.2.2 Application limitations

- Beryllium and its compounds ..... Limit 0.1 percent by weight = 1 g/kg
- Tetrabrombisphenol A additive ..... Limit 0.1 percent by weight = 1 g/kg  
(TBBP A additive) Limit applicable to freely available monomers
- Bisphenol A (BP A) ..... Materials that are approved for contact with foodstuffs.  
Limit in accordance with legal regulations, however maximum 0.1 percent by weight = 1 g/kg  
Limit applicable to freely available monomers
- Hexabromocyclododecane (HBCDD).... Limit 0.1 percent by weight = 1 g/kg

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- Polycyclic aromatic hydrocarbons (PAH)

Important: For materials/components expected to come into contact with foodstuffs, the application limitations in **category 1** apply.

Application limitations in **category 2** apply to all components made of plastic, elastomers or rubber that can be touched by the user during normal operation of the finished product such as

- outer casing
- handles and contact areas
- controls
- service flaps
- mains cable
- plug
- seals

For components/materials that can be touched by the user during incorrect operation of the finished product, the limits given in **category 3** apply.

Parameters	Category 1	Category 2	Category 3
	Materials in contact with foodstuffs or materials designed to be taken into the mouth and toys for children < 36 months	Materials expected to be in contact with the skin for longer than 30 s (long-term skin contact) not covered by category 1	Materials (not covered by category 1 or 2) expected to be in contact with the skin for less than 30 s (short-term skin contact)
Benzo[a]pyrene mg/kg	Not verifiable (< 0.2) <sup>1)</sup>	1	20
Sum 18 PAH (ZEK 01.4-08) mg/kg	Not verifiable (< 0.2) <sup>1)</sup>	10	200

1) If the maximum values in category 1 are exceeded, but the maximum values in category 2 are complied with, confirmation for suitability for contact with foodstuffs or oral mucous membranes can be shown with an additional specific migration test of the PAH components in accordance with DIN EN 1186ff and Section 64 LFGB 80.30-1. The results of the migration are to be evaluated in accordance with foodstuff legislation criteria.

Stricter requirements in accordance with specific requirements from Miele/Imperial must be complied with.

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- Softener  
The following application limitations apply to all materials/components and toys:
  - BBP..... Limit 0.1 percent by weight = 1 g/kg
  - DBP..... Limit 0.1 percent by weight = 1 g/kg
  - DIBP..... Limit 0.1 percent by weight = 1 g/kg
  - DEHP (DOP)..... Limit 0.1 percent by weight = 1 g/kg
  - DHNUP..... Limit 0.1 percent by weight = 1 g/kg
  - DIHP..... Limit 0.1 percent by weight = 1 g/kg

The following application limitations apply only to toys (the requirements of guideline 1907/2006/EC (REACH) appendix XVII must be observed):

- DINP ..... Limit 0.1 percent by weight = 1 g/kg
- DIDP ..... Limit 0.1 percent by weight = 1 g/kg
- DNOP..... Limit 0.1 percent by weight = 1 g/kg

## 5 Obligation to provide information and Miele Factory Standard conformity declaration

The enclosed Miele Factory Standard conformity declaration is to be submitted without delay in cases where, for materials/components, accessories and final products supplied to Miele/Imperial,

- the substances listed in this Miele Factory Standard (MWN) at Point 4.1 are utilised within the given limits, or approved alternatives from other relevant documents, and/or
- the substances listed in this Miele Factory Standard (MWN) at Point 4.2 are present and/or
- substances on the "candidates list" in accordance with 1907/2006/EC REACH are present ([http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp)).

Details of these substances are always to be given with quantity.

## 6 Modification history

24.03.2010

Point 3: 76/769 EWG removed

Point 4.2: Dimethyl fumarate limit details in mg/kg only

03.11.2010

Point 3                    2007/639/EG Add decision from the EU Commission

V appended to REACH

RL appended to RoHS

Point 4.1    PCB flame protection deleted

Point 4.2    PCB flame protection added

08.12.2011

Summary modified

Point 1                    Added reference regarding food law/drinking water ordinance

Point 3                    Other relevant documents

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1935/2004/EC Contact with foodstuffs deleted

10/2011/EC Plastic materials and articles intended to come into contact with food deleted

ElektroG and GefStoffV deleted

DIN EN ISO 1043-4 replaced by DIN EN ISO 11469

ZEK 01.4-08 PAH updated

Point 4 Modified

Point 4.1 4.1 old and 4.2 old summarised

Added reference regarding the unit of reference for fibres

Point 4.2 Added reference regarding the avoidance of candidate substances (REACH)

Added dibutyltin

PAH table update

Added DHNUP

Added DIHO

Point 5 Requirements modified

Declaration Modifications adapted