CHEMISCHE FABRIK KARL BUCHER

# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

# Isopropylmagnesium chloride (in THF)

Version number: 5.0
Replaces version of: 2019-06-28 (4)

Revision: 2020-03-05

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

| | |
|---|---|
| Trade name | **Isopropylmagnesium chloride (in THF)** |
| Registration number (REACH) | not relevant (mixture) |
| Alternative number(s) | B0087 |

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

| | |
|---|---|
| Relevant identified uses | Industrial uses<br>Intermediate |

### 1.3 Details of the supplier of the safety data sheet

Chemische Fabrik Karl Bucher GmbH
An der Günz 1
89367 Waldstetten
Germany

Telephone: +49 (0)8223 / 9691 - 0
Telefax: +49 (0)8223 / 9691 - 15
e-mail: sdb.bucher@cfkb.de
Website: www.cfkb.de

| | |
|---|---|
| e-mail (competent person) | sdb.bucher@cfkb.de |

### 1.4 Emergency telephone number

| | |
|---|---|
| Emergency information service | +49 (0)8223 / 9691 - 34<br>This number is only available during the following office hours: Mon-Fri 08:00 - 17:00 |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

| Section | Hazard class | Category | Hazard class and category | Hazard statement |
|---|---|---|---|---|
| 2.6 | flammable liquid | 2 | Flam. Liq. 2 | H225 |
| 2.12 | substance and mixture which, in contact with water, emits flammable gas | 1 | Water-react. 1 | H260 |
| 3.2 | skin corrosion/irritation | 1B | Skin Corr. 1B | H314 |
| 3.3 | serious eye damage/eye irritation | 1 | Eye Dam. 1 | H318 |
| 3.6 | carcinogenicity | 2 | Carc. 2 | H351 |
| 3.8R | specific target organ toxicity - single exposure (respiratory tract irritation) | 3 | STOT SE 3 | H335 |
| 3.8D | specific target organ toxicity - single exposure (narcotic effects, drowsiness) | 3 | STOT SE 3 | H336 |

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. The product is combustible and can be ignited by potential ignition sources. In contact with water releases flammable gases which may ignite spontaneously.

### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

- signal word danger

- pictograms

GHS02, GHS05, GHS07, GHS08

- hazard statements

| | |
|---|---|
| H225 | Highly flammable liquid and vapour. |
| H260 | In contact with water releases flammable gases which may ignite spontaneously. |
| H314 | Causes severe skin burns and eye damage. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H351 | Suspected of causing cancer. |

- precautionary statements

| | |
|---|---|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P231+P232 | Handle and store contents under inert gas. Protect from moisture. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P281 | Use personal protective equipment as required. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P335+P334 | Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. |
| P370+P378 | In case of fire: Use metal fire powder to extinguish - never use water. |
| P403+P235 | Store in a well-ventilated place. Keep cool. |

- supplemental hazard information

| | |
|---|---|
| EUH014 | Reacts violently with water. |
| EUH019 | May form explosive peroxides. |

- hazardous ingredients for labelling Tetrahydrofuran, chloro(1-methylethyl)magnesium

### 2.3 Other hazards

See section 12.5 "results of PBT and vPvB assessment".

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not relevant (mixture)

### 3.2 Mixtures

Description of the mixture

| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms |
|---|---|---|---|---|
| Tetrahydrofuran | CAS No<br>109-99-9<br><br>EC No<br>203-726-8<br><br>Index No<br>603-025-00-0<br><br>REACH Reg. No<br>01-2119444314-46-xxxx | 75 – < 90 | Flam. Liq. 2 / H225<br>Acute Tox. 4 / H302<br>Eye Irrit. 2 / H319<br>Carc. 2 / H351<br>STOT SE 3 / H335<br>STOT SE 3 / H336 |  |

| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms |
|---|---|---|---|---|
| chloro(1-methylethyl)magnesium | CAS No 1068-55-9<br><br>EC No 213-947-1<br><br>REACH Reg. No 01-2119919043-47-0002 | 10 – < 25 | Flam. Liq. 2 / H225<br>Water-react. 1 / H260<br>Skin Corr. 1B / H314<br>Eye Dam. 1 / H318 |  |

For full text of abbreviations: see SECTION 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

#### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

#### Following skin contact

Wash with plenty of soap and water.

#### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

### 4.2 Most important symptoms and effects, both acute and delayed

Narcotic effects.

### 4.3 Indication of any immediate medical attention and special treatment needed

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Extinguishing powder based on alkali metal chlorides or limestone

#### Unsuitable extinguishing media

Water, Carbon dioxide (CO2), Foam

### 5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Develops toxic and irritant vapours during strong heating or fire. Flame backstroke over longer distance possible. Water-reactive (in contact with water releases flammable gases) ->Danger of spontaneous combustion.

#### Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO2), Hydrogen chloride (HCl), Metal oxide smoke

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance. Remove undamaged containers from heat radiation. Precipitate combustion gases with water spray if possible. Reacts violently with water, liberating extremely flammable gases.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety. Do not get in eyes, on skin, or on clothing. Do not breathe gas/mist/vapours/spray.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Personal protective equipment. Eliminate all ignition sources if safe to do so. Provision of sufficient ventilation.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

### 6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Collect spillage: limestone powder, non-sparking tools and equipment

Other information relating to spills and releases

Do not allow contact with water. Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Recommendations

- measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Handle under inert gas. Protect from moisture.

- specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

### 7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight. Protect from moisture. Keep under inert gas. Protect from Contact with air/oxygen. Use only non-sparking tools.

- flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Protect from sunlight.

- incompatible substances or mixtures

Do not allow contact with water. Protect from moisture.

- evaporative conditions

Keep container tightly closed and in a well-ventilated place.

- ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

- specific designs for storage rooms or vessels

Keep under inert gas.

- packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

### 7.3 Specific end use(s)

This information is not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

| Country | Name of agent | CAS No | Identifier | TWA [ppm] | TWA [mg/m³] | STEL [ppm] | STEL [mg/m³] | Ceiling-C [ppm] | Ceiling-C [mg/m³] | Notation | Source |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EU | tetrahydrofuran | 109-99-9 | IOELV | 50 | 150 | 100 | 300 | | | | 2000/39/EC |

Notation

| | |
|---|---|
| Ceiling-C | ceiling value is a limit value above which exposure should not occur |
| STEL | short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified) |
| TWA | time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified) |

Relevant DNELs of components of the mixture

| Name of substance | CAS No | End-point | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
|---|---|---|---|---|---|---|
| Tetrahydrofuran | 109-99-9 | DNEL | 72.4 mg/m³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| Tetrahydrofuran | 109-99-9 | DNEL | 96 mg/m³ | human, inhalatory | worker (industry) | acute - systemic effects |
| Tetrahydrofuran | 109-99-9 | DNEL | 150 mg/m³ | human, inhalatory | worker (industry) | chronic - local effects |
| Tetrahydrofuran | 109-99-9 | DNEL | 300 mg/m³ | human, inhalatory | worker (industry) | acute - local effects |
| Tetrahydrofuran | 109-99-9 | DNEL | 12.6 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |

Relevant PNECs of components of the mixture

| Name of substance | CAS No | End-point | Threshold level | Organism | Environmental compartment | Exposure time | Notes |
|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | 109-99-9 | PNEC | 4.6 mg/l | microorganisms | sewage treatment plant (STP) | short-term (single instance) | |
| Tetrahydrofuran | 109-99-9 | PNEC | 23.3 mg/kg | benthic organisms | sediments | short-term (single instance) | |
| Tetrahydrofuran | 109-99-9 | PNEC | 2.33 mg/kg | pelagic organisms | sediments | short-term (single instance) | |
| Tetrahydrofuran | 109-99-9 | PNEC | 67 mg/kg | (top) predators | water | short-term (single instance) | |
| Tetrahydrofuran | 109-99-9 | PNEC | 21.6 mg/l | aquatic organisms | water | intermittent release | |
| Tetrahydrofuran | 109-99-9 | PNEC | 4.32 mg/l | aquatic organisms | freshwater | short-term (single instance) | |
| Tetrahydrofuran | 109-99-9 | PNEC | 0.432 mg/l | aquatic organisms | marine water | short-term (single instance) | |
| Tetrahydrofuran | 109-99-9 | PNEC | 4.6 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) | |
| Tetrahydrofuran | 109-99-9 | PNEC | 23.3 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) | dw |
| Tetrahydrofuran | 109-99-9 | PNEC | 2.33 mg/kg | aquatic organisms | marine sediment | short-term (single instance) | dw |
| Tetrahydrofuran | 109-99-9 | PNEC | 2.13 mg/kg | terrestrial organisms | soil | short-term (single instance) | dw |

## 8.2 Exposure controls

### Appropriate engineering controls

Local and general ventilation.

### Individual protection measures (personal protective equipment)

### Eye/face protection

Splash goggles.

### Skin protection

- hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves together with the supplier of these gloves.

- other protection measures

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. In the case of wanting to use the gloves again, clean them before taking off and air them well.
Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling. Protective clothing against liquid chemicals. Footwear protecting against chemicals.

### Respiratory protection

In case of inadequate ventilation wear respiratory protection. Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/White)
In case of long or intensive exposure: Wear self-contained breathing apparatus.

### Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Appearance**

| | |
|---|---|
| Physical state | liquid |
| Colour | brown |
| Odour | these information are not available |

**Other safety parameters**

| | |
|---|---|
| pH (value) | not determined |
| Melting point/freezing point | not determined |
| Initial boiling point and boiling range | 65 °C at 1,013 mbar (THF) |
| Flash point | -21.2 °C at 101.3 kPa (THF) |
| Evaporation rate | not determined |
| Flammability (solid, gas) | mixture which, in contact with water, emits flammable gases (in accordance with GHS criteria) |
| Explosive limits | not determined |
| Vapour pressure | 17 kPa at 20 °C (THF) |
| Density | 0.97 $^{g}/_{cm^3}$ at 20 °C |
| Vapour density | this information is not available |

Solubility(ies) not determined

| | |
|---|---|
| - water solubility | exothermic decomposition |

Partition coefficient

| | |
|---|---|
| - n-octanol/water (log KOW) | this information is not available |
| Auto-ignition temperature | not determined |
| Viscosity | not determined |
| Explosive properties | may form explosive peroxides |
| Oxidising properties | this information is not available |

### 9.2 Other information

There is no additional information.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition. Reactivity with water.

If heated:

Risk of ignition

### 10.2 Chemical stability

See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

Material reacts vigorously with water emitting flammable gases -> Propane.
May form explosive peroxides.

### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from moisture.

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

### 10.5 Incompatible materials

Water, other protic substances, Oxidisers

Release of flammable materials with:

Water, protic substances

### 10.6 Hazardous decomposition products

Propane. Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**Classification according to GHS (1272/2008/EC, CLP)**

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity of components of the mixture

| Name of substance | CAS No | Exposure route | Endpoint | Value | Species |
|---|---|---|---|---|---|
| Tetrahydrofuran | 109-99-9 | oral | LD50 | 1,650 $^{mg}/_{kg}$ | rat |
| Tetrahydrofuran | 109-99-9 | dermal | LD50 | >2,000 $^{mg}/_{kg}$ | rat |

Skin corrosion/irritation

Causes severe skin burns and eye damage.

### Serious eye damage/eye irritation

Causes serious eye damage.

### Respiratory or skin sensitisation

Data are not available.

### Germ cell mutagenicity

Data are not available.

### Carcinogenicity

Suspected of causing cancer.

### Reproductive toxicity

Data are not available.

### Specific target organ toxicity - single exposure

May cause respiratory irritation. May cause drowsiness or dizziness.

### Specific target organ toxicity - repeated exposure

Data are not available.

### Aspiration hazard

Data are not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

### 12.2 Persistence and degradability

Data are not available.

### 12.3 Bioaccumulative potential

Data are not available.

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

THF: According to the results of its assessment, this substance is not a PBT or a vPvB.
There is no additional information.

### 12.6 Other adverse effects

#### Endocrine disrupting potential

None of the ingredients are listed.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Waste treatment-relevant information

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

### Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

## SECTION 14: Transport information

| | | |
|---|---|---|
| **14.1** | **UN number** | 3399 |
| **14.2** | **UN proper shipping name** | ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE |
| | Technical name (Hazardous ingredients) | tetrahydrofuran, chloro(1-methylethyl)magnesium |
| **14.3** | **Transport hazard class(es)** | |
| | Class | 4.3 (substances which, in contact with water, emit flammable gases) |
| | Subsidiary risk(s) | 3 (flammable liquid) |
| **14.4** | **Packing group** | I (substance presenting high danger) |
| **14.5** | **Environmental hazards** | non-environmentally hazardous acc. to the dangerous goods regulations |

### 14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

### Information for each of the UN Model Regulations

**Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)**

| | |
|---|---|
| UN number | 3399 |
| Proper shipping name | ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE |
| Class | 4.3 |
| Classification code | WF1 |
| Packing group | I |
| Danger label(s) | 4.3+3 |

| | |
|---|---|
| Special provisions (SP) | 274 |
| Excepted quantities (EQ) | E0 |
| Limited quantities (LQ) | 0 |
| Transport category (TC) | 0 |
| Tunnel restriction code (TRC) | B/E |
| Hazard identification No | X323 |
| Emergency Action Code | 4W |

**International Maritime Dangerous Goods Code (IMDG)**

| | |
|---|---|
| UN number | 3399 |
| Proper shipping name | ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE |
| Class | 4.3 |
| Subsidiary risk(s) | 3 |
| Marine pollutant | - |
| Packing group | I |
| Danger label(s) | 4.3+3 |

| | |
|---|---|
| Special provisions (SP) | 274 |
| Excepted quantities (EQ) | E0 |
| Limited quantities (LQ) | 0 |
| EmS | F-G, S-N |
| Stowage category | D |
| Segregation group | 18 - Alkalis |

**International Civil Aviation Organization (ICAO-IATA/DGR)**

| | |
|---|---|
| UN number | 3399 |
| Proper shipping name | Organometallic substance, liquid, water-reactive, flammable |
| Class | 4.3 |
| Subsidiary risk(s) | 3 |
| Packing group | I |
| Danger label(s) | 4.3+3 |

| | |
|---|---|
| Special provisions (SP) | A3 |
| Excepted quantities (EQ) | E0 |
| ERG Code | 4FW |

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**Relevant provisions of the European Union (EU)**

**Restrictions according to REACH, Annex XVII**

Dangerous substances with restrictions (REACH, Annex XVII)

| Name of substance | Name acc. to inventory | CAS No | Type of registration | No |
|---|---|---|---|---|
| Isopropylmagnesium chloride (in THF) | this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC | | 1907/2006/EC annex XVII | 3 |
| Isopropylmagnesium chloride (in THF) | flammable / pyrophoric | | 1907/2006/EC annex XVII | 40 |

| Dangerous substances with restrictions (REACH, Annex XVII) | | | | |
|---|---|---|---|---|
| **Name of substance** | **Name acc. to inventory** | **CAS No** | **Type of registration** | **No** |
| chloro(1-methylethyl)magnesium | flammable / pyrophoric | | 1907/2006/EC annex XVII | 40 |
| Tetrahydrofuran | flammable / pyrophoric | | 1907/2006/EC annex XVII | 40 |

### List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

none of the ingredients are listed

### Seveso Directive

| 2012/18/EU (Seveso III) | | | | |
|---|---|---|---|---|
| **No** | **Dangerous substance/hazard categories** | **Qualifying quantity (tonnes) for the application of lower and upper-tier requirements** | | **Notes** |
| O1 | other hazards (EUH014) | 100 | 500 | 58) |
| O2 | other hazards (Water-react., cat. 1) | 100 | 500 | 59) |

Notation
58) substances or mixtures with hazard statement EUH014
59) substances and mixtures which in contact with water emit flammable gases, category 1

### Deco-Paint Directive (2004/42/EC)

| | |
|---|---|
| VOC content | 100 % |

### Directive on industrial emissions (VOCs, 2010/75/EU)

| | |
|---|---|
| VOC content | 100 % |

### Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

none of the ingredients are listed

### Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

### Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

none of the ingredients are listed

### National inventories

| Country | Inventory | Status |
|---|---|---|
| EU | REACH Reg. | all ingredients are listed |

Legend
REACH Reg. REACH registered substances

## 15.2 Chemical Safety Assessment

This information is not available.

# Isopropylmagnesium chloride (in THF)

Version number: 5.0
Replaces version of: 2019-06-28 (4)

Revision: 2020-03-05

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---|---|---|---|
| 2.1 | | Classification according to Regulation (EC) No 1272/2008 (CLP):<br>change in the listing (table) | yes |
| 2.2 | | - hazard statements:<br>change in the listing (table) | yes |
| 2.2 | - additional statements:<br>80 % of the mixture consists of ingredient(s) of unknown toxicity. | | yes |
| 2.2 | | - precautionary statements:<br>change in the listing (table) | yes |
| 3.2 | | Description of the mixture:<br>change in the listing (table) | yes |
| 4.2 | Most important symptoms and effects, both acute and delayed:<br>Symptoms and effects are not known to date. | Most important symptoms and effects, both acute and delayed:<br>Narcotic effects. | yes |
| 9.1 | Flash point:<br>-27 °C at 1,013 mbar | Flash point:<br>-21.2 °C at 101.3 kPa (THF) | yes |
| 9.1 | Density:<br>0.97 $^{g}/_{cm^3}$ at 20 °C (ECHA) | Density:<br>0.97 $^{g}/_{cm^3}$ at 20 °C | yes |
| 9.1 | Auto-ignition temperature:<br>240 °C at 1,004 mbar | Auto-ignition temperature:<br>not determined | yes |
| 11.1 | Acute toxicity:<br>Harmful if swallowed. | Acute toxicity:<br>Shall not be classified as acutely toxic. | yes |
| 11.1 | | - acute toxicity estimate (ATE):<br>change in the listing (table) | yes |
| 11.1 | | Acute toxicity estimate (ATE) of components of the mixture:<br>change in the listing (table) | yes |
| 11.1 | | Acute toxicity of components of the mixture:<br>change in the listing (table) | yes |
| 11.1 | Specific target organ toxicity - single exposure:<br>May cause respiratory irritation. | Specific target organ toxicity - single exposure:<br>May cause respiratory irritation. May cause drowsiness or dizziness. | yes |
| 14.7 | | Segregation group:<br>18 - Alkalis | yes |
| 15.1 | | Dangerous substances with restrictions (REACH, Annex XVII):<br>change in the listing (table) | yes |
| 15.1 | | National inventories | yes |
| 15.1 | | National inventories:<br>change in the listing (table) | yes |
| 16 | | Abbreviations and acronyms:<br>change in the listing (table) | yes |
| 16 | | List of relevant phrases (code and full text as stated in chapter 2 and 3):<br>change in the listing (table) | yes |

## Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|---|---|
| 2000/39/EC | Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC |
| Acute Tox. | Acute toxicity |
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR | Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road) |
| Carc. | Carcinogenicity |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| Ceiling-C | Ceiling value |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DNEL | Derived No-Effect Level |
| EC No | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| ERG Code | Emergency Response Guidance - Code |
| Eye Dam. | Seriously damaging to the eye |
| Eye Irrit. | Irritant to the eye |
| Flam. Liq. | Flammable liquid |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods Code |
| index No | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 |
| IOELV | Indicative occupational exposure limit value |
| LD50 | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval |
| MARPOL | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant") |
| NLP | No-Longer Polymer |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |
| ppm | Parts per million |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |

| Abbr. | Descriptions of used abbreviations |
|---|---|
| Skin Corr. | Corrosive to skin |
| Skin Irrit. | Irritant to skin |
| STEL | Short-term exposure limit |
| STOT SE | Specific target organ toxicity - single exposure |
| SVHC | Substance of Very High Concern |
| TWA | Time-weighted average |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and very Bioaccumulative |
| Water-react. | Material which, in contact with water, emits flammable gases |

## Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

## Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

## List of relevant phrases (code and full text as stated in chapter 2 and 3)

| Code | Text |
|---|---|
| H225 | Highly flammable liquid and vapour. |
| H260 | In contact with water releases flammable gases which may ignite spontaneously. |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H351 | Suspected of causing cancer. |

## Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.