Said data sheet according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

LUX ELEMENTS(R)-TUB-(LINE) FINISH

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

Relevant identified uses of the substance or mixture:

This is an article.

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

LUX ELEMENTS GmbH & Co. KG, An der Schusterinsel 7, 51379 Leverkusen, Germany

Phone:+49 (0)2171/72 12-0, Fax:+49 (0)2171/72 12-40

info@luxelements.de, www.luxelements.de

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

---

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (LEC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

This is an article.

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)

Not applicable

This is an article.

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0.1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0.1 %).

May form explosible dust-air mixture if dispersed.

SECTION 3: Composition/information on ingredients
3.1 Substance
n.a.

3.2 Mixture

<table>
<thead>
<tr>
<th>Substance</th>
<th>Substance for which an EU exposure limit value applies.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate</td>
<td></td>
</tr>
<tr>
<td>Registration number (REACH)</td>
<td>---</td>
</tr>
<tr>
<td>Index</td>
<td>607-035-00-6</td>
</tr>
<tr>
<td>EINECS, ELINCS, NLP</td>
<td>201-297-1</td>
</tr>
<tr>
<td>CAS</td>
<td>80-62-6</td>
</tr>
<tr>
<td>content %</td>
<td>&lt;100</td>
</tr>
<tr>
<td>Classification according to Regulation (EC) 1272/2008 (CLP)</td>
<td>Flam. Liq. 2, H225</td>
</tr>
<tr>
<td></td>
<td>STOT SE 3, H335</td>
</tr>
<tr>
<td></td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td>Skin Sens. 1, H317</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Substance for which an EU exposure limit value applies.</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-butyl acrylate</td>
<td></td>
</tr>
<tr>
<td>Registration number (REACH)</td>
<td>---</td>
</tr>
<tr>
<td>Index</td>
<td>607-062-00-3</td>
</tr>
<tr>
<td>EINECS, ELINCS, NLP</td>
<td>205-480-7</td>
</tr>
<tr>
<td>CAS</td>
<td>141-32-2</td>
</tr>
<tr>
<td>content %</td>
<td>&lt;100</td>
</tr>
<tr>
<td>Classification according to Regulation (EC) 1272/2008 (CLP)</td>
<td>Flam. Liq. 3, H226</td>
</tr>
<tr>
<td></td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td>Skin Sens. 1, H317</td>
</tr>
<tr>
<td></td>
<td>Eye Irrit. 2, H319</td>
</tr>
<tr>
<td></td>
<td>Acute Tox. 4, H332</td>
</tr>
<tr>
<td></td>
<td>STOT SE 3, H335</td>
</tr>
<tr>
<td></td>
<td>Aquatic Chronic 3, H412</td>
</tr>
</tbody>
</table>

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.
The substances named in this section are given with their actual, appropriate classification!
For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all
notes that may be given here for the named classification have been taken into account.

SECTION 4: First aid measures

4.1 Description of first aid measures
First-aiders should ensure they are protected!
Never pour anything into the mouth of an unconscious person!

Inhalation
On dust formation:
Remove person from danger area.
Supply person with fresh air and consult doctor according to symptoms.

Skin contact
Not required.

Eye contact
Irritating to eyes.
Immediately rinse the eyes with plenty of water for at least ten minutes, holding the eyelids properly open.
If applicable, consult doctor if necessary.

Ingestion
Typically no exposure pathway.

4.2 Most important symptoms and effects, both acute and delayed
If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

4.3 Indication of any immediate medical attention and special treatment needed
SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Water jet spray/foam/CO2/dry extinguisher

Unsuitable extinguishing media
None

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:
- Metal oxides
- Oxides of carbon
- Iron oxides
- Aluminium oxide
- Note danger of explosive-dust
- Monomer vapours
- Aldehydes

5.3 Advice for firefighters

Protective respirator with independent air supply.
Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

No special measures required.
Avoid breathing dust.

6.2 Environmental precautions

Normally not necessary.

6.3 Methods and material for containment and cleaning up

Pick up mechanically and dispose of according to Section 13.
Avoid build up of dust.
Note danger of explosive-dust
Use non-sparking tools and explosion-proof equipment.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Do not breathe dust.
On dust formation:
Earth devices.
Take precautions against electrostatic charges.
Use non-sparking tools and explosion-proof equipment.
Suction measures at the workplace or on the processing machines required.

7.1.2 Notes on general hygiene measures at the workplace
General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
7.2 Conditions for safe storage, including any incompatibilities

No special measures required.
Store product closed and only in original packing.
Not to be stored in gangways or stair wells.

7.3 Specific end use(s)
No information available at present.

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Materials are integrated into the product and should not lead to any exposure under normal handling conditions.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Methyl methacrylate</th>
<th>n-butyl acrylate</th>
<th>Titanium dioxide</th>
<th>general dust limit</th>
<th>Iron(III)oxide</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL-TWA</td>
<td>50 ppm (208 mg/m³) (WEL), 50 ppm (EU)</td>
<td>1 ppm (5 mg/m³) (WEL), 2 ppm (11 mg/m³) (EU)</td>
<td>10 mg/m³ (total inhalable dust), 4 mg/m³ (respirable dust)</td>
<td>10 mg/m³ (inhal. dust), 4 mg/m³ (resp. dust)</td>
<td>5 mg/m³ (fume, as Fe) / Rouge: 4 mg/m³ (total inh. dust)</td>
</tr>
<tr>
<td>WEL-STE L</td>
<td>100 ppm (416 mg/m³) (WEL), 100 ppm (EU)</td>
<td>5 ppm (26 mg/m³) (WEL), 10 ppm (53 mg/m³) (EU)</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Monitoring procedures:</td>
<td>Compur - KITA-184 S (548 618)</td>
<td>Compur - KITA-211 U (548 865)</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>NIOSH 2537 (Methyl and ethyl metacrylate) - 2003 - EU project</td>
<td>MTA/MA-054/A04 (Determination of acrylates (ethyl acrylate, n-butyl acrylate) in air. Synthetic carbon tube method / Gas chromatography) - 2004 - EU project</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>---</td>
</tr>
<tr>
<td>BMGV:</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

#### Environmental compartment

<table>
<thead>
<tr>
<th>Area of application</th>
<th>Exposure route</th>
<th>Effect on health</th>
<th>Descriptor</th>
<th>Value</th>
<th>Unit</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment - freshwater</td>
<td>PNEC</td>
<td>0.94</td>
<td>mg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment - marine</td>
<td>PNEC</td>
<td>0.094</td>
<td>mg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment - sediment</td>
<td>PNEC</td>
<td>5.74</td>
<td>mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Industrial / commercial | Human - dermal | Long term, local effects | DNEL | 1.5 | mg/kg |
--- | --- | --- | --- | --- | --- |
Industrial / commercial | Human - inhalation | Long term, local effects | DNEL | 210 | mg/m³ |
Industrial / commercial | Human - inhalation | Long term, systemic effects | DNEL | 210 | mg/m³ |
Industrial / commercial | Human - dermal | Long term, systemic effects | DNEL | 13.67 | mg/kg |

### Titanium dioxide

<table>
<thead>
<tr>
<th>Area of application</th>
<th>Exposure route / Environmental compartment</th>
<th>Effect on health</th>
<th>Descriptor</th>
<th>Value</th>
<th>Unit</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment - freshwater</td>
<td></td>
<td></td>
<td>PNEC</td>
<td>0.184</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>Environment - marine</td>
<td></td>
<td></td>
<td>PNEC</td>
<td>0.0184</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>Environment - water, sporadic (intermittent) release</td>
<td></td>
<td></td>
<td>PNEC</td>
<td>0.193</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>Environment - sewage treatment plant</td>
<td></td>
<td></td>
<td>PNEC</td>
<td>100</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>Environment - sediment, freshwater</td>
<td></td>
<td></td>
<td>PNEC</td>
<td>1000</td>
<td>mg/kg dw</td>
<td></td>
</tr>
<tr>
<td>Environment - sediment, marine</td>
<td></td>
<td></td>
<td>PNEC</td>
<td>100</td>
<td>mg/kg dw</td>
<td></td>
</tr>
<tr>
<td>Environment - soil</td>
<td></td>
<td></td>
<td>PNEC</td>
<td>100</td>
<td>mg/kg dw</td>
<td></td>
</tr>
<tr>
<td>Environment - oral (animal feed)</td>
<td></td>
<td></td>
<td>PNEC</td>
<td>1667</td>
<td>mg/kg feed</td>
<td></td>
</tr>
<tr>
<td>Consumer</td>
<td>Human - oral</td>
<td>Long term, systemic effects</td>
<td>DNEL</td>
<td>700</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>Workers / employees</td>
<td>Human - inhalation</td>
<td>Long term, local effects</td>
<td>DNEL</td>
<td>10</td>
<td>mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

### Iron(III)oxide

<table>
<thead>
<tr>
<th>Area of application</th>
<th>Exposure route / Environmental compartment</th>
<th>Effect on health</th>
<th>Descriptor</th>
<th>Value</th>
<th>Unit</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers / employees</td>
<td>Human - inhalation</td>
<td>Long term, local effects</td>
<td>DNEL</td>
<td>10</td>
<td>mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

---

** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

### 8.2 Exposure controls

#### 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction. If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn. Applies only if maximum permissible exposure values are listed here.
Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques. These are specified by e.g. BS EN 14042.
BS EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents”.

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:
Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:
--
The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.
The recommended maximum wearing time is 50% of breakthrough time.

Skin protection - Other:
Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:
Normally not necessary.
If the general dust-limit is exceeded, breathing masks with fine-dust filters are necessary (EN 143), code colour white.

Thermal hazards:
If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).

Additional information on hand protection - No tests have been performed.
In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.
Selection of materials derived from glove manufacturer’s indications.
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.
The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls
No information available at present.

SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour:</td>
<td>According to specification</td>
</tr>
<tr>
<td>Odour:</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold:</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH-value:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Melting point/freezing point:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash point:</td>
<td>n.a.</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>Not determined</td>
</tr>
<tr>
<td>Lower explosive limit:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Upper explosive limit:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour pressure:</td>
<td>Not determined</td>
</tr>
</tbody>
</table>
SECTION 10: Stability and reactivity

10.1 Reactivity
The product has not been tested.

10.2 Chemical stability
Stable with proper storage and handling.

10.3 Possibility of hazardous reactions
No decomposition if used as intended.

10.4 Conditions to avoid
Stable with proper storage and handling.

10.5 Incompatible materials
Avoid contact with other chemicals.

10.6 Hazardous decomposition products
No decomposition when used as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Possibly more information on health effects, see Section 2.1 (classification).

This is an article.

<table>
<thead>
<tr>
<th>LUX ELEMENTS(R)-TUB-(LINE) FINISH</th>
<th>Toxicity / effect</th>
<th>Endpoint</th>
<th>Value</th>
<th>Unit</th>
<th>Organism</th>
<th>Test method</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity, by oral route:</td>
<td>ATE</td>
<td>&gt;2000</td>
<td>mg/kg</td>
<td></td>
<td></td>
<td>calculated</td>
<td>valueestimated</td>
</tr>
<tr>
<td>Acute toxicity, by dermal route:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n.d.a.</td>
<td></td>
</tr>
<tr>
<td>Acute toxicity, by inhalation:</td>
<td>ATE</td>
<td>&gt;5</td>
<td>mg/l/4h</td>
<td></td>
<td></td>
<td>calculated</td>
<td>value, Vapoursestimated</td>
</tr>
<tr>
<td>Skin corrosion/irritation:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n.d.a.</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/irritation:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n.d.a.</td>
<td></td>
</tr>
<tr>
<td>Respiratory or skin sensitisation:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n.d.a.</td>
<td></td>
</tr>
<tr>
<td>Germ cell mutagenicity:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n.d.a.</td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n.d.a.</td>
<td></td>
</tr>
</tbody>
</table>
Reproductive toxicity: n.d.a.


Aspiration hazard: n.d.a.

Symptoms: n.d.a.

### Methyl methacrylate

<table>
<thead>
<tr>
<th>Toxicity / effect</th>
<th>Endpoint</th>
<th>Value</th>
<th>Unit</th>
<th>Organism</th>
<th>Test method</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity, by dermal route:</td>
<td>LD50</td>
<td>&gt;5000</td>
<td>mg/kg</td>
<td>Rabbit</td>
<td>OECD 402 (Acute Dermal Toxicity)</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/irritation:</td>
<td></td>
<td></td>
<td></td>
<td>Rabbit</td>
<td></td>
<td>Mild irritant</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation:</td>
<td></td>
<td></td>
<td></td>
<td>Human being</td>
<td>Sensitising (skin contact)</td>
<td></td>
</tr>
<tr>
<td>Germ cell mutagenicity:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OECD 471 (Bacterial Reverse Mutation Test)</td>
<td>Negative</td>
</tr>
<tr>
<td>Carcinogenicity:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reproductive toxicity:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity - repeated exposure (STOT-RE):</td>
<td>NOAEL</td>
<td>2000</td>
<td>ppm</td>
<td>Rat</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Aspiration hazard: No indications of such an effect.

Symptoms: breathing difficulties, respiratory distress, drowsiness, drop in blood pressure, coughing, headaches, fatigue, mucous membrane irritation, watering eyes, mental confusion

<table>
<thead>
<tr>
<th>Toxicity / effect</th>
<th>Endpoint</th>
<th>Value</th>
<th>Unit</th>
<th>Organism</th>
<th>Test method</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity, by oral route:</td>
<td>LD50</td>
<td>&gt;5000</td>
<td>mg/kg</td>
<td>Rat</td>
<td>OECD 425 (Acute Oral Toxicity - Up-and-Down Procedure)</td>
<td></td>
</tr>
<tr>
<td>Acute toxicity, by dermal route:</td>
<td>LD50</td>
<td>&gt;5000</td>
<td>mg/kg</td>
<td>Rabbit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute toxicity, by inhalation:</td>
<td>LD50</td>
<td>&gt;6,8</td>
<td>mg/l/4h</td>
<td>Rat</td>
<td>OECD 404 (Acute Dermal Irritation/Corrosion)</td>
<td>Not irritant</td>
</tr>
</tbody>
</table>

### Titanium dioxide

<table>
<thead>
<tr>
<th>Toxicity / effect</th>
<th>Endpoint</th>
<th>Value</th>
<th>Unit</th>
<th>Organism</th>
<th>Test method</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity, by oral route:</td>
<td>LD50</td>
<td>&gt;5000</td>
<td>mg/kg</td>
<td>Rat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute toxicity, by dermal route:</td>
<td>LD50</td>
<td>&gt;5000</td>
<td>mg/kg</td>
<td>Rabbit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin corrosion/irritation:</td>
<td>LD50</td>
<td>&gt;6,8</td>
<td>mg/l/4h</td>
<td>Rat</td>
<td>OECD 404 (Acute Dermal Irritation/Corrosion)</td>
<td>Not irritant</td>
</tr>
</tbody>
</table>
**Safety data sheet according to Regulation (EC) No 1907/2006, Annex II**

**Revision date / version:** 24.05.2019  / 0001  
**Replacing version dated / version:** 24.05.2019  / 0001  
**Valid from:** 24.05.2019  
**PDF print date:** 27.05.2019  

### Serious eye damage/irritation:
- **Rabbit**
  - OECD 405 (Acute Eye Irritation/Corrosion)
  - Not irritant, Mechanical irritation possible.

### Respiratory or skin sensitisation:
- **Mouse**
  - OECD 429 (Skin Sensitisation - Local Lymph Node Assay)
  - Not sensitising

- **Guinea pig**
  - OECD 406 (Skin Sensitisation)
  - Not sensitising

### Germ cell mutagenicity:
- **Salmonella typhimurium**
  - OECD 473 (In Vitro Mammalian Chromosome Aberration Test)
  - Negative

- **OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)**
  - Negative

- **OECD 471 (Bacterial Reverse Mutation Test)**
  - Negative

### Reproductive toxicity (Developmental toxicity):
- **Rat**
  - OECD 414 (Prenatal Developmental Toxicity Study)
  - No indications of such an effect.

### Specific target organ toxicity - single exposure (STOT-SE):
- **Rat**
  - NOAEL 3500 mg/kg/d
  - NOAEC 10 mg/m3

### Symptoms:
- Coughing, Irritant to mucosa of the nose and throat

### Iron(III)oxide

<table>
<thead>
<tr>
<th>Toxicity / effect</th>
<th>Endpoint</th>
<th>Value</th>
<th>Unit</th>
<th>Organism</th>
<th>Test method</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity, by oral route:</td>
<td>LD50</td>
<td>&gt;5000</td>
<td>mg/kg</td>
<td>Rat</td>
<td>Analogous conclusion</td>
<td></td>
</tr>
<tr>
<td>Acute toxicity, by inhalation:</td>
<td>LC50</td>
<td>&gt;210</td>
<td>mg/m3</td>
<td>Rat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin corrosion/irritation:</td>
<td></td>
<td></td>
<td></td>
<td>Rabbit</td>
<td>Not irritant, Analogous conclusion, Mechanical irritation possible.</td>
<td></td>
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<td>Serious eye damage/irritation:</td>
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<td>Rabbit</td>
<td>Not irritant, Analogous conclusion, Mechanical irritation possible.</td>
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</table>
### Symptoms:
- Respiratory distress, coughing, mucous membrane irritation

### SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

**LUX ELEMENTS(R)-TUB-(LINE) FINISH**

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<tr>
<th>Toxicity / effect</th>
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<tbody>
<tr>
<td>12.1. Toxicity to fish:</td>
<td>LC50</td>
<td>96h</td>
<td>130</td>
<td>mg/l</td>
<td>Pimephales promelas</td>
<td>OECD 203 (Fish, Acute Toxicity Test)</td>
<td></td>
</tr>
<tr>
<td>12.1. Toxicity to algae:</td>
<td>EC50</td>
<td>72h</td>
<td>&gt;110</td>
<td>mg/l</td>
<td>Pseudokirchneriella subcapitata</td>
<td>OECD 201 (Alga, Growth Inhibition Test)</td>
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</tr>
<tr>
<td>12.1. Toxicity to algae:</td>
<td>EC50</td>
<td>96h</td>
<td>37</td>
<td>mg/l</td>
<td>Selenastrum capricornutum</td>
<td>OECD 201 (Alga, Growth Inhibition Test)</td>
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<tr>
<td>12.1. Toxicity to algae:</td>
<td></td>
<td>7d</td>
<td>37</td>
<td>mg/l</td>
<td>Scenedesmus quadricauda</td>
<td></td>
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<tr>
<td>12.2. Persistence and degradability:</td>
<td></td>
<td>28d</td>
<td>&gt;95</td>
<td>%</td>
<td></td>
<td>OECD 302 B (Inherent Biodegradability - Zahn-Wellens/EMPA Test)</td>
<td>Readily biodegradable</td>
</tr>
<tr>
<td>12.3. Bioaccumulative potential:</td>
<td>Log Pow</td>
<td>1,32-1,38</td>
<td></td>
<td></td>
<td>OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)</td>
<td>A notable biological accumulation potential is not to be expected (LogPow 1-3).</td>
<td></td>
</tr>
<tr>
<td>12.5. Results of PBT and vPvB assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No PBT substance, No vPvB substance</td>
<td></td>
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**Methyl methacrylate**

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**Titanium dioxide**

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- n.d.a.: not determined, available

- Readily biodegradable

- A notable biological accumulation potential is not to be expected (LogPow 1-3).
12.1. Toxicity to fish: LC50 96h >100 mg/l Oncorhynchus mykiss OECD 203 (Fish, Acute Toxicity Test)

12.1. Toxicity to daphnia: LC50 48h >100 mg/l Daphnia magna OECD 202 (Daphnia sp. Acute Immobilisation Test)

12.1. Toxicity to algae: EC50 72h 16 mg/l Pseudokirchneriella subcapitata U.S. EPA-600/9-78-018

12.3. Bioaccumulative potential: BCF 14d 19-352 Oncorhynchus mykiss

12.3. Bioaccumulative potential: BCF 42d 9.6 No

12.5. Results of PBT and vPvB assessment No PBT substance, No vPvB substance

12.5. Results of PBT and vPvB assessment Toxicity to bacteria: >5000 mg/l Escherichia coli

Toxicity to bacteria: LC0 24h >10000 mg/l Pseudomonas fluorescens

Toxicity to annelids: NOEC/NOEL >1000 mg/kg Eisenia foetida

Water solubility: Insoluble 20°C

Iron(III)oxide

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<td>12.1. Toxicity to fish:</td>
<td>LC50</td>
<td>96h</td>
<td>&gt;1000</td>
<td>mg/l</td>
<td>Leuciscus idus</td>
<td>OECD 202 (Daphnia sp. Acute Immobilisation Test)</td>
<td>No PBT substance, No vPvB substance</td>
</tr>
<tr>
<td>12.1. Toxicity to daphnia:</td>
<td>EC50</td>
<td>48h</td>
<td>&gt;100</td>
<td>mg/l</td>
<td>Daphnia magna</td>
<td>ISO 8192</td>
<td>Analogous conclusion</td>
</tr>
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SECTION 13: Disposal considerations

13.1 Waste treatment methods
For the substance / mixture / residual amounts
EC disposal code no.: The waste codes are recommendations based on the scheduled use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

17 06 04 insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 09 04 mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03

Recommendation: Sewage disposal shall be discouraged. Pay attention to local and national official regulations. E.g. dispose at suitable refuse site. E.g. suitable incineration plant.

For contaminated packing material
Pay attention to local and national official regulations. Recommendation:
SECTION 14: Transport information

General statements
14.1. UN number: n.a.

Transport by road/by rail (ADR/RID)
14.2. UN proper shipping name:
14.3. Transport hazard class(es): n.a.
14.4. Packing group: n.a.
Classification code: n.a.
LQ: n.a.
14.5. Environmental hazards: Not applicable
Tunnel restriction code:

Transport by sea (IMDG-code)
14.2. UN proper shipping name:
14.3. Transport hazard class(es): n.a.
14.4. Packing group: n.a.
Marine Pollutant: n.a.
14.5. Environmental hazards: Not applicable

Transport by air (IATA)
14.2. UN proper shipping name:
14.3. Transport hazard class(es): n.a.
14.4. Packing group: n.a.
14.5. Environmental hazards: Not applicable

14.6. Special precautions for user
Unless specified otherwise, general measures for safe transport must be followed.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
Non-dangerous material according to Transport Regulations.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Observe restrictions:
Comply with national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)! General hygiene measures for the handling of chemicals are applicable.


15.2 Chemical safety assessment
A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):
Not applicable

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
LUX ELEMENTS®-TUB-(LINE) FINISH

H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Flam. LIq. — Flammable liquid
STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation
Skin Irrit. — Skin irritation
Skin Sens. — Skin sensitization
Eye Irrit. — Eye irritation
Acute Tox. — Acute toxicity - inhalation
Aquatic Chronic — Hazardous to the aquatic environment - chronic

Any abbreviations and acronyms used in this document:

AC Article Categories
acc., acc. to according, according to
ACGIHAmerican Conference of Governmental Industrial Hygienists
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOEL Acceptable Operator Exposure Level
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
BCF Bioconcentration factor
BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)
BMGV Biological monitoring guidance value (EH40, UK)
BOD Biochemical oxygen demand
BSEF Bromine Science and Environmental Forum
bw body weight
CAS Chemical Abstracts Service
CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids
CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques
CIPAC Collaborative International Pesticides Analytical Council
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR carcinogenic, mutagenic, reproductive toxic
COD Chemical oxygen demand
CTFA Cosmetic, Toiletry, and Fragrance Association
DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
DOC Dissolved organic carbon
DT50 Dwell Time - 50% reduction of start concentration
DVS Deutscher Verband für Schweissen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)
dw dry weight
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EC European Community
ECHA European Chemicals Agency
EEA European Economic Area
EEC European Economic Community
EINECS European Inventory of Existing Commercial Chemical Substances
ELINCS European List of Notified Chemical Substances
RID Régllement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SADT Self-Accelerating Decomposition Temperature
SAR Structure Activity Relationship
SU Sector of use
SVHC Substances of Very High Concern
Tel. Telephone
ThOD Theoretical oxygen demand
TOC Total organic carbon
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative
WHO World Health Organization
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.

These statements were made by:
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