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

1.1 Product identifier

WLK (Binder)

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

1.2.1 Relevant uses

Resin

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company
Fischer Elektronik GmbH & Co. KG
Nottebohmstr. 28
58511 Lüdenscheid / GERMANY
Phone +49 2351 4 35-0
Fax +49 2351 4 57 54
Homepage www.fischerelektronik.de
E-mail info@fischerelektronik.de

Address enquiries to
Technical information info@fischerelektronik.de
Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0) 228-19240 (24h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Skin Irrit. 2: H315 Causes skin irritation.
Eye Irrit. 2: H319 Causes serious eye irritation.
Skin Sens. 1: H317 May cause an allergic skin reaction.
Carc. 2: H351 Suspected of causing cancer.
Muta. 2: H341 Suspected of causing genetic defects.
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects.
2.2 Label elements

The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

Hazard pictograms

![Warning symbol]

Signal word
WARNING

Contains:
Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700)
Butyl 2,3-epoxypropyl ether

Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H341 Suspected of causing genetic defects.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements
P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P308+P311 IF exposed or concerned: Call a POISON CENTER / doctor.
P363 Wash contaminated clothing before reuse.
P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

Special labelling
EUH205 Contains epoxy constituents. May produce an allergic reaction.

2.3 Other hazards

Environmental hazards
Does not contain any PBT or vPvB substances.

Other hazards
Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

Product-type:
The product is a mixture.

<table>
<thead>
<tr>
<th>Range [%]</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 - 50</td>
<td>Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700)</td>
</tr>
<tr>
<td></td>
<td>CAS: 25068-38-6, EINECS/ELINCS: 500-033-5, EU-INDEX: 603-074-00-8</td>
</tr>
<tr>
<td></td>
<td>GHS/CLP: Eye Irrit. 2: H319 - Skin Irrit. 2: H317 - Skin Sens. 1: H317 - Aquatic Chronic 2: H411</td>
</tr>
<tr>
<td>1 - 10</td>
<td>Butyl 2,3-epoxypropyl ether</td>
</tr>
<tr>
<td></td>
<td>CAS: 2426-08-6, EINECS/ELINCS: 219-376-4, EU-INDEX: 603-039-00-7</td>
</tr>
</tbody>
</table>

Comment on component parts
Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.
**SECTION 4: First aid measures**

4.1 **Description of first aid measures**

**General information**
Take off contaminated clothing and wash before reuse.

**Inhalation**
Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

**Skin contact**
In case of contact with skin wash off immediately with soap and water.
Consult a doctor if skin irritation persists.

**Eye contact**
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

**Ingestion**
Consult a doctor immediately.
Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.

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

Allergic reactions
Irritant effects

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

Treat symptomatically.

**SECTION 5: Fire-fighting measures**

5.1 **Extinguishing media**

**Suitable extinguishing media**
- Foam.
- Dry powder.
- Water spray jet.
- Carbon dioxide.

**Extinguishing media that must not be used**
- Full water jet.

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

In the event of fire the following can be released:
- Carbon monoxide (CO)
- Chlorine compounds.

5.3 **Advice for firefighters**

Use self-contained breathing apparatus.
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.
Cool containers at risk with water spray jet.

**SECTION 6: Accidental release measures**

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

Keep away from all sources of ignition.
High risk of slipping due to leakage/spillage of product.
Ensure adequate ventilation.
Use personal protective equipment (protective gloves, safety glasses, protective clothing).

6.2 **Environmental precautions**

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.
6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, sawdust, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Provide suitable vacuuming at the processing machines.

Contaminated work clothing should not be allowed out of the workplace.
Do not eat, drink, smoke or take drugs at work.
After worktime and before work breaks the affected skin areas must be thoroughly cleaned.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.
Do not store together with oxidizing agents.
Do not store together with food and animal food/diet.
Keep container tightly closed.
Keep container in a well-ventilated place.
Protect from heat/overheating.
Keep in a cool place. Store in a dry place.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS:</th>
<th>Long-term exposure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talc (Mg3H2(SiO3)4)</td>
<td>14807-96-6, EINECS/ELINCS: 238-877-9</td>
<td>1 mg/m³, respirable dust</td>
</tr>
<tr>
<td>Aluminium oxide</td>
<td>1344-28-1, EINECS/ELINCS: 215-691-6</td>
<td>10 mg/m³, inhalable dust (respirable dust: 4 mg/m³)</td>
</tr>
</tbody>
</table>
8.2 Exposure controls

Additional advice on system design

Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA’s list of hazardous substances.

Eye protection
Safety glasses. (EN 166:2001)

Hand protection
0,7 mm Nitrile rubber, >480 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.

Skin protection
Protective clothing.

Other
Avoid contact with eyes and skin. Do not inhale vapours. It is essential for pregnant women to avoid inhaling the product and not to let it come in contact with the skin. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.

Respiratory protection
Breathing apparatus in the event of high concentrations. Short term: combination filter A-P3. (DIN EN 14387)

Respiratory protection
Breathing apparatus in the event of high concentrations. Short term: combination filter A-P3. (DIN EN 14387)

Thermal hazards
No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form
liquid

Color
blue

Odor
characteristic

Odour threshold
not determined

pH-value
not applicable

pH-value [%]
not applicable

Boiling point [°C]
not determined

Flash point [°C]
> 100

Flammability (solid, gas) [°C]
not determined

Lower explosion limit
not applicable

Upper explosion limit
not applicable

Oxidising properties
no

Vapour pressure/gas pressure [kPa]
not determined

Density [g/ml]
2,0 - 2,2

Bulk density [kg/m³]
not applicable

Solubility in water
immiscible

Partition coefficient [n-octanol/water]
not determined

Viscosity
not applicable

Relative vapour density determined in air
not determined

Evaporation speed
not determined

Melting point [°C]
not determined

Autoignition temperature [°C]
not determined

Decomposition temperature [°C]
not determined

9.2 Other information

none
SECTION 10: Stability and reactivity

10.1 Reactivity
Reactions with oxidizing agents.

10.2 Chemical stability
The product is stable under standard conditions.

10.3 Possibility of hazardous reactions
No hazardous reactions known.

10.4 Conditions to avoid
Strong heating.
See SECTION 7

10.5 Incompatible materials
Strong oxidizing agent.
strong acids
Alkalis

10.6 Hazardous decomposition products
No hazardous decomposition products known.
11.1 Information on toxicological effects

**Acute toxicity**

<table>
<thead>
<tr>
<th>Product</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>dermal,</td>
<td>Based on the available</td>
<td>classification criteria</td>
</tr>
<tr>
<td></td>
<td>information, the</td>
<td>are not fulfilled.</td>
</tr>
<tr>
<td></td>
<td>classification criteria</td>
<td></td>
</tr>
<tr>
<td></td>
<td>are not fulfilled.</td>
<td></td>
</tr>
<tr>
<td>ATE-mix,</td>
<td>&gt; 20 mg/l (4 h).</td>
<td></td>
</tr>
<tr>
<td>inhalativ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(vapour),</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATE-mix,</td>
<td>&gt; 2000 mg/kg.</td>
<td></td>
</tr>
<tr>
<td>oral,</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Substance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 25068-38-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50, dermal, Rabbit: 22800 mg/kg bw (GESTIS).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50, oral, Rat: 11400 mg/kg bw (GESTIS).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butyl 2,3-epoxypropyl ether, CAS: 2426-08-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50, dermal, Rabbit: 2520 mg/kg.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50, oral, Rat: 1660 mg/kg.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50, inhalative, Rat: 14,02 mg/l (4h).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Serious eye damage/irritation**

Based on the available information, the classification criteria are fulfilled. Toxicological data of complete product are not available.

Irritant

Calculation method

**Skin corrosion/irritation**

Based on the available information, the classification criteria are fulfilled. Toxicological data of complete product are not available.

Irritant

Calculation method

**Respiratory or skin sensitisation**

Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.

May cause an allergic skin reaction.

Calculation method

**Specific target organ toxicity — single exposure**

Based on the available information, the classification criteria are not fulfilled. Toxicological data of complete product are not available.

No classification.

Calculation method

**Specific target organ toxicity — repeated exposure**

Does not contain a relevant substance that meets the classification criteria.

**Mutagenicity**

Based on the available information, the classification criteria are fulfilled. Toxicological data of complete product are not available.

Suspected of causing genetic defects.

Calculation method

**Reproduction toxicity**

Does not contain a relevant substance that meets the classification criteria.

**Carcinogenicity**

Based on the available information, the classification criteria are fulfilled. Toxicological data of complete product are not available.

Suspected of causing cancer.

Calculation method

**Aspiration hazard**

Does not contain a relevant substance that meets the classification criteria.

**General remarks**

The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.
SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 25068-38-6</td>
</tr>
<tr>
<td>LC50, (96h), Pimephales promelas: 3.1 mg/l (Lit.).</td>
</tr>
<tr>
<td>EC50, (48h), Daphnia magna: 1.4-1.7 mg/l (Lit.).</td>
</tr>
<tr>
<td>IC50, Bacteria: &gt; 42.6 mg/l/18h (Lit.).</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

| Behaviour in environment compartments | not determined |
| Behaviour in sewage plant              | not determined |
| Biological degradability               | not determined |

12.3 Bioaccumulative potential

not determined

12.4 Mobility in soil

not applicable

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

Ecological data of complete product are not available.
Do not discharge product unmonitored into the environment or into the drainage.
The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Disposal in an incineration plant in accordance with the regulations of the local authorities.
Coordinate disposal with the authorities if necessary.

Waste no. (recommended) 080409*

Contaminated packaging

Packaging that cannot be cleaned should be disposed of as for product.
Uncontaminated packaging may be taken for recycling.

Waste no. (recommended)
150110*
150101
150102
150104
SECTION 14: Transport information

14.1 UN number

- Transport by land according to ADR/RID
  - UN number 3082

- Inland navigation (ADN)
  - UN number 3082

- Marine transport in accordance with IMDG
  - UN number 3082

- Air transport in accordance with IATA
  - UN number 3082

14.2 UN proper shipping name

- Transport by land according to ADR/RID
  - Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy resin)
    - Classification Code M6
    - ADR LQ 5 l
    - ADR 1.1.3.6 (8.6) Transport category (tunnel restriction code) 3 (E)

- Inland navigation (ADN)
  - Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy resin)
    - Classification Code M6

- Marine transport in accordance with IMDG
  - Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy resin)
    - EMS F-A, S-F
    - IMDG LQ 5 l

- Air transport in accordance with IATA
  - Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy resin-mixture)

14.3 Transport hazard class(es)

- Transport by land according to ADR/RID
  - Hazard class 9

- Inland navigation (ADN)
  - Hazard class 9

- Marine transport in accordance with IMDG
  - Hazard class 9

- Air transport in accordance with IATA
  - Hazard class 9
14.4 Packing group
Transport by land according to ADR/RID III
Inland navigation (ADN) III
Marine transport in accordance with IMDG III
Air transport in accordance with IATA III

14.5 Environmental hazards
Transport by land according to ADR/RID yes
Inland navigation (ADN) yes
Marine transport in accordance with IMDG MARINE POLLUTANT
Air transport in accordance with IATA yes

14.6 Special precautions for user
Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
not applicable

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
CHIP 3/ CHIP 4
- Observe employment restrictions for people
- VOC (2010/75/CE) 10 %

15.2 Chemical safety assessment
not applicable

16.1 Hazard statements
(SECTION 03)
H412 Harmful to aquatic life with long lasting effects.
H335 May cause respiratory irritation.
H302+H332 Harmful if swallowed or if inhaled.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H226 Flammable liquid and vapour.
H411 Toxic to aquatic life with long lasting effects.
H317 May cause an allergic skin reaction.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
ELINCS = European List of Notified Chemical Substances
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCID = International Uniform Chemical Information Database
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

**Classification procedure**
- Skin Irrit. 2: H315 Causes skin irritation. (Calculation method)
- Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
- Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
- Carc. 2: H351 Suspected of causing cancer. (Calculation method)
- Muta. 2: H341 Suspected of causing genetic defects. (Calculation method)
- Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects. (Calculation method)

**Modified position**
- none

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

1.1 Product identifier

WLK (Härter)

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

1.2.1 Relevant uses

Hardener

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company
Fischer Elektronik GmbH & Co. KG
Nottebohmstr. 28
58511 Lüdenscheid / GERMANY
Phone +49 2351 4 35-0
Fax +49 2351 4 57 54
Homepage www.fischerelektronik.de
E-mail info@fischerelektronik.de

Address enquiries to
Technical information info@fischerelektronik.de
Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0) 228-19240 (24h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Skin Corr. 1B: H314 Causes severe skin burns and eye damage.
Eye Dam. 1: H318 Causes serious eye damage.
Skin Sens. 1: H317 May cause an allergic skin reaction.

2.2 Label elements

The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

Hazard pictograms

Signal word DANGER
Contains:
3,3’-oxybis(ethyleneoxy)bis(propylamine)
2-[2-(3-aminopropoxy)ethoxy]ethanol
Hazard statements
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
Precautionary statements
P260 Do not breathe vapours.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P303+P361+P335 IF ON SKIN (or hair): Take off immediately all contaminated clothing.
Rinse skin with water / shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER / doctor.
P501 Dispose of contents/container to in accordance with local/regional/national/international regulation.
Special labelling EUH071 Corrosive to the respiratory tract.

2.3 Other hazards

Human health dangers People who are allergic to amines should avoid the use of the product.
Environmental hazards Does not contain any PBT or vPvB substances.
Other hazards Further hazards were not determined with the current level of knowledge.
SECTION 3: Composition / Information on ingredients

Product-type:
The product is a mixture.

<table>
<thead>
<tr>
<th>Range [%]</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 - &lt;100</td>
<td>3,3'-oxybis(ethyleneoxy)bis(propylamine)</td>
</tr>
<tr>
<td>1 - 10</td>
<td>2-[2-(3-aminopropoxy)ethoxy]ethanol</td>
</tr>
<tr>
<td></td>
<td>CAS: 112-33-4, EINECS/ELINCS: 203-960-0</td>
</tr>
<tr>
<td></td>
<td>GHS/CLP: Skin Corr. 1B: H314 - Eye Dam. 1: H318</td>
</tr>
</tbody>
</table>

Comment on component parts
Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Remove contaminated soaked clothing immediately and dispose of safely.

Inhalation
Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact
In case of contact with skin wash off immediately with soap and water.
Immediate medical treatment necessary, as untreated burns can result in slow-healing wounds.

Eye contact
In case of contact with eyes rinse thoroughly and immediately with plenty of water and seek medical advice.
Shield unaffected eye.

Ingestion
Do not induce vomiting.
Seek medical advice immediately.
Rinse out mouth and give plenty of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Product is caustic.

Allergic reactions
Risk of serious damage to eyes.

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media
foam, dry powder, water spray jet, carbon dioxide

Extinguishing media that must not be used
Full water jet

5.2 Special hazards arising from the substance or mixture

In the event of fire the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NOx).

5.3 Advice for firefighters

Do not inhale explosion and/or combustion gases.
Use self-contained breathing apparatus.
Wear full protective suit.

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.
Collect contaminated firefighting water separately, must not be discharged into the drains.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Use personal protective equipment.
High risk of slipping due to leakage/spillage of product.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
Take up residues with absorbent material (e.g. sand, sawdust, general purpose binder, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Vapours can form an explosive mixture with air.
Remove contaminated soaked clothing immediately and dispose of safely.
Do not eat, drink, smoke or take drugs at work.
Wash hands before breaks and after work.
Use barrier skin cream.
Showers and eye wash stations should be provided.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.
Do not store together with food and animal food/diet.
Keep container in a well-ventilated place.
Keep container tightly closed.
Keep in a cool place. Store in a dry place.
Protect from atmospheric moisture and water.
Recommended storage temperature: 5-25 °C (41-77 °F).

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

not applicable
8.2 Exposure controls

Additional advice on system design
Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA’s list of hazardous substances.

Eye protection
Tightly fitting goggles. (EN 166:2001)

Hand protection
The details concerned are recommendations. Please contact the glove supplier for further information.
0,7 mm Nitrile rubber, >480 min (EN 374-1/-2/-3).

Skin protection
Protective clothing.

Other
Avoid contact with eyes and skin.
Do not inhale gases/vapours/aerosols.
Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.

Respiratory protection
If ventilation is insufficient, wear respiratory protection.
Short term: filter apparatus, combination filter A-P2. (DIN EN 14387)

Thermal hazards
not applicable

Delimitation and monitoring of the environmental exposition
Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form
liquid

Color
amber colour

Odor
amine-like

Odour threshold
not determined

pH-value
> 12 (100 g/l)

pH-value [1%]
not determined

Boiling point [°C]
146 - 148

Flash point [°C]
178,5

Flammability (solid, gas) [°C]
not applicable

Lower explosion limit
not determined

Upper explosion limit
not determined

Oxidising properties
no

Vapour pressure/gas pressure [kPa]
0,000005 (20 °C)

Density [g/ml]
0,98

Bulk density [kg/m³]
not applicable

Solubility in water
miscible

Partition coefficient [n-octanol/water]
not determined

Viscosity
not determined

Relative vapour density determined in air
not determined

Evaporation speed
not determined

Melting point [°C]
-32

Autoignition temperature [°C]
268

Decomposition temperature [°C]
not determined

9.2 Other information
No information available.
SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

- Reactions with oxidizing agents.
- Reactions with strong acids.
- Reactions with epoxides

10.4 Conditions to avoid

- Strong heating.
  See SECTION 7.2.

10.5 Incompatible materials

- Strong oxidizing agent.

10.6 Hazardous decomposition products

- No hazardous decomposition products known.
SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Inhalative, Based on the available information, the classification criteria are not fulfilled.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dermal, Based on the available information, the classification criteria are not fulfilled.</td>
</tr>
<tr>
<td></td>
<td>Oral, Based on the available information, the classification criteria are not fulfilled.</td>
</tr>
</tbody>
</table>

Substance

3,3’-oxybis(ethyleneoxy)bis(propylamine), CAS: 4246-51-9

LD50, dermal, Rabbit: > 2500 mg/kg (OECD 402).

LD50, oral, Rat: ca. 3160 mg/kg.

2-[2-(3-aminopropoxy)ethoxy]ethanol, CAS: 112-33-4

LD50, oral, Rat: 6500 mg/kg bw.

Serious eye damage/irritation

Based on the available information, the classification criteria are fulfilled.

Risk of serious damage to eyes.

Calculation method

Skin corrosion/irritation

Based on the available information, the classification criteria are fulfilled.

Product is caustic.

Calculation method

Respiratory or skin sensitisation

Based on the available information, the classification criteria are fulfilled.

May cause an allergic skin reaction.

Calculation method

Specific target organ toxicity — single exposure

Does not contain a relevant substance that meets the classification criteria.

Specific target organ toxicity — repeated exposure

Does not contain a relevant substance that meets the classification criteria.

Mutagenicity

Does not contain a relevant substance that meets the classification criteria.

Reproduction toxicity

Does not contain a relevant substance that meets the classification criteria.

Carcinogenicity

Does not contain a relevant substance that meets the classification criteria.

Aspiration hazard

Does not contain a relevant substance that meets the classification criteria.

General remarks

The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3,3’-oxybis(ethyleneoxy)bis(propylamine), CAS: 4246-51-9</td>
<td></td>
</tr>
<tr>
<td>LC50, (96h), Leuciscus idus: &gt; 1000 mg/l (DIN 38412).</td>
<td></td>
</tr>
<tr>
<td>EC50, (48h), Daphnia magna: 218,16 mg/l.</td>
<td></td>
</tr>
<tr>
<td>2-[2-(3-aminopropoxy)ethoxy]ethanol, CAS: 112-33-4</td>
<td></td>
</tr>
<tr>
<td>LC50, (96h), Danio rerio: 681,18 mg/l.</td>
<td></td>
</tr>
<tr>
<td>EC50, (48h), Daphnia magna: &gt; 100 mg/l.</td>
<td></td>
</tr>
<tr>
<td>EC10, (72h), Scenedesmus subspicatus: &gt; 100 mg/l.</td>
<td></td>
</tr>
</tbody>
</table>
12.2 Persistence and degradability

- Behaviour in environment compartments: not determined
- Behaviour in sewage plant: not determined
- Biological degradability: not determined

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

Ecological data of complete product are not available.

The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

- **Product**: Coordinate disposal with the disposal contractor/authorities if necessary.
- **Waste no. (recommended)**: 080409*
- **Contaminated packaging**: Uncontaminated packaging may be taken for recycling. Dispose full / partially emptied cartridges as hazardous waste in accordance with official regulations.
- **Waste no. (recommended)**: 150110*

SECTION 14: Transport information

14.1 UN number

- **Transport by land according to ADR/RID**: 2735
- **Inland navigation (ADN)**: 2735
- **Marine transport in accordance with IMDG**: 2735
- **Air transport in accordance with IATA**: 2735
14.2 UN proper shipping name

Transport by land according to ADR/RID
- Classification Code C7
- Label
- ADR LQ 1 l
- ADR 1.1.3.6 (8.6) Transport category (tunnel restriction code) 2 (E)

Inland navigation (ADN)
- Classification Code C7
- Label

Marine transport in accordance with IMDG
- EMS F-A, S-B
- Label
- IMDG LQ 1 l

Air transport in accordance with IATA
- Label

14.3 Transport hazard class(es)

Transport by land according to ADR/RID 8

Inland navigation (ADN) 8

Marine transport in accordance with IMDG 8

Air transport in accordance with IATA 8

14.4 Packing group

Transport by land according to ADR/RID II

Inland navigation (ADN) II

Marine transport in accordance with IMDG II

Air transport in accordance with IATA II
14.5 Environmental hazards

- Transport by land according to ADR/RID: no
- Inland navigation (ADN): no
- Marine transport in accordance with IMDG: no
- Air transport in accordance with IATA: no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

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

Not applicable

SECTION 15: Regulatory information

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

  - CHIP 3/CHIP 4
  - Voc (2010/75/CE)

15.2 Chemical safety assessment

Not applicable

SECTION 16: Other information

16.1 Hazard statements

(SECTION 03)

H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H314 Causes severe skin burns and eye damage.
16.2 Abbreviations and acronyms:

- ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
- RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
- ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
- CAS = Chemical Abstracts Service
- CLP = Classification, Labelling and Packaging
- DMEL = Derived Minimum Effect Level
- DNEL = Derived No Effect Level
- EC50 = Median effective concentration
- ECB = European Chemicals Bureau
- EEC = European Economic Community
- EINECS = European Inventory of Existing Commercial Chemical Substances
- ELINCS = European List of Notified Chemical Substances
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
- IC50 = Inhibition concentration, 50%
- IMDG = International Maritime Code for Dangerous Goods
- IUCLID = International Uniform Chemical Information Database
- LC50 = Lethal concentration, 50%
- LD50 = Median lethal dose
- MARPOL = International Convention for the Prevention of Marine Pollution from Ships
- PBT = Persistent, Bioaccumulative and Toxic substance
- PNEC = Predicted No-Effect Concentration
- REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
- TLV®/TWA = Threshold limit value – time-weighted average
- TLV®STEL = Threshold limit value – short-time exposure limit
- VOC = Volatile Organic Compounds
- vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure
- Skin Corr. 1B: H314 Causes severe skin burns and eye damage. (Calculation method)
- Eye Dam. 1: H318 Causes serious eye damage. (Calculation method)
- Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)

Modified position
- none

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