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

1.1. Product identifier

- **Product form**: Substance
- **Physical state**: Liquid
- **Substance name**: (3-GLYCIDOXYPROPYL)METHYLDIETHOXYSILANE
- **Product code**: SIG5832.0
- **Formula**: $\text{C}_{11}\text{H}_{24}\text{O}_{4}\text{Si}$
- **Synonyms**: 3-(2,3-EPOXYPROPOXYPROPYL)METHYLDIETHOXYSILANE; [3-(2,3-EPOXYPROPOXO)PROPYL]DIETHOXYMETHYL SILANE; 3-(METHYLDIETHOXYSILYL)PROPYL GLYCIDYL ETHER
- **Chemical family**: ORGANEOETHOXYSILANE

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

1.2.1. Relevant identified uses

- **Use of the substance/mixture**: Chemical intermediate

1.2.2. Uses advised against

- No additional information available

1.3. Details of the supplier of the safety data sheet

**GELEST, INC.**
11 East Steel Road
Morrisville, PA 19067
**USA**
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

**GELEST INC.**
Fritz-Klatte-Strasse 8
65933 Frankfurt
**Germany**
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestde.com - www.gelestde.com

1.4. Emergency telephone number

- **Emergency number**: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

- **Classification according to Regulation (EC) No. 1272/2008 [CLP]**
  - Skin corrosion/irritation, Category 2: H315
  - Serious eye damage/eye irritation, Category 2: H319

Adverse physicochemical, human health and environmental effects

- No additional information available

2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

- **Hazard pictograms (CLP)**: ![GHS07]
  - **Signal word (CLP)**: Warning
  - **Hazard statements (CLP)**: H315 - Causes skin irritation. H319 - Causes serious eye irritation.
Precautionary statements (CLP):
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P264 - Wash hands thoroughly after handling.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P332+P313 - IF SKIN IRRITATION OCCURS: Get medical advice/attention.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - IF EYE IRRITATION PERSISTS: Get medical advice/attention.

2.3. Other hazards:
The hydrolysis product of this compound is ethanol. Overexposure to ethanol by skin absorption, inhalation or ingestion may have a narcotic effect (headache, nausea, drowsiness). Ethanol is metabolized to acetaldehyde and acetic acid which in large quantities result in metabolic acidosis, CNS depression and death due to respiratory arrest. This product reacts with water in the acid contents of the stomach to form ethanol.

SECTION 3: Composition/information on ingredients
3.1. Substances:
Name: (3-GLYCIDOXYPROPYL)METHYLDIETHOXYXILANE
CAS-No.: 2897-60-1
EC-No.: 220-780-8

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC No. 1272/2008 [CLP])</th>
</tr>
</thead>
<tbody>
<tr>
<td>(3-Glycidoxypropyl)methyldiethoxysilane</td>
<td>(CAS-No.) 2897-60-1 (EC-No. 220-780-8)</td>
<td>&gt; 95</td>
<td>Skin Irrit. 2, H315 Eye Irrit. 2, H319</td>
</tr>
<tr>
<td>Ethanol</td>
<td>(CAS-No.) 64-17-5 (EC-No.) 200-578-6 (EC Index-No.) 603-002-00-5</td>
<td></td>
<td>Flam. Liq. 2, H225</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

3.2. Mixtures:
Not applicable

SECTION 4: First aid measures
4.1. Description of first aid measures:
First-aid measures general: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.
First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact: Wash with plenty of water/…. Get medical advice/attention.
First-aid measures after eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion: Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed:
Symptoms/effects after inhalation: May cause irritation to the respiratory tract. Overexposure may cause: Cough. Headache. Nausea.
Symptoms/effects after skin contact: Causes skin irritation.
Symptoms/effects after eye contact: Causes serious eye irritation.
Symptoms/effects after ingestion: May be harmful if swallowed.
Chronic symptoms: On contact with water this compound liberates ethanol which is known to have a chronic effect on the central nervous system.

4.3. Indication of any immediate medical attention and special treatment needed:
NOTE TO PHYSICIAN: This product reacts with water in the acid contents of the stomach to form ethanol.

SECTION 5: Firefighting measures
5.1. Extinguishing media:
Special hazards arising from the substance or mixture:
Fire hazard: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.
5.3. Advice for firefighters

Firefighting instructions: Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.
Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapour and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Avoid all eye and skin contact and do not breathe vapour and mist. Provide local exhaust or general room ventilation.

Hygiene measures: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed.
Incompatible materials: Amines. Moisture. Water:
Storage area: Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Country</th>
<th>MAK (mg/m³)</th>
<th>MAK (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>1900 mg/m³</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Austria</td>
<td>3800 mg/m³</td>
<td>2000 ppm</td>
</tr>
<tr>
<td>Belgium</td>
<td>1907 mg/m³</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>1000 mg/m³</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>9500 mg/m³</td>
<td>5000 ppm</td>
</tr>
<tr>
<td>France</td>
<td>1900 mg/m³</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Germany</td>
<td>960 mg/m³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>500 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>1900 mg/m³</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Latvia</td>
<td>1000 mg/m³</td>
<td></td>
</tr>
<tr>
<td>USA IDLH</td>
<td>3300 ppm (10% LEL)</td>
<td></td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>1900 mg/m³</td>
<td></td>
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</table>
### Ethanol (64-17-5)

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<th>Regulation</th>
<th>Value</th>
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<td>USA NIOSH</td>
<td>NIOSH REL (TWA) (ppm)</td>
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<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
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<td>OSHA PEL (TWA) (ppm)</td>
<td>1000 ppm</td>
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<td>Spain</td>
<td>VLA-EC (mg/m³)</td>
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<td>Spain</td>
<td>VLA-EC (ppm)</td>
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<tr>
<td>Switzerland</td>
<td>KZGW (mg/m³)</td>
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<tr>
<td>Switzerland</td>
<td>KZGW (ppm)</td>
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</tr>
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<td>Switzerland</td>
<td>MAK (mg/m³)</td>
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</tr>
<tr>
<td>Switzerland</td>
<td>MAK (ppm)</td>
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<td>Netherlands</td>
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<td>Grenswaarde TGG 15MIN (mg/m³)</td>
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<td>United Kingdom</td>
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<td>Exposiční limity (PEL) (mg/m³)</td>
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<td>Grænseværdie (langvarig) (mg/m³)</td>
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<td>HTP-arvo (8h) (ppm)</td>
<td>1000 ppm</td>
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<td>HTP-arvo (15 min)</td>
<td>2500 mg/m³</td>
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<td>Finland</td>
<td>HTP-arvo (15 min) (ppm)</td>
<td>1300 ppm</td>
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<td>Hungary</td>
<td>AK-érték</td>
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<td>CK-érték</td>
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<td>Ireland</td>
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<td>TPRV (mg/m³)</td>
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<tr>
<td>Norway</td>
<td>Grenseverdier (Korttidsverdi) (mg/m3)</td>
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<tr>
<td>Norway</td>
<td>Grenseverdier (Korttidsverdi) (ppm)</td>
<td>500 ppm</td>
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<tr>
<td>Poland</td>
<td>NDS (mg/m³)</td>
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</tr>
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<td>Romania</td>
<td>OEL TWA (mg/m³)</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td>Romania</td>
<td>OEL TWA (ppm)</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Romania</td>
<td>OEL STEL (mg/m³)</td>
<td>9500 mg/m³</td>
</tr>
<tr>
<td>Romania</td>
<td>OEL STEL (ppm)</td>
<td>5000 ppm</td>
</tr>
<tr>
<td>Slovakia</td>
<td>NPHV (priemerná) (mg/m³)</td>
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<tr>
<td>Slovakia</td>
<td>NPHV (priemerná) (ppm)</td>
<td>500 ppm</td>
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<tr>
<td>Slovakia</td>
<td>NPHV (Hraniční) (mg/m³)</td>
<td>1920 mg/m³</td>
</tr>
<tr>
<td>Sweden</td>
<td>nivägränsvärde (NVG) (mg/m³)</td>
<td>1000 mg/m³</td>
</tr>
<tr>
<td>Sweden</td>
<td>nivägränsvärde (NVG) (ppm)</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Sweden</td>
<td>kortidsvärde (KTV) (mg/m³)</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td>Sweden</td>
<td>kortidsvärde (KTV) (ppm)</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Canada (Quebec)</td>
<td>VEMP (mg/m³)</td>
<td>1880 mg/m³</td>
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<td>Canada (Quebec)</td>
<td>VEMP (ppm)</td>
<td>1000 ppm</td>
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<tr>
<td>Australia</td>
<td>TWA (mg/m³)</td>
<td>1880 mg/m³</td>
</tr>
<tr>
<td>Australia</td>
<td>TWA (ppm)</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Portugal</td>
<td>OEL TWA (ppm)</td>
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</tr>
<tr>
<td>Portugal</td>
<td>OEL chemical category (PT)</td>
<td>A4 - Not Classifiable as a Human Carcinogen</td>
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---

Print date: 10/04/2019  
SDS ID: SIG5832.0  
EN (English)  
4/9
(3-GLYCIDOXYPROPYL)METHYLDIETHOXYSILANE
Safety Data Sheet

8.2. Exposure controls

Appropriate engineering controls:
Provide local exhaust or general room ventilation.

Personal protective equipment:
Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:
Neoprene or nitrile rubber gloves

Eye protection:
Chemical goggles. Contact lenses should not be worn

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
NIOSH-certified organic vapor (black cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>248.39 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>Straw</td>
</tr>
<tr>
<td>Odour</td>
<td>Mild</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.431</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>&lt; 0 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>122 - 126 °C @ 5 mm Hg</td>
</tr>
<tr>
<td>Flash point</td>
<td>122 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>&lt; 1 mm Hg</td>
</tr>
<tr>
<td>Relative vapour density @ 20 °C</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.978</td>
</tr>
<tr>
<td>Solubility</td>
<td>Reacts with water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>3 cSt</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
Can react exothermically with amines.

10.2. Chemical stability
Stable in sealed containers.

10.3. Possibility of hazardous reactions
Reacts with water and moisture in air, liberating ethanol.
10.4. Conditions to avoid
Heat. Open flame. Sparks.

10.5. Incompatible materials

10.6. Hazardous decomposition products
Ethanol. Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

(3-Glycidoxypropyl)methyldiethoxysilane (2897-60-1)
LD50 oral rat > 2000 mg/kg

Ethanol (64-17-5)
LD50 oral rat 7060 mg/kg
LC50 inhalation rat (mg/l) 124.7 mg/l/4h
LC50 inhalation rat (ppm) 20000 ppm 10 hrs.
LDLo oral rat 1400 mg/kg (Human)
ATE CLP (oral) 7060 mg/kg bodyweight
ATE CLP (vapours) 124.7 mg/l/4h
ATE CLP (dust,mist) 124.7 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Ethanol (64-17-5)
IARC group 1 - Carcinogenic to humans

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Symptoms/effects after inhalation : May cause irritation to the respiratory tract. Overexposure may cause: Cough. Headache. Nausea.
Symptoms/effects after skin contact : Causes skin irritation.
Symptoms/effects after eye contact : Causes serious eye irritation.
Symptoms/effects after ingestion : May be harmful if swallowed.
Chronic symptoms : On contact with water this compound liberates ethanol which is known to have a chronic effect on the central nervous system.
Reason for classification : Expert judgment

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Not classified

Ethanol (64-17-5)
LC50 fish 1 > 10000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [rainbow trout])
LC50 fish 2 > 13400 mg/l (Exposure time: 96 h - Species: Pimephales promelas [fathead minnow])

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
Ethanol (64-17-5)
Log Pow -0.32

12.4. Mobility in soil
No additional information available
12.5. Results of PBT and vPvB assessment
No additional information available

12.6. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Product/Packaging disposal recommendations: May be incinerated. Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number
In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number
UN-No. (ADR): Not applicable
UN-No. (IMDG): Not applicable
UN-No. (IATA): Not applicable
UN-No. (ADN): Not applicable
UN-No. (RID): Not applicable

14.2. UN proper shipping name
Proper Shipping Name (ADR): Not applicable
Proper Shipping Name (IMDG): Not applicable
Proper Shipping Name (IATA): Not applicable
Proper Shipping Name (ADN): Not applicable
Proper Shipping Name (RID): Not applicable

14.3. Transport hazard class(es)

ADR
Transport hazard class(es) (ADR): Not applicable

IMDG
Transport hazard class(es) (IMDG): Not applicable

IATA
Transport hazard class(es) (IATA): Not applicable

ADN
Transport hazard class(es) (ADN): Not applicable

RID
Transport hazard class(es) (RID): Not applicable

14.4. Packing group
Packing group (ADR): Not applicable
Packing group (IMDG): Not applicable
Packing group (IATA): Not applicable
Packing group (ADN): Not applicable
Packing group (RID): Not applicable

14.5. Environmental hazards
Dangerous for the environment: No
Marine pollutant: No
Other information: No supplementary information available

14.6. Special precautions for user

- Overland transport
No data available
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

15.1.1. EU-Regulations
No REACH Annex XVII restrictions
(3-GLYCIDOXYPROPYL)METHYLDIETHOXYXILANE is not on the REACH Candidate List
(3-GLYCIDOXYPROPYL)METHYLDIETHOXYXILANE is not on the REACH Annex XIV List
(3-GLYCIDOXYPROPYL)METHYLDIETHOXYXILANE is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

15.1.2. National regulations

Germany
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands
SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed
NIET-limiteerbare lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
NIET-limiteerbare lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed
NIET-limiteerbare lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark
Danish National Regulations : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment
No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

<table>
<thead>
<tr>
<th>Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other information : Prepared by safety and environmental affairs.</td>
</tr>
</tbody>
</table>

Full text of H- and EUH-statements:

Eye Irrit. 2 : Serious eye damage/eye irritation, Category 2
Flam. Liq. 2 : Flammable liquids, Category 2
<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td><strong>Skin Irrit. 2</strong></td>
<td><strong>Skin corrosion/irritation, Category 2</strong></td>
</tr>
<tr>
<td><strong>H225</strong></td>
<td><strong>Highly flammable liquid and vapour.</strong></td>
</tr>
<tr>
<td><strong>H315</strong></td>
<td><strong>Causes skin irritation.</strong></td>
</tr>
<tr>
<td><strong>H319</strong></td>
<td><strong>Causes serious eye irritation.</strong></td>
</tr>
</tbody>
</table>

**SDS EU (REACH Annex II) - Custom**

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