SAFETY DATA SHEET

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

1.1. Product identifier
Name of the substance Glycerol
Trade name of the substance Couplant B
Identification number 200-289-5 (EC number)
Registration number -
Synonyms None.
Issue date 15-August-2016
Version number 04
Revision date 22-November-2022

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses Couplant.
Uses advised against None known.

1.3. Details of the supplier of the safety data sheet
Supplier EVIDENT Europe GmbH
Address Caffamacherreihe 8-10
20355 Hamburg
Germany
Telephone +49 40-23773-0
Fax +
e-mail ordersindustrial@evidentscientific.com

1.4. Emergency telephone number
CHEMTREC
US: 1-800-424-9300, International: +1 703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended
Health hazards Specific target organ toxicity - single exposure Category 3 respiratory tract irritation H335 - May cause respiratory irritation.

Hazard summary May cause respiratory irritation.

2.2. Label elements
Label according to Regulation (EC) No. 1272/2008 as amended
Contains: Glycerol
Hazard pictograms

Signal word Warning
Hazard statements H335 May cause respiratory irritation.
Precautionary statements Prevention P261 Avoid breathing mist or vapour.
P271 Use only outdoors or in a well-ventilated area.

Response

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor/physician if you feel unwell.

P312 Call a POISON CENTRE or doctor/physician if you feel unwell.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information

None.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>%</th>
<th>CAS-No. / EC No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>100</td>
<td>56-81-5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200-289-5</td>
</tr>
</tbody>
</table>

Classification: STOT SE 3; H335

Composition comments

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4: First aid measures

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation

If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth thoroughly. Get medical attention if symptoms occur.

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

Exposure may cause temporary irritation, redness, or discomfort. May cause respiratory irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards

Will burn if involved in a fire.

5.1. Extinguishing media

Suitable extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media

None known.

5.2. Special hazards arising from the substance or mixture

By heating and fire, harmful vapours/gases may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures

Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

For emergency responders
Keep unnecessary personnel away. Be aware of potential for surfaces to become slippery. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up
Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). After cleaning, flush away traces with water. For waste disposal, see section 13 of the SDS.

6.4. Reference to other sections
For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Provide adequate ventilation. Avoid prolonged exposure. Avoid breathing mist or vapour. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities
Couplant.

7.3. Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
No exposure limits noted for ingredient(s).

Biological limit values
No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures
Follow standard monitoring procedures.

Derived no effect levels (DNELs)
Not available.

Predicted no effect concentrations (PNECs)
Not available.

8.2. Exposure controls

Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information
Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection
If contact is likely, safety glasses with side shields are recommended. Eye wash fountain is recommended.

Skin protection
- Hand protection
For prolonged or repeated skin contact use suitable protective gloves. Suitable gloves can be recommended by the glove supplier.

- Other
Wear suitable protective clothing.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

Hygiene measures
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental exposure controls
Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Form</td>
<td>Viscous.</td>
</tr>
<tr>
<td>Colour</td>
<td>Clear.</td>
</tr>
<tr>
<td>Odour</td>
<td>Mild.</td>
</tr>
</tbody>
</table>
Odour threshold Not available.

pH Not available.

Melting point/freezing point 19.85 °C (67.73 °F)

Initial boiling point and boiling range 290 °C (554 °F)

Flash point 198.9 °C (390.0 °F) Closed cup

Evaporation rate > 1 (Ether (anhydrous) =1)

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

<table>
<thead>
<tr>
<th>Flammability limit - lower (%)</th>
<th>2.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability limit - upper (%)</td>
<td>11.3</td>
</tr>
</tbody>
</table>

Vapour pressure < 0.13 kPa

Vapour density 3.1 (Air = 1)

Relative density 1.4 - 1.6

Solubility(ies) Soluble in water.

Partition coefficient (n-octanol/water) -1.76

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Explosive properties Not explosive.

Oxidising properties Not oxidising.

9.2. Other information

Molecular formula C3-H8-O3

Molecular weight 92.09 g/mol

SECTION 10: Stability and reactivity

10.1. Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport. Hygroscopic.

10.2. Chemical stability Material is stable under normal conditions.

10.3. Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid Excessive heat. Ignition sources.

10.5. Incompatible materials Strong oxidising agents.

10.6. Hazardous decomposition products Hygroscopic

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

| Inhalation | High mist concentrations may cause irritation of respiratory tract. |
| Skin contact | No adverse effects due to skin contact are expected. |
| Eye contact | Direct contact with eyes may cause temporary irritation. |
| Ingestion | Expected to be a low ingestion hazard. |

Symptoms Exposure may cause temporary irritation, redness, or discomfort. May cause respiratory irritation.

11.1. Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol (CAS 56-81-5)</td>
<td>Rabbit</td>
<td>&gt; 10 g/kg</td>
</tr>
</tbody>
</table>

Glycerol (CAS 56-81-5)

Acute

Dermal

LD50

Rabbit

> 10 g/kg
<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>Rat</td>
<td>12600 mg/kg</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**
Based on available data, the classification criteria are not met.

**Serious eye damage/eye irritation**
Based on available data, the classification criteria are not met.

**Respiratory sensitisation**
Due to lack of data the classification is not possible.

**Skin sensitisation**
This product is not expected to cause skin sensitisation.

**Germ cell mutagenicity**
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**Reproductive toxicity**
This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure**
May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure**
Based on available data, the classification criteria are not met.

**Aspiration hazard**
Not an aspiration hazard.

**Mixture versus substance information**
No information available.

**Other information**
Not available.

**SECTION 12: Ecological information**

**12.1. Toxicity**
Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol (CAS 56-81-5) Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>54000 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

**12.2. Persistence and degradability**
The product is readily biodegradable.

**12.3. Bioaccumulative potential**
The product is not bioaccumulating.

**Bioconcentration factor (BCF)**
Not available.

**12.4. Mobility in soil**
No data available.

**12.5. Results of PBT and vPvB assessment**
Not a PBT or vPvB substance or mixture.

**12.6. Other adverse effects**
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

- **Residual waste**
  Dispose of in accordance with local regulations.

- **Contaminated packaging**
  Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

- **EU waste code**
  The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

- **Disposal methods/information**
  Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

- **Special precautions**
  Dispose in accordance with all applicable regulations.

**SECTION 14: Transport information**

**ADR**
14.1. - 14.6.: Not regulated as dangerous goods.

**RID**
14.1. - 14.6.: Not regulated as dangerous goods.

**ADN**
14.1. - 14.6.: Not regulated as dangerous goods.
IATA
14.1. - 14.6.: Not regulated as dangerous goods.

IMDG
14.1. - 14.6.: Not regulated as dangerous goods.

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

EU regulations
Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended
Not listed.
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended
Not listed.
Not listed.
Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
Not listed.

Authorisations
Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended
Not listed.

Restrictions on use
Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
Not listed.
Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.
Not listed.

Other EU regulations
Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended
Not listed.

Other regulations
The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations
Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment
No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations
vPvB: Very Persistent and very Bioaccumulative.
PBT: Persistent, bioaccumulative and toxic.
LD50: Lethal Dose 50%.
LC50: Lethal Concentration 50%.

References
Not available.

Information on evaluation method leading to the classification of mixture
The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
H335 May cause respiratory irritation.

Follow training instructions when handling this material.

Evident Scientific cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.