

Conductivity Standard 1,3 μ S/cm

Material number 238973

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1. Product and company identification**Product identifier**Trade name: Conductivity Standard 1,3 μ S/cm**Relevant identified uses of the substance or mixture and uses advised against**

General use: Calibration solution

Details of the supplier of the safety data sheet

Company name: HAMILTON Bonaduz AG

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Dept. responsible for information:

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Emergency telephone number

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2. Hazards identification**Emergency overview**

Appearance: Physical state: liquid

Color: colorless

Odor: odorless

Regulatory status

This material is not considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

Information pertaining to special dangers for human and environment

see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization: aqueous solution

Hazardous ingredients:

| CAS No. | Designation | Content | Classification |
|-------------|-------------|---------|----------------|
| CAS 56-81-5 | Glycerol | >= 50 % | not applicable |

4. First-aid measures

In case of inhalation: Provide fresh air.

In case of skin contact: Remove residues with water. Change contaminated clothing.

After eye contact: With eyelids open, wash out eyes for several minutes under flowing water. In case of troubles or persistent symptoms, consult an ophthalmologist.

After swallowing: Rinse mouth and drink large quantities of water.
If you feel unwell, seek medical advice.

Most important symptoms and effects, both acute and delayed

no data available

Information to physician

Treat symptomatically.

5. Firefighting measures

Flash point/flash point range: approx. 180 °C

Suitable extinguishing media: Water fog, alcohol resistant foam, extinguishing powder, carbon dioxide

Special hazards arising from the substance or mixture

In case of fire may be liberated: Acrolein, carbon monoxide and carbon dioxide.

Special protective equipment for firefighters: Wear self-contained breathing apparatus.

6. Accidental release measures

Personal precautions: Avoid contact with skin, eyes, and clothing. Do not breathe vapors.

Methods for cleaning up: Soak up with absorbent materials such as sand, siliceous earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance. Wash spill area with plenty of water.

7. Handling and storage**Handling**

Advices on safe handling: Avoid aerosol and mist formation.
Avoid prolonged and intensive skin contact.

Storage

Requirements for storerooms and containers: Keep container tightly closed. Store at room temperature.

Specific use(s)

Calibration solution

8. Exposure controls / personal protection**Exposure guidelines**

Occupational exposure limit values:

| CAS No. | Designation | Type | Limit value |
|---------|-------------|----------------|---|
| 56-81-5 | Glycerol | USA: OSHA: TWA | 15 mg/m ³ (total) |
| | | USA: OSHA: TWA | 5 mg/m ³ (respirable fraction) |

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Engineering controls

Provide good ventilation and/or an exhaust system in the work area.
See also information in chapter 7, section storage.

Eye protection: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Body protection: Wear suitable protective clothing.

Protective gloves according to OSHA Standard - 29 CFR: 1910.138.

Glove material: natural rubber, nitrile rubber, butyl caoutchouc (butyl rubber).

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Personal protection equipment

Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded.
Use filter according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

General protection and hygiene measures

Change contaminated clothing.

Wash hands before breaks and after work.

Follow up by applying protective skin cream.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Appearance: Physical state: liquid
Color: colorless

Odor: odorless

pH value: at 20 °C: approx. 6

Initial boiling point and boiling range: approx. 120 °C

Flash point/flash point range: approx. 180 °C

Density: at 20 °C: 1.2 g/mL

Water solubility: at 20 °C: soluble

Additional information

-

Ignition temperature: approx. 430 °C

10. Stability and reactivity

Reactivity: no data available

Chemical stability: Product is stable under normal storage conditions.

Possibility of hazardous reactions
No hazardous reactions known.

Conditions to avoid: Protect from excessive heat.

Materials to avoid: strong oxidizing agents, nitric acid, sulphuric acid, phosphorus oxides, peroxide compounds, hydrogen peroxide, halogens

Hazardous decomposition products:
In case of fire may be liberated: Acrolein, carbon monoxide and carbon dioxide.

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11. Toxicological information**Toxicological tests**

Toxicological effects:

- Acute toxicity (oral): Lack of data.
- Acute toxicity (dermal): Lack of data.
- Acute toxicity (inhalative): Lack of data.
- Skin corrosion/irritation: Lack of data.
- Eye damage/irritation: Lack of data.
- Sensitisation to the respiratory tract: Lack of data.
- Skin sensitisation: Lack of data.
- Germ cell mutagenicity/Genotoxicity: Lack of data.
- Carcinogenicity: Lack of data.
- Reproductive toxicity: Lack of data.
- Effects on or via lactation: Lack of data.
- Specific target organ toxicity (single exposure): Lack of data.
- Specific target organ toxicity (repeated exposure): Lack of data.
- Aspiration hazard: Lack of data.

General remarks

Information about Glycerol:
LD50 Rat, oral: 12600 mg/kg.
After ingestion of high quantities: Headache, diarrhea, cyanosis (blue coloration of the blood).

12. Ecological information**Ecotoxicity**

Aquatic toxicity: Information about Glycerol:
Daphnia toxicity: EC50 Daphnia magna: > 10000 mg/l/24 h.
Fish toxicity: LC50 Carassius auratus: > 5000 mg/l/24 h.

Persistence and degradability

Further details: Information about Glycerol:
Product is readily biodegradable.

Additional ecological information

Volatile organic compounds (VOC):
0 % by weight
General information: Do not allow to enter undiluted resp. in large quantities into surface water or into drains.

13. Disposal considerations**Product**

Recommendation: Dispose of waste according to applicable legislation.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation.
Non-contaminated packages may be recycled.

14. Transport information

USA: Department of Transportation (DOT)

Proper shipping name: Not controlled under DOT

Sea transport (IMDG)

Proper shipping name: Not restricted

Marine pollutant: No

Air transport (IATA)

Proper shipping name: Not restricted

Further information

No dangerous good in sense of these transport regulations.

15. Regulatory information

U.S. Federal Regulations

Glycerol: TSCA Inventory: listed
TSCA HPVC: not listed
Clean Air Act:
SOCMI Chemical: yes
NIOSH Recommendations:
Occupational Health Guideline: 0302

National regulations - EC member states

Labeling (67/548/EEC or 1999/45/EC)

Code letter and hazard symbol:

not applicable

R phrase(s): not applicable

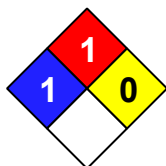
S phrase(s): not applicable

National regulations - Great Britain

Hazchem-Code: -

16. Other information

Hazard rating systems:



NFPA Hazard Rating:

Health: 1 (Slight)

Fire: 1 (Slight)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 1 (Slight)

Flammability: 1 (Slight)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

| | |
|-----------------|---|
| HEALTH | 1 |
| FLAMMABILITY | 1 |
| PHYSICAL HAZARD | 0 |
| X | |

Reason of change: General revision

Date of first version: 03.12.2009

Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.