

**Conductivity Standard 5 µS/cm**

Material number 238926

Page: 1 of 5

**1. Product and company identification****Product identifier**

Trade name: Conductivity Standard 5 µS/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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Switzerland

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Dept. responsible for information:

Susanne Näf-Rüdiger,

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**Emergency telephone number**

GIZ-Nord, Germany, Telephone: +49 (0)551-19240

**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 <sup>3</sup> (total)
		USA: OSHA: TWA	5 mg/m <sup>3</sup> (respirable fraction)

## 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

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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.

**Conductivity Standard 5 µS/cm**

Material number 238926

Page: 4 of 5

**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:  
 SOCOMI 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

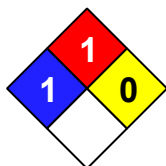
S phrase(s): not applicable

#### 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.