

**Conductivity Standard 1413  $\mu$ S/cm**

Material number 238928

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**1. Product and company identification****Product identifier**Trade name: Conductivity Standard 1413  $\mu$ S/cm**Relevant identified uses of the substance or mixture and uses advised against**

General use: Calibration of conductivity sensors

**Details of the supplier of the safety data sheet**

Company name: Hamilton Bonaduz AG

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Postal Code, city: 7402 Bonaduz

Switzerland

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Dept. responsible for information:

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Telephone: +41 58 610 12 76, E-mail: [SNaef@hamilton.ch](mailto:SNaef@hamilton.ch)**Emergency phone number****GIZ-Nord, Göttingen, Germany,****Telephone: +49 551-19240****2. Hazards identification****Emergency overview**

Appearance: Physical state at 68 °F and 101.3 kPa: liquid

Color: colorless

Odor: odorless

Classification: This material is classified as not hazardous.

**Regulatory status**

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

**Hazards not otherwise classified**

see section 11: Toxicological information

**3. Composition / Information on ingredients**

Chemical characterization: Aqueous solution of anorganic salts and organic compounds.

Additional information: Contains Glycerol: The maximum workplace exposure limits are, where necessary, listed in section 8.

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**4. First aid measures**

- In case of inhalation: Move victim to fresh air. In case of respiratory difficulties seek medical attention.
- Following skin contact: Remove residues with soap and water.  
Change contaminated clothing. In case of skin reactions, consult a physician.
- After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.
- After swallowing: Rinse mouth and drink large quantities of water. Induce vomiting when the affected person is not unconscious. If you feel unwell, seek medical advice.

**Most important symptoms/effects, acute and delayed**

After ingestion of high quantities: Headache, nausea, inebriation, vomiting, abdominal pain, drowsiness, diarrhea.

**Information to physician**

Treat symptomatically.

**5. Fire fighting measures**

- Flash point/flash point range:  
approx. 356 °F
- Auto-ignition temperature: No data available
- Suitable extinguishing media:  
Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.

**Specific hazards arising from the chemical**

In the event of a fire, the following may be produced when the water evaporates: Carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus. Wear suitable protective clothing.

**6. Accidental release measures**

- Personal precautions: Avoid contact with the substance. Do not breathe vapors. Provide adequate ventilation. Wear appropriate protective equipment. Remove all sources of ignition.
- Environmental precautions:  
Do not allow to penetrate into soil, waterbodies or drains.
- Methods for clean-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 contact with skin and eyes. Do not breathe vapors. Provide adequate ventilation.

Specific use(s) Calibration of conductivity sensors

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**Storage**

Requirements for storerooms and containers:

Keep container tightly closed. Store at room temperature. (Recommendation: 15 - 25 °C)

**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> inhalable fraction
		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.

**Personal protection equipment (PPE)**

Eye/face protection	Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.
Skin 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). Breakthrough time >= 480 min. Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Respiratory protection:	Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. Use filter type A (= against vapors of organic substances) according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

General hygiene considerations:

Change contaminated clothing.  
After work, wash hands and face.**9. Physical and chemical properties****Information on basic physical and chemical properties**

Appearance:	Physical state at 68 °F and 101.3 kPa: liquid Color: colorless
Odor:	odorless
Odor threshold:	No data available
pH value:	at 68 °F: approx. 6
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	approx. 248 °F
Flash point/flash point range:	approx. 356 °F
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available

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Density:	at 68 °F: approx. 1.2 g/mL
Water solubility:	at 68 °F: soluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Ignition temperature:	approx. 806 °F

**10. Stability and reactivity**

Reactivity:	No data available
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reactions known.
Conditions to avoid:	Protect from excessive heat.
Incompatible materials:	strong oxidizing agents, nitric acid, sulphuric acid, phosphorus oxides, peroxides, halogens.
Thermal decomposition:	No data available

**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.

**Symptoms**

After ingestion of high quantities: Headache, nausea, inebriation, vomiting, abdominal pain, drowsiness, diarrhea.

**General remarks**

After ingestion of high quantities: Headache, nausea, inebriation, vomiting, abdominal pain, drowsiness, diarrhea.

## 12. Ecological information

### Ecotoxicity

Further details: No data available

### Mobility in soil

No data available

### Persistence and degradability

Further details: No data available

### Additional ecological information

General information: Do not allow to enter into ground-water, surface water or 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 restricted

### 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

### National regulations - 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 - U.S. State Regulations

Glycerol:

California Proposition 65 code: not listed  
Massachusetts Haz. Substance codes:  
2,4  
Minnesota Haz. Substance:  
Codes: A - Ratings: --  
Pennsylvania Haz. Substance code: -  
Washington Air Contaminant:  
TWA: 10 mg

### National regulations - Great Britain

Hazchem-Code: -

## 16. Other information

Hazard rating systems:



NFPA Hazard Rating:

Health: 1 (Slight)  
Fire: 0 (Minimal)  
Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 1 (Slight)  
Flammability: 0 (Minimal)  
Physical Hazard: 0 (Minimal)  
Personal Protection: X = Consult your supervisor

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
	X

Reason of change: General revision

Date of first version: 4/20/2011

### 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.