1. Product and company identification

Product identifier
Trade name: Conductivity Standard 100 µS/cm
This safety data sheet pertains to the following products:
Article number 238934, 238977

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
Street/POB-No.: Via Crusch 8
Postal Code, city: 7402 Bonaduz
Switzerland
WWW: www.hamilton.ch
Telephone: +41 81 660 62 76
Telefax: +41 81 660 60 70
Dept. responsible for information:
Susanne Naf-Rüdiger,
Telephone: +41 81 660 62 76, E-mail SNaef@hamilton.ch

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

2. Hazards identification

Emergency overview
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 of inorganic salts and organic compounds.
Additional information: Contains Glycerol: The maximum workplace exposure limits are expressed in Section 8, as may be required.

4. First-aid measures

After inhalation: Move victim to fresh air. In case of respiratory difficulties seek medical attention.

In case of 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. 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 and effects, both acute and delayed**

No data available

**Information to physician**

Treat symptomatically.

## 5. Firefighting measures

**Flash point / flash point range:**

approx. 356 °F

**Suitable extinguishing media:**

Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.

**Special hazards arising from the substance or mixture**

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

**Special protective equipment 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. Remove all sources of ignition.

**Environmental measures:**

Do not allow to penetrate into soil, waterbodies or drains.

**Methods for cleaning up:**

Soak up with absorbent materials such as sand, siliceus 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.

**Storage**

Requirements for storerooms and containers:

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

**Specific use(s)**

Calibration of conductivity sensors

## 8. Exposure controls / personal protection

**Exposure guidelines**

Occupational exposure limit values:

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Designation Type</th>
<th>Limit value</th>
</tr>
</thead>
<tbody>
<tr>
<td>56-81-5</td>
<td>Glycerol</td>
<td></td>
</tr>
<tr>
<td></td>
<td>USA: ACGIH: TWA</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td></td>
<td>USA: OSHA: TWA</td>
<td>15 mg/m³ (total)</td>
</tr>
<tr>
<td></td>
<td>USA: OSHA: TWA</td>
<td>5 mg/m³ (respirable fraction)</td>
</tr>
</tbody>
</table>
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.
Glove material: natural rubber, nitrile rubber, butyl caoutchouc (butyl rubber).
Breakthrough time >= 480 min.
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 type A (= against vapors of organic substances) according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

General protection and hygiene measures
Change contaminated clothing.
After work, wash hands and face.

9. Physical and chemical properties

Appearance
Physical state: liquid
Color: colorless
Odor: odorless

Important health, safety and environmental information
Boiling temperature / boiling range: approx. 248 °F
Flash point / flash point range: approx. 356 °F
Ignition temperature: approx. 806 °F
Density: at 68 °F: approx. 1,2 g/mL
pH value: at 68 °F: approx. 6
Water solubility: at 68 °F: soluble

10. Stability and reactivity

Reactivity: No data available
Chemical stability: Product is stable under normal storage conditions.
Polymerisation: No hazardous reactions known.
Conditions to avoid: Protect from excessive heat.
Materials to avoid: strong oxidizing agents, nitric acid, sulphuric acid, phosphorus oxides, peroxides, halogens.
Hazardous decomposition products:
In the event of a fire, the following may be produced when the water evaporates: Carbon monoxide and carbon dioxide.
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, dizziness, diarrhea.

General remarks

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

12. Ecological information

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 controlled under DOT

Sea transport (IMDG)

Proper shipping name: Not restricted

Marine pollutant: No
Air transport (IATA)
Proper shipping name: Not restricted
Canada: Transportation of Dangerous Goods (TDG)
Shipping name: Not controlled under TDG

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:
  - SOCM1 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: 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

Reason of change:
General revision
Date of first version: 20.04.2011

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.