EU SAFETY DATA SHEET

Conductivity Standard 100 mS/cm
Material number 238935

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

1.1 Product identifier
Trade name: Conductivity Standard 100 mS/cm

1.2 Relevant identified uses of the substance or mixture and uses advised against
General use: Calibration of conductivity sensors

1.3 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 NÄF-RÜDIGER,
Telephone: +41 81 660 62 76, E-mail SNaef@hamilton.ch

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to EC regulation 1272/2008 (CLP)
This mixture is classified as not hazardous.

Classification according to Directive 67/548/EEC or 1999/45/EC
This preparation is classified as not hazardous.

2.2 Label elements
Labelling (CLP)
Hazard statements: not applicable
Safety precautions: not applicable

Labelling (67/548/EEC or 1999/45/EC)
R phrase(s): not applicable
S phrase(s): not applicable

2.3 Other hazards
No risks worthy of mention.
SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

3.2 Mixtures
Chemical characterization: Aqueous solution of anorganic salts and organic compounds.
Additional information: Contains Glycerol: The maximum workplace exposure limits are expressed in Section 8, as may be required.

SECTION 4: First aid measures

4.1 Description of 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.

4.2 Most important symptoms and effects, both acute and delayed
No data available

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

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media: Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.

5.2 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.

5.3 Advice for firefighters
Special protective equipment for firefighters: Wear self-contained breathing apparatus. Wear suitable protective clothing.
Additional information: Hazchem-Code: -

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Avoid contact with the substance. Do not breathe vapours. Provide adequate ventilation. Remove all sources of ignition.

6.2 Environmental precautions
Do not allow to penetrate into soil, waterbodies or drains.
6.3 Methods and material for containment and 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.

6.4 Reference to other sections

Refer additionally to chapter 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Avoid contact with skin and eyes. Do not breathe vapours. Provide adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers: Keep container tightly closed. Store at room temperature. (Recommendation: 15 - 25 °C)

Storage class: 12 Non-combustible liquids

7.3 Specific end use(s)

Calibration of conductivity sensors

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Designation</th>
<th>Type</th>
<th>Limit value</th>
</tr>
</thead>
<tbody>
<tr>
<td>56-81-5</td>
<td>Glycerol</td>
<td>Great Britain: WEL-TWA</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ireland: 8 hours</td>
<td>10 mg/m³</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Provide good ventilation and/or an exhaust system in the work area.

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded. Use filter type A (= against vapours of organic substances) according to EN 14387.

Hand protection: Protective gloves according to EN 374. Glove material: natural rubber, nitrile rubber, butyl caoutchouc (butyl rubber). Breakthrough time >= 480 min. Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Wear suitable protective clothing.

General protection and hygiene measures: Change contaminated clothing. After work, wash hands and face.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Boiling temperature / boiling range</td>
<td>approx. 120 °C</td>
</tr>
<tr>
<td>Flash point / flash point range</td>
<td>approx. 180 °C</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>approx. 430 °C</td>
</tr>
<tr>
<td>Density at 20 °C: approx. 1.2 g/mL</td>
<td></td>
</tr>
<tr>
<td>pH value at 20 °C: approx. 6</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>soluble</td>
</tr>
</tbody>
</table>

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

refer to 10.3

10.2 Chemical stability

Product is stable under normal storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known.

10.4 Conditions to avoid

Protect from excessive heat.

10.5 Incompatible materials

strong oxidizing agents, nitric acid, sulphuric acid, phosphorus oxides, peroxides, halogens.

10.6 Hazardous decomposition products

In the event of a fire, the following may be produced when the water evaporates: Carbon monoxide and carbon dioxide.
SECTION 11: Toxicological information

11.1 Information on toxicological effects

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, diarrhoea.

General remarks

With correct and proper handling/application, no cases health hazards are known.

SECTION 12: Ecological information

12.1 Toxicity

Water Hazard Class: 1 = slightly hazardous to water

12.2. Persistence and degradability

Further details: No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.
SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 16 10 02 = Aqueous liquid wastes destined for off-site treatment.
Recommendation: Dispose of waste according to applicable legislation.

Contaminated packaging

Waste key number: 15 01 02 = Plastic packaging.
Recommendation: Dispose of waste according to applicable legislation.
Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number
not applicable

14.2 UN proper shipping name
ADR/RID, IMDG, IATA: Not restricted

14.3 Transport hazard class(es)
not applicable

14.4 Packing group
not applicable

14.5 Environmental hazards
Marine pollutant - IMDG: No

14.6 Special precautions for user
No dangerous good in sense of these transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations - Great Britain

Hazchem-Code: -
National regulations - USA

Hazard rating systems:

<table>
<thead>
<tr>
<th>NFPA Hazard Rating:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health: 1 (Slight)</td>
</tr>
<tr>
<td>Fire: 0 (Minimal)</td>
</tr>
<tr>
<td>Reactivity: 0 (Minimal)</td>
</tr>
</tbody>
</table>

HMIS Version III Rating:

<table>
<thead>
<tr>
<th>Health: 1 (Slight)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability: 0 (Minimal)</td>
</tr>
<tr>
<td>Physical Hazard: 0 (Minimal)</td>
</tr>
</tbody>
</table>

Personal Protection: X = Consult your supervisor

15.2 Chemical Safety Assessment

No data available

SECTION 16: Other information

Further information

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

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

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.