GPS Safety Summary
(2-hydroxyethyl)(3-hydroxypropyl)dimethylammonium chloride

Chemical Identity

Name: (2-hydroxyethyl)(3-hydroxypropyl)dimethylammonium chloride

CAS number: 78182-00-0

Molecular formula: C$_7$H$_{18}$NO$_2$.Cl

Structure

IUPAC name: 3-hydroxy-N-(2-hydroxyethyl)-N,N-dimethylpropan-1-aminium chloride

BASF brand names:
DMAc

For synonyms see end of document

Product Uses

The aqueous solution is exported outside of the EU and is used as an intermediate and raw material for the production of a dyestuff.

Benefits

DMAc is an excellent solvent with high solving power for high molecular-weight polymers and synthetic resins. DMAc is used as a reaction solvent for the manufacture of acryl and polyamide fibres. DMAc is also used for the manufacture of agro chemicals, dyes and pharmaceuticals.
Health Information

Human Health Safety Assessment

Note: The information contained in the table below may be useful to someone handling the concentrated substance such as a manufacturer or transporter. Consumers are not likely to come in contact with the concentrated substance. The data, while verifiable, are not intended to be comprehensive nor replace the data found in the (M)SDS.

<table>
<thead>
<tr>
<th>Effect Assessment</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity</td>
<td>Of low toxicity after single ingestion.</td>
</tr>
<tr>
<td>Irritation</td>
<td>Not irritating to the skin and the eyes.</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>The substance was not mutagenic in bacteria.</td>
</tr>
</tbody>
</table>

Environmental Information

Environment Safety Assessment

Note: The information in this chapter is intended to provide brief and general information of this substance’s environmental impact. The results in the table below refer to testing performed with the concentrated substance. The data contained in this section explain the relative effect of the concentrated substance on the environment, as defined by certain tests.

<table>
<thead>
<tr>
<th>Effect Assessment</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Toxicity</td>
<td>With high probability acutely not harmful to aquatic life.</td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>Readily biodegradable.</td>
</tr>
<tr>
<td>Bioaccumulation potential</td>
<td>Accumulation in organisms is not expected.</td>
</tr>
</tbody>
</table>

Physical/Chemical Properties

Phys/Chem Safety Assessment

- Hydroxyethyl-hydroxypropyl dimethyl-ammonium-chloride is a light brown organic liquid with a product-specific odor which does not have flammable or explosive properties.

Note: The results in the table below refer to testing performed with the concentrated substance. It is not intended to be comprehensive or to replace information found in the (M)SDS.
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Melting / freezing point</td>
<td>73 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>100 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 200 °C</td>
</tr>
<tr>
<td>Flammability</td>
<td>Non flammable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Non explosive</td>
</tr>
<tr>
<td>Self-ignition temperature</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**Exposure Potential**

- **Workplace exposure:** Hydroxyethyl-hydroxypropyl dimethyl-ammonium-chloride is used as an intermediate in industrial settings under strictly controlled and rigorously contained conditions. Therefore, releases and subsequent worker exposure are unlikely. Nevertheless, workers should follow the recommended safety measures in the extended Safety Data Sheet (eSDS).

- **Consumer exposure:** There is no intended use of hydroxyethyl-hydroxypropyl dimethyl-ammonium-chloride in consumer products. Therefore, a health hazard due to exposure for the consumer is negligible.

- **Environmental exposure:** Hydroxyethyl-hydroxypropyl dimethyl-ammonium-chloride is with high probability not harmful to aquatic organisms and hence the substance is not considered to pose an unacceptable risk for the environment. It will almost entirely be removed by biodegradation during waste water treatment processes. Insignificant amounts that may reach surface waters will not exist in the environment for extended time periods due to degradation by microorganisms. Conclusively, all identified uses are safe for the environment based on the scientific facts summarized above and when carried out in compliance with recommended risk management measures and applicable regulations.

**Recommended Handling Measures**

*The recommended safety measures generally apply in contact with the concentrated substance. It is NOT intended to replace the comprehensive guidance found in the (M)SDS, only supplement it. Please refer to the (M)SDS for specific safety and first aid measures.*
When using concentrated chemicals always make sure that there is adequate ventilation. Always use appropriate chemical resistant gloves to protect your hands and skin and always wear eye protection such as chemical goggles. Do not eat, drink, or smoke where chemicals are handled, processed, or stored. Wash hands and skin following contact. If the substance gets into your eyes, rinse eyes thoroughly for at least 15 minutes with tap water and seek medical attention. For specific advice please consult the corresponding (Material) Safety Data Sheet of the substance.

All effluent releases that may include the substance must be directed to a (municipal) waste water treatment plant that removes the substance from the final releases to the receiving water.

Regulatory Information / Classification and Labeling

Under GHS substances are classified according to their physical, health, and environmental hazards. The hazards are communicated via specific labels and the (M)SDS. GHS attempts to standardize hazard communication so that the intended audience (workers, consumers, transport workers, and emergency responders) can better understand the hazards of the chemicals in use.

Note: The hazard statements and symbols presented here refer to the hazard properties of the concentrated substance and are meant to provide a brief overview of the substance’s labeling. It is not intended to be comprehensive or to replace information found in the (M)SDS.

Labeling according to UN GHS
UN GHS is the basis for country specific GHS labeling

Signal word:
Warning

Hazard statements:
H303: May be harmful if swallowed.
Additional information


Most commonly used synonyms

» 1-Propanaminium, 3-hydroxy-N-(2-hydroxyethyl)-N,N-dimethyl-, chloride
» (2-hydroxyethyl)(3-hydroxypropyl)dimethylammonium chloride
» (2-Hydroxyethyl)(3-hydroxypropyl)dimethylammoniumchlorid

Disclaimer

This Product Safety Summary is intended to provide a general overview of the chemical substance. It contains basic information and is not intended to provide emergency response information, medical information or treatment information. The summary cannot be relied on to provide in-depth safety and health information. In-depth safety and health information must be obtained from the Material Safety Data Sheet ((M)SDS) for the chemical substance.

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Contact

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For further information on this substance or GPS safety summaries in general, please contact:
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