GPS Safety Summary

Oxydipropanol

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. This information must be obtained from the Material Safety Data Sheet ((M)SDS) for this chemical substance. Before handling or using Oxydipropanol the relevant (M)SDS has to be consulted.

Chemical Identity

Name: Oxydipropanol

CAS number: 25265-71-8

Molecular formula: C₆H₁₄O₃

Structure:

IUPAC name: 1,1'-oxydipropan-1-ol

BASF brand names:
Dipropylene glycol (DPG)

For synonyms see end of document

2-(2-hydroxypropoxy)-1-propanol (CAS No. 106-62-7)

1,1N-oxybis(2-propanol) (CAS No. 110-98-5)
2,2N-oxybis(1-propanol) (CAS No. 108-61-2)

**Product Description and Uses**

Oxydipropanol (dipropylene glycol) is a mixture of three structural isomers: 2-(2-hydroxypropoxy)-1-propanol (CAS No. 106-62-7), 1,1N-oxybis(2-propanol) (CAS No. 110-98-5), and 2,2N-oxybis(1-propanol) (CAS No. 108-61-2). Dipropylene glycol is composed of these structural isomers, whereas the first 2 mentioned are the main isomers.

Dipropylene glycol is a colourless, low-volatility, almost odourless, oily liquid that is miscible with water and common organic solvents.

Dipropylene glycol is used as intermediate, processing aid and as solvent in a variety of downstream applications like dyes, printing inks, hydraulic fluids, lubricants, metal surface treating agents, pressure and heat transfer agents, auxiliary in the leather industry, additive in extractants, e.g. for the separation of aliphatic and aromatic hydrocarbons. DPG can also be used as humectant, in formulations of agrochemicals and in personal care products. Examples of applications for the products of these reactions are plasticizers,

**Health Information**

**Human Health Safety Assessment**

<table>
<thead>
<tr>
<th>Effect Assessment</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity</td>
<td>Virtually nontoxic after a single ingestion and single skin contact.</td>
</tr>
<tr>
<td>Irritation</td>
<td>Not irritating to skin and eyes.</td>
</tr>
<tr>
<td>Sensitization</td>
<td>Skin sensitizing effects were not observed in animal studies.</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>The substance was not mutagenic in bacteria, in mammalian cell culture and in animals.</td>
</tr>
</tbody>
</table>
Carcinogenicity

In long-term studies in rats and mice in which the substance was given by drinking-water, a carcinogenic effect was not observed.

Toxicity after repeated exposure

No adverse effects were observed after repeated exposure in animal studies.

Toxicity for reproduction

Not considered to be toxic for reproduction. No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Note: For more information on the health hazards of this substance and recommended protective equipment, please refer to the relevant (M)SDS

Environmental Information

Environment Safety Assessment

<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 organisms.</td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>Readily biodegradable.</td>
</tr>
<tr>
<td>Bioaccumulation potential</td>
<td>Accumulation in organisms is not to be expected.</td>
</tr>
</tbody>
</table>

Note: For more information on the environmental hazards of this substance and recommended measures, please refer to the (M)SDS

Physical/Chemical Properties

Phys/Chem Safety Assessment

- Oxydipropanol is a colorless and odorless liquid. The substance is very hygroscopic and miscible with water. It is non-flammable and non-explosive.

<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>&lt; -20 °C</td>
</tr>
</tbody>
</table>
Boiling point & 227 °C at 98.36 kPa  
Flash point & 130 ± 2 °C at 98.88 kPa  
Flammability & Non-flammable  
Explosive properties & Non-explosive  
Self-ignition temperature & 332 ± 5 °C at 98.96 - 100.18 kPa

Note: For further information, see the relevant (M)SDS

Exposure Potential

Oxydipropanol is an industrial solvent and chemical intermediate. Although BASF does not sell this substance for direct consumer use or directly to consumers, the public at large or consumers may be exposed to it from processing or use as a raw material for a variety of goods used by consumers or professionals. Based on the uses of this substance the public could be exposed through:

- **Workplace exposure**: Based on the very low toxicity of oxydipropanol exposure is considered to be without risk. Nevertheless, workplace exposure is controlled and minimized by the use of proper occupational handling procedures and personal protection and safety equipment.

- **Consumer exposure**: Based on the very low toxicity of oxydipropanol exposure is considered to be without risk. Oxydipropanol released during handling is of no concern for the health of consumers since consumers will not come into contact with harmful levels of oxydipropanol.

- **Environmental exposure**: Oxydipropanol 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 is readily biodegradable and will therefore be degraded within the wastewater treatment process. Furthermore, it is not expected to accumulate in the food chain. 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**

Before handling or using this substance, please consult the relevant (M)SDS. It contains the required handling measures, emergency response information, medical information or treatment information.

**Regulatory Information / Classification and Labeling**

Regulations exist that govern manufacture, sales, transportation, use and disposal of Oxydipropanol. These regulations may vary by city, state, country or geographic region. Information can be found by consulting the relevant (M)SDS.

Oxydipropanol was registered under REACH Regulation in the EU.

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.

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

**Based on available data, labeling is currently not required.**

**Additional information**

1. IFA GESTIS-database on hazardous substances  
   http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp

2. Information on registered substance (ECHA)  
3. BASF Homepage

4. OECD SIDS

**Most commonly used synonyms**

» Propanol, oxybis-
» Di-1,2-propyleneglycol

**Disclaimer**

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**Contact**

For further information on this substance or GPS safety summaries in general, please contact: info.gps@basf.com