GPS Safety Summary
D-Glucopyranose, oligomeric, C10-16-alkyl glycosides

Chemical Identity

Name: D-Glucopyranose, oligomeric, C10-16-alkyl glycosides
CAS number: 110615-47-9
Molecular formula: Not applicable, UVCB.

Product Uses

D-Glucopyranose, oligomeric, C10-16 (even numbered) alkyl glycosides belongs to the alkyl polyglucosides (APG) surfactants and is manufactured by reaction of dextrose with fatty alcohol to alkyl polyglucoside. APGs are surface active agents very useful in washing and cleaning products, in coatings and inks, in metal working fluids and rolling oils, in cosmetics and personal care products, in fertilizers, in fuel additives and fuel blends, in crop protection products and in construction chemicals.

Benefits

Alkyl polyglucoside (APG®) surfactants are obtained from renewable, vegetable-derived raw materials such as vegetable oils and starch. Used in the recommended concentrations, which are significantly lower than the concentrated product, their first-rate environmental and skin compatibility profiles fit in well with consumer demands for wellness, green solutions, mildness to human skin, and safety for human health. Furthermore, they contribute to various performance benefits in personal and home care products as well as industrial and institutional (I&I) applications.

Date of Issue: March 2012
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>Virtually nontoxic after single ingestion. Virtually nontoxic after short-term skin contact. The vapor pressure of the liquid substance is very low. Exposure to vapor can thus be precluded.</td>
</tr>
<tr>
<td>Irritation</td>
<td>Skin contact causes irritation. Risk of serious damage to the eyes.</td>
</tr>
<tr>
<td>Sensitization</td>
<td>Skin sensitizing effects were not observed in animal studies.</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>Results from a number of mutagenicity studies with microorganisms and mammalian cell culture are available. Taking into account all of the information, there is no indication that the substance is mutagenic.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>The whole of the information available provides no indication of a carcinogenic effect.</td>
</tr>
<tr>
<td>Toxicity after repeated exposure</td>
<td>No adverse effects were observed after repeated oral exposure in animal studies.</td>
</tr>
<tr>
<td>Toxicity for reproduction</td>
<td>The results of animal studies gave no indication of a fertility impairing effect. In animal studies the substance did not cause malformations.</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.
### Effect Assessment

<table>
<thead>
<tr>
<th>Effect Assessment</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Toxicity</td>
<td>Toxic to aquatic life.</td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>Readily biodegradable.</td>
</tr>
<tr>
<td>Bioaccumulation potential</td>
<td>Significant accumulation in organisms is not to be expected.</td>
</tr>
</tbody>
</table>

### Physical/Chemical Properties

#### Phys/Chem Safety Assessment

- The water free substance is a dark brown solid, with undefined appearance 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>Solid</td>
</tr>
<tr>
<td>Melting / freezing point</td>
<td>&gt; 150 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>&gt; 301 °C at ca. 1013 mbar, Decomposition</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</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>The test item has no Relative Self-Ignition Temperature according to the definition on the EEC-directive 92/69/EEC, method A.16.</td>
</tr>
</tbody>
</table>

### Exposure Potential

- **Workplace exposure:** Exposure can occur either in an APG manufacturing facility or in the various industrial facilities that use APG. Those working with APG could be exposed during maintenance, sampling, testing, handling or other procedures. Each facility should have a thorough training program for employees and appropriate work processes, as well as safety equipment in place to limit unnecessary exposure. The substance may cause skin irritation and eye damaging effects; no systemic effects. For that reason: always use protective goggles and gloves during the handling and application activities.

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and workers should follow the recommended safety measures in the extended Safety Data Sheet (eSDS).

- **Consumer exposure**: The concentration of APG in consumer products is generally low; therefore APG does not pose any hazard to the consumer. However, carefully read and follow the instructions given on product labels for proper use.

- **Environmental exposure**: D-Glucopyranose, oligomeric, C10-16 (even numbered) alkyl glycosides are readily biodegradable and will therefore be degraded within the wastewater treatment process and the environment. Though they are considered to be acutely toxic to aquatic organisms, D-Glucopyranose, oligomeric, C10-16 (even numbered) alkyl glycosides do not 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**

*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:
Danger

Hazard statements: (> 12 and < 30 %)
H318: Causes serious eye damage.
H401: Toxic to aquatic life

Hazard statements: (> 30 %)
H318: Causes serious eye damage.
H315: Causes skin irritation.
H401: Toxic to aquatic life

Additional information


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

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