GPS Safety Summary

Hexasodium 2,2'-[vinylenebis[(3-sulphonato-4,1-phenylene)imino[6-(diethylamino)-1,3,5-triazine-4,2-diyl]imino]]bis(benzene-1,4-disulphonate)

Chemical Identity

Name: Hexasodium 2,2'[vinylenebis[(3-sulphonato-4,1-phenylene)imino[6-(diethylamino)-1,3,5-triazine-4,2-diyl]imino]]bis(benzene-1,4-disulphonate)

CAS number: 41098-56-0

Molecular formula: C_{40}H_{44}N_{12}O_{18}S_{6}.6Na

Structure

![Structure of the compound]

IUPAC name: hexasodium 2,2'- (ethene-1,2-diylbis((3-sulphonato-4,1-phenylene)imino[6-(diethylamino)-1,3,5-triazine-4,2-diyl]imino)) dibenzene-1,4-disulphonate

BASF brand names: TINOPAL SPP

For synonyms see end of document

Product Uses

The substance is a whitening agent used in detergents, cleaners, paper articles, textiles and textile dyes in order to enhance their optical brightness and whiteness.

Benefits

TINOPAL whitening agents are well-established optical brightening agents for whitening paper and textiles. The range includes products for application in wet end, size press and coating for...
cost-efficient whiteness management. With TINOPAL whitening agents, BASF also offers customers an environment-friendly solution that helps reduce COD, BOD and nitrogen outlet in white paper production.

**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><strong>Acute Toxicity</strong></td>
<td>Virtually nontoxic after single ingestion, short-term skin contact and short-term inhalation. This statement has been derived from substances of similar structure.</td>
</tr>
<tr>
<td><strong>Irritation</strong></td>
<td>Not irritating to the skin and eyes. This statement has been derived from substances of similar structure.</td>
</tr>
<tr>
<td><strong>Sensitization</strong></td>
<td>Skin sensitizing effects were not observed.</td>
</tr>
<tr>
<td><strong>Mutagenicity</strong></td>
<td>Not considered to be mutagenic. The product has not been fully tested. Information is partly obtained from substances of similar structure.</td>
</tr>
<tr>
<td><strong>Carcinogenicity</strong></td>
<td>Not considered to be carcinogenic. The result of animal studies with a product of similar structure gave no indication of carcinogenic properties.</td>
</tr>
<tr>
<td><strong>Toxicity after repeated exposure</strong></td>
<td>Not considered to be toxic after repeated exposure. This statement has been derived from substances of similar structure. Repeated oral uptake of the similar substance did not cause substance-related effects.</td>
</tr>
<tr>
<td><strong>Toxicity for reproduction</strong></td>
<td>Not considered to be toxic for reproduction. This statement has been derived from substances of similar structure.</td>
</tr>
</tbody>
</table>

**Environmental Information**

**Environmental Safety Assessment**
**Effect 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 life.</td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>Not readily biodegradable.</td>
</tr>
<tr>
<td>Bioaccumulation potential</td>
<td>Not bioaccumulative.</td>
</tr>
</tbody>
</table>

**Physical/Chemical Properties**

**Phys/Chem Safety Assessment**

- The concentrated substance is a slightly yellow to light brown powder. It is soluble in water. The substance is non flammable, non-explosive and has no oxidising properties.

**Property**

<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; 300 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not applicable</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>&gt; 300 °C</td>
</tr>
</tbody>
</table>

**Exposure Potential**

- **Workplace exposure**: Based on the very low toxicity of this whitening agent a health hazard due to exposure for workers is negligible. Hexasodium 2,2'-[vinylenebis[(3-sulphonato-4,1-phenylene)imino][6-(diethylamino)-1,3,5-triazine-4,2-diyl]imino]bis(benzene-1,4-disulphonate) released during manufacturing or handling
is of no concern for the health of workers since it does not induce any adverse effects at relevant doses. Nevertheless, workers should follow the recommended safety measures in the Safety Data Sheet (SDS).

- **Consumer exposure:** Based on the very low toxicity of this whitening agent a health hazard due to exposure for the consumer is negligible. Hexasodium 2,2'-[vinylenebis[(3-sulphonato-4,1-phenylene)imino][6-(diethylamino)-1,3,5-triazine-4,2-diyl]imino]bis(benzene-1,4-disulphonate) released during handling is of no concern for the health of consumers since consumers will not come into contact with harmful levels of this whitening agent. Nevertheless consumer should always read product information before use and follow the label/use instructions.

- **Environmental exposure:** The toxicity of this whitening agent towards aquatic organisms is very low and it does not accumulate in the food chain. Therefore the chemical is not expected to pose an unacceptable risk for the environment and an exposure estimation is not considered necessary. 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 Labelling**
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 labelling. 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

**Based on the available data, no labeling is currently required.**

**Additional information**

1. **IFA GESTIS-database on hazardous substances**

2. **Information on registered substance (ECHA)**

3. **BASF Product Finder**
   [http://www.basf.com/group/corporate/de/Product-finder/index](http://www.basf.com/group/corporate/de/Product-finder/index)

**Most commonly used synonyms**

- Fluorescent Brightener 357
- Tinopal SCP
- Tinopal STP

**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