Product Safety Summary Sheet

DuPont™ o-Phenylenediamine

Chemical Identification, Product Identification or Common Name:

CAS number (EC inventory): 95-54-5
CAS Index name: 1,2-Benzenediamine (o-Phenylenediamine)
EC Number: 202-430-6
IUPAC name: Benzene-1,2-diamine

Product Uses and Applications:
o-Phenylenediamine is used as a chemical intermediate in the synthesis of pigments.

Physical Properties of the Chemical or Product:
o-Phenylenediamine is a solid at room temperature, with a slight aromatic odor.
o-Phenylenediamine has a boiling point of 256 °C and a melting point of 101°C.

Exposure Potential:

Workplace exposure: Workers should follow the recommended safety measures contained within the Safety Data Sheet (SDS) and on any product packaging. Employees should be trained in the appropriate work processes and safety equipment to limit unnecessary exposure to chemical substances. Occupational use of this substance is considered to be safe provided the recommended safety measures in the SDS are followed. Occupational exposure may occur through inhalation.

Consumer exposure: No known exposure to consumers is expected once o-Phenylenediamine is reacted to form another organic chemical.
**Environmental exposure:** Exposure to the environment is not expected during the usage of o-Phenylenediamine as a precursor for other organic chemicals. o-Phenylenediamine is handled within closed systems by industrial processors.

**Health Information**

*Note: The information contained in this section may be useful to someone handling the pure undiluted substance such as a manufacturer or transporter. Consumers are not likely to come in contact with the pure substance. For more information on health hazards and recommended protective equipment, please refer to the SDS.*

Exposures may affect human health as follows:

<table>
<thead>
<tr>
<th>Effect Assessment</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irritation</td>
<td>Skin: May cause skin irritation, discomfort, itching, redness, or swelling. Eye: Causes eye irritation; may cause irritation with discomfort, pain, tearing, swelling, redness, or temporary visual impairment. Respiratory tract: may cause irritation of the respiratory system.</td>
</tr>
<tr>
<td>Sensitization</td>
<td>May cause an allergic skin reaction in susceptible persons by skin contact, with itching, rash, or swelling.</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>Caused genetic damage in cultured bacterial and animal cells.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Limited evidence of carcinogenic effect in experimental animals.</td>
</tr>
<tr>
<td>Toxicity after repeated exposure</td>
<td>No significant toxicity anticipated as a result of repeated exposures.</td>
</tr>
<tr>
<td>Toxicity to Reproduction / Development</td>
<td>No data.</td>
</tr>
</tbody>
</table>

**Environmental Information**

*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 non-formulated, undiluted substance. The data does not replace the data given in the SDS. For more information and recommended protective measures please refer to the SDS.*

<table>
<thead>
<tr>
<th>Effect Assessment</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Toxicity</td>
<td>Very toxic to aquatic life with long-lasting effects.</td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>No data.</td>
</tr>
<tr>
<td>Bioaccumulation potential</td>
<td>No data.</td>
</tr>
</tbody>
</table>

**Risk Management**
Based on the closed system characteristics employed, there are no significant exposures to o-Phenylenediamine expected during manufacturing and polymerization uses.

**Consumer Risk Management:**
Because of the closed processes used in the manufacture of o-Phenylenediamine, there are no expected exposures for consumers.

**Regulatory Information**
Always refer to the Safety Data Sheet (SDS) for guidance on regulatory restrictions that may govern the manufacture, sale, transportation, use and/or disposal of this chemical or product. Regulations may vary by region, country, state, county, city, or local government. Consult environmental agencies for guidance on acceptable disposal practices.

**First Aid Information:**
For all First Aid or Emergency information, consult the Safety Data Sheet (SDS).

**Information Sources:**
Data is compiled from a variety of sources, including publicly available documents, internal data and other sources such as, but not limited to, Chemical Safety Reports and Safety Data Sheets (SDS).

**Contact Information:**
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