MSDS for 4,4’-DIAMINODIPHENYL SULFONE(44DDS)

**** MATERIAL SAFETY DATA SHEET ****
4,4’-DIAMINODIPHENYL SULFONE

Section 1 - Chemical Product and Company Identification

MSDS Name 4,4’-DIAMINODIPHENYL SULFONE
Synonyms Dapsone, DDS, 4,4’-Sulfonyldianiline
Manufacturer's Name Atul Limited – PP Site
Manufacturer’s Address P.O. ATUL, Dist: Valsad, Gujarat - 396020, India
Emergency Telephone No.: ++91 2632 233204, 233205, 233621
Fax No.: ++91 2632 233639, 233053

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-08-0</td>
<td>4,4’-DIAMINODIPHENYL SULFONE</td>
<td>201-248-4</td>
</tr>
</tbody>
</table>

Hazard Symbols: XN
Risk Phrases: 22

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Harmful if swallowed. Cancer suspect agent.

POTENTIAL HEALTH EFFECTS

Eye
May cause eye irritation.

Skin
May cause skin irritation.

Ingestion
Harmful if swallowed.

Inhalation
May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

Chronic
Not available.

Section 4 - First aid Measures

Eyes
Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Skin
Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion
Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
**Inhalation**  Remove from exposure to fresh air immediately.

**Notes to Physician**

**Section 5 - Fire Fighting Measures**

**General Information**  As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media**  In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

**Section 6 - Accidental Release Measures**

**General Information**  Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks**  Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal.

**Section 7 - Handling and Storage**

**Handling**  Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

**Storage**  Store in a cool, dry place. Keep container closed when not in use.

**Section 8 - Exposure Controls, Personal Protection**

**Engineering Controls**  Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eyes**  Wear safety glasses and chemical goggles if splashing is possible.

**Skin**  Wear appropriate protective gloves and clothing to prevent skin exposure.

**Clothing**  Wear appropriate protective clothing to minimize contact with skin.

**Respirators**  Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

**Section 9 - Physical and Chemical Properties**

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Crystalline powder</th>
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<tbody>
<tr>
<td>Appearance</td>
<td>white - beige</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Vapor Pressure Not available.
Viscosity Not available.
Boiling Point Not available.
Freezing/Melting Point 173.00 - 178.00 deg C
Autoignition Temperature Not available.
Flash Point Not available.
Explosion Limits, lower Not available.
Explosion Limits, upper Not available.
Decomposition Temperature
Solubility in water insoluble
Specific Gravity/Density
Molecular Formula C12H12N2O2S
Molecular Weight 248.30

Section 10 - Stability and Reactivity

Chemical Stability Stable under normal temperatures and pressures.
Conditions to Avoid Incompatible materials, strong oxidants.
Incompatibilities with Other Materials Strong oxidizing agents.
Hazardous Decomposition Products Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases,
carbon dioxide, nitrogen.
Hazardous Polymerization Has not been reported.

Section 11 - Toxicological Information

RTECS# CAS# 80-08-0: BY8925000
LD50/LC50 CAS# 80-08-0: Oral, mouse: LD50 = 250 mg/kg; Oral, rat: LD50 = 1 gm/kg; Skin, rabbit: LD50 = >4 gm/kg.
Carcinogenicity 4-AMINOPHENYL SULFONE, 97% - IARC: Group 3 carcinogen See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.
Section 14 - Transport Information

<table>
<thead>
<tr>
<th>IATA</th>
<th>IMO</th>
<th>RID/ADR</th>
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<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>Not regulated.</td>
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Shipping Name: -
Hazard Class: -
UN Number: -
Packing Group: -

Section 15 - Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: XN
Risk Phrases:
R 22 Harmful if swallowed.
Safety Phrases:
S 22 Do not breathe dust.

WGK (Water Danger/Protection)
CAS# 80-08-0: No information available.

United Kingdom Occupational Exposure Limits

Canada
CAS# 80-08-0 is listed on Canada's DSL List.
CAS# 80-08-0 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits
CAS# 80-08-0: OEL-FINLAND; Carcinogen
OEL-RUSSIA: STEL 5 mg/m3

US FEDERAL
TSCA
CAS# 80-08-0 is listed on the TSCA inventory.

Section 16 - Additional Information

MSDS Creation Date 7/16/1996
Revision #0 Date Original.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

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