Section I. Chemical Product and Company Identification

Chemical Name: 5,5’-Dithiobis(2-nitrobenzoic Acid) [for determination of SH groups]

Catalog Number: D0944

Synonym: Bis(3-carboxy-4-nitrophenyl) Disulfide

Chemical Formula: C₁₄H₈N₂O₈S₂

CAS Number: 69-78-3

Supplier: TCI America
9211 N. Harborgate St.
Portland OR
1-800-423-8616

In case of Emergency Call: Chemtrec® (800) 424-9300 (U.S.) (703) 527-3887 (International)

Section II. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Percent (%)</th>
<th>TLV/PEL</th>
<th>Toxicology Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,5’-Dithiobis(2-nitrobenzoic Acid)</td>
<td>69-78-3</td>
<td>Min. 98.0 (T)</td>
<td>Not available.</td>
<td>Mouse LD₅₀ (intraperitoneal) 2080mg/kg</td>
</tr>
</tbody>
</table>

Section III. Hazards Identification

Acute Health Effects: Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.

Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Section IV. First Aid Measures

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Inhalation: If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.

Ingestion: INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. SEEK IMMEDIATE MEDICAL ATTENTION in case of ingestion of a radioactive material.

Section V. Fire and Explosion Data

Flammability: May be combustible at high temperature.

Flash Points: Not available.

Combustion Products: These products are toxic carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂), sulfur oxides (SO₂, SO₃...).

Fire Hazards: Not available.

Explosion Hazards: Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet. Consult with local fire authorities before attempting large scale fire-fighting operations.
Section VI. Accidental Release Measures
Spill Cleanup Instructions
Irritating material. Use a shovel to put the material into a convenient waste disposal container. Finish cleaning the spill by rinsing any contaminated surfaces with copious amounts of water. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and Storage
Handling and Storage Information
IRRITANT. Keep away from heat. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. Do not breathe dust. Always store away from incompatible compounds such as oxidizing agents, alkalis (bases).

Section VIII. Exposure Controls/Personal Protection

Engineering Controls
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection
Splash goggles. Lab coat. Dust respirator. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. Be sure to use a MSHA/NIOSH approved respirator or equivalent.

Exposure Limits
Not available.

Section IX. Physical and Chemical Properties

Physical state @ 20°C
Solid. (Powder.)
Specific Gravity
Not available.
Molecular Weight
396.35
Boiling Point
240°C (464°F)
Melting Point
Not available.
Refractive Index
Not available.
Critical Temperature
Not available.
Viscosity
Not available.
Solubility
Not available.
Partition Coefficient
Not available.
Vapor Pressure
Not applicable.
Vapor Density
Not available.
Volatility
Not available.
Odor
Not available.
Taste
Not available.

Section X. Stability and Reactivity Data
Stability
This material is stable if stored under proper conditions. (See Section VII for instructions)
Conditions of Instability
Avoid excessive heat and light.
Incompatibilities
Reactive with strong oxidizing agents, strong alkalis (bases).

Section XI. Toxicological Information

RTECS Number
DG9650000
Routes of Exposure
Eye Contact. Ingestion. Inhalation.
Toxicity Data
Mouse LD_{50} (intraperitoneal) 2080mg/kg
Chronic Toxic Effects
CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Acute Toxic Effects
Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Continued on Next Page
### Section XII. Ecological Information

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecotoxicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Environmental Fate</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### Section XIII. Disposal Considerations

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Disposal</td>
<td>Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.</td>
</tr>
</tbody>
</table>

### Section XIV. Transport Information

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Classification</td>
<td>Not a DOT controlled material (United States).</td>
</tr>
<tr>
<td>PIN Number</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Packing Group (PG)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>DOT Pictograms</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### Section XV. Other Regulatory Information and Pictograms

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA Chemical Inventory (EPA)</td>
<td>This compound is <strong>ON</strong> the EPA Toxic Substances Control Act (TSCA) inventory list.</td>
</tr>
<tr>
<td>WHMIS Classification (Canada)</td>
<td>Not available.</td>
</tr>
<tr>
<td>EINECS Number (EEC)</td>
<td>200-714-4</td>
</tr>
<tr>
<td>EEC Risk Statements</td>
<td>R36/37/38- Irritating to eyes, respiratory system and skin.</td>
</tr>
<tr>
<td>Japanese Regulatory Data</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### Section XVI. Other Information

**Version 1.0**  
**Validated on 6/26/2002.**  
**Printed 2/4/2005.**

**Notice to Reader**

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