Material Safety Data Sheet
Dithizone

Section 1 - Chemical Product and Company Identification

**MSDS Name:**
Dithizone

**Catalog Numbers:**
LC13687

**Synonyms:**
Diphenylthiocarbazone; (Phenylazo) thioformic acid, 2-phenylhydrazide; 3-Formazanthiol, 1,5-diphenyl; Semicarbazide

**Company Identification:**
LabChem Inc
200 William Pitt Way
Pittsburgh, PA 15238

**Company Phone Number:**
(412) 826-5230

**Emergency Phone Number:**
(800) 424-9300

**CHEMTREC Phone Number:**
(800) 424-9300

Section 2 – Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name:</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-10-6</td>
<td>Dithizone</td>
<td>100</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**Emergency Overview**

**Appearance:** Dark brownish-black powder

**Caution.** Causes eye irritation. May cause irritation to skin, respiratory and gastrointestinal tracts.

**Target Organs:** None

**Potential Health Effects**

**Eye:**
Causes eye irritation. May cause chemical conjunctivitis.

**Skin:**
May cause skin irritation. Low hazard for usual industrial handling.

**Ingestion:**
May be harmful if swallowed. Causes gastrointestinal tract irritation with nausea, vomiting, and diarrhea.

**Inhalation:**
May cause respiratory tract irritation.

**Chronic:**
This material chelates metals. When administered to animals, this material has been shown to induce diabetes or glycosuria.
Section 4 - First Aid Measures

Eyes:
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:
Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:
Call a poison control center. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:
Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:
Treat symptomatically and supportively.

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:
Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Autoignition Temperature:
Not available

Flash Point:
Not available

NFPA Rating:
H-2; F-1; I-0

Explosion Limits:
Lower: n/a Upper: n/a

Section 6 - Accidental Release Measures

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

Spills/Leaks:
Sweep up material and place in a labeled container for disposal. Avoid generating dust. Clean surface of residual material with water.
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Section 7 - Handling and Storage

Handling:
Keep away from heat and sources of ignition. Do not ingest or inhale dust. Avoid contact with eyes and skin. Keep away from incompatible substances.

Storage:
Keep container tightly closed in a cool, well-ventilated area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dithizone</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs:
None listed.

Personal Protective Equipment

Eyes:
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:
Wear appropriate gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Dark brownish-black</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>8.8 (Air = 1)</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Negligible</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing/Melting Point</td>
<td>168°C (334°F)</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>168°C (334°F)</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Insoluble in cold water</td>
</tr>
<tr>
<td>Specific Gravity/Density</td>
<td>Not available</td>
</tr>
</tbody>
</table>
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Molecular Formula: C13H12N4S
Molecular Weight: 256.33

Section 10 - Stability and Reactivity

Chemical Stability:
Stable under normal temperatures and pressures.

Conditions to Avoid:
Excess heat, dust generation, incompatible materials.

Incompatibilities with Other Materials:
Oxidizing agents.

Hazardous Decomposition Products:
Carbon monoxide, carbon dioxide, nitrogen oxides.

Hazardous Polymerization:
Has not been reported.

Section 11 - Toxicological Information

RTECS:
CAS# 60-10-6: LQ9450000

LD50/LC50:
CAS# 60-10-6:
Oral, rat: LD50 = >500 mg/kg

Carcinogenicity:
CAS# 60-10-6: Not classified as a carcinogen by IARC, NTP, ACGIH, or California Proposition 65.

Epidemiology:
This material chelates metals. When administered to animals, this material has been shown to induce diabetes or glycosuria.

Teratogenicity:
No information found

Reproductive:
No information found

Mutagenicity:
No information found

Neurotoxicity:
No information found

Section 12 - Ecological Information

No information found

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.
Section 14 - Transport Information

US DOT  
Shipping Name: Not regulated  
Hazard Class:  
UN Number:  
Packing Group:  

Section 15 - Regulatory Information

US Federal  
TSCA:  
CAS# 60-10-6 is listed on the TSCA inventory.  
SARA Reportable Quantities (RQ):  
CERCLA/SARA Section 313:  
OSHA - Highly Hazardous:  
None of the chemicals in this product are considered highly hazardous by OSHA.  

US State  
State Right to Know:  
CAS# 60-10-6 is not listed on state Right-to-Know lists from California, Florida, Massachusetts, Minnesota, New Jersey, or Pennsylvania.  
California Regulations:  
None.  

European/International Regulations  
Canadian DSL/NDSL:  
CAS# 60-10-6 is listed on Canada's DSL List.  
CanadaIngredient Disclosure List:  
CAS# 60-10-6 is not listed on the Canadian Ingredient Disclosure List.  

Section 16 - Other Information

MSDS Creation Date: November 6, 2007  
Revision Date: November 3, 2009  

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