Material Safety Data Sheet
1,5-Diphenylcarbazone

Section 1 - Chemical Product and Company Identification

MSDS Name:
1,5-Diphenylcarbazone
Catalog Numbers:
LC13675
Synonyms:
Phenylazoformic acid 2-phenyhydrazide; Diazene-carboxylic acid, phenyl-2-phenylhydrazide;
Diphenylcarbazone; 1,5-Diphenylcarbazone; s-Diphenylcarbazone; Formic acid, (phenylazo)-,
2-phenylhydrazide.
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>538-62-5</td>
<td>Diphenylcarbazone</td>
<td>100</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview

Appearance: Orange powder.
Danger! Flammable solid. Causes eye, skin, and respiratory tract irritation. May be harmful if swallowed.
Target Organs: Respiratory system, eyes, skin.

Potential Health Effects

Eye:
Causes eye irritation.

Skin:
Causes skin irritation. May be absorbed through the skin in harmful amounts.

Ingestion:
May cause irritation of the digestive tract. May be harmful if swallowed. May cause nausea,
vomiting, abdominal pain, and increased salivation.

Inhalation:
Causes respiratory tract irritation. May be harmful if inhaled.
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Chronic:
No information found.

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. If swallowed, 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. Do NOT use mouth-to-mouth resuscitation.

**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. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion. Flammable solid. May burn rapidly with flare burning effect. May re-ignite after fire is extinguished.

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

**Autoignition Temperature:**
Not available.

**Flash Point:**
Not available.

**NFPA Rating:**
(estimated) Health: 2; Flammability: 2; Instability: 1

**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:**
Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Scoop up with a
nonsparking tool, then place into a suitable container for disposal. Avoid generating dusty conditions. Remove all sources of ignition. Provide ventilation.

Section 7 - Handling and Storage

Handling:
Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Use with adequate ventilation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Avoid breathing dust.

Storage:
Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

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>Diphenylcarbazone</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs:
Diphenylcarbazone: No OSHA Vacated PELs are listed for this chemical.

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>Orange</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 available</td>
</tr>
</tbody>
</table>
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Vapor Density: 8.28
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: 153-157°C
Decomposition Temperature: 153-157°C
Solubility in water: Insoluble
Specific Gravity/Density: Not available
Molecular Formula: C13H12N4O
Molecular Weight: 240.26

Section 10 - Stability and Reactivity

Chemical Stability:
Stable under normal temperatures and pressures.

Conditions to Avoid:
High temperatures, ignition sources, dust generation.

Incompatibilities with Other Materials:
Strong oxidizing agents, strong reducing agents.

Hazardous Decomposition Products:
Nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization:
Has not been reported.

Section 11 - Toxicological Information

RTECS:
CAS# 538-62-5: LQ9420000

LD50/LC50:
Oral, rat: LD>500mg/kg (Acros).

Carcinogenicity:
CAS# 538-62-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:
No information found

Teratogenicity:
No information found

Reproductive:
No information found

Mutagenicity:
See actual entry in RTECS for complete information.

Neurotoxicity:
No information found

Section 12 - Ecological Information

No information found
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Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Flammable solid, organic, n.o.s.
Hazard Class: 4.1
UN Number: UN1325
Packing Group: III

Section 15 - Regulatory Information

US Federal
TSCA:
CAS# 538-62-5 is listed on the TSCA inventory.
SARA Reportable Quantities (RQ):
None of the chemicals in this material have an RQ.
CERCLA/SARA Section 313:
No chemicals are reportable under 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# 538-62-5 is not present on state lists from California, Pennsylvania, Minnesota, Massachusetts, Florida, or New Jersey.
California Regulations:
None.

European/International Regulations
Canadian DSL/NDSL:
CAS# 538-62-5 is not listed on Canada's DSL List.
Canada Ingredient Disclosure List:
CAS# 538-62-5 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: November 13, 2007
Revision Date: December 17, 2007
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