Material Safety Data Sheet

Sodium Diethyldithiocarbamate Trihydrate

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Sodium diethyldithiocarbamate trihydrate

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd. Columbus, WI. 53925

For More Information Call: 920-623-2140
(IN CASE OF EMERGENCY CALL: CHEMTREC 800-424-9300
(Monday – Friday 8:00-4:30) (24 Hours/Day, 7 Days/Week)
703-527-3887

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Weight %</th>
<th>Component</th>
<th>CAS #</th>
<th>EINECS# / ELINCS#</th>
<th>Classification*</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Sodium diethyldithiocarbamate trihydrate</td>
<td>20624-25-3</td>
<td>205-710-6</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

*Symbol and R phrase according to EC Annex1

3. HAZARDS IDENTIFICATION

Solid
Signal word: Danger
Pictograms:
Hazard statements:
- H302 harmful if swallowed
- H315 causes skin irritation
- H318 causes serious eye damage
Precautionary statements:
- P280 wear protective gloves/eye protection/face protection
- P305+P351+P338 if in eyes rinse cautiously for several minutes, remove contact lenses if easy to do, continue rinsing

Routes of Entry: Skin, eyes, inhalation, ingestion.

Ingredients found on carcinogen lists:

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>NTP STATUS</th>
<th>IARC STATUS</th>
<th>OSHA LIST</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium diethyldithiocarbamate</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

4. FIRST AID INFORMATION

Revised on 5/5/2011
Inhalation: Move casualty to fresh air and keep at rest. If not breathing give artificial respiration. Consult a physician.

Eyes: In case of eye contact, rinse with water for at least 15 minutes. Assure adequate rinsing by using fingers to separate the eyelids. Seek medical attention.

Skin: Immediately flush with soap and plenty of water while removing contaminated clothing, and wash using soap. Get medical attention if needed.

Ingestion: Never give anything by mouth to an unconscious person. Wash out mouth with water. Get medical attention.

5. FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point method</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper Flame Limit (volume % in air)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Flame Limit (volume % in air)</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Extinguishing Media: Use water fog, foam, dry chemical, or carbon dioxide.

Special fire-fighting procedures: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

Hazardous combustion products: Not available.

Unusual fire and explosion hazards: Not available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use appropriate personal protective equipment. Avoid dust formation. Avoid breathing dust, vapor, mist, or gas. Ensure adequate ventilation. Evacuate non-essential personnel to a safe area.

Environmental precautions: Cleanup personnel need personal protection from inhalation and skin/eye contact. Evacuate and ventilate the area. Prevent spillage from entering drains. Dam spills. Clean up spill with vermiculite or other inert absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Any release to the environment may be subject to federal/national or local reporting requirements. Dispose of all waste or cleanup materials in accordance with regulations. Containers, even when empty, will retain residue and vapors.

7. HANDLING AND STORAGE

Normal handling: Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Do not breathe vapor. Avoid prolonged or repeated exposure. Wash thoroughly after using. Keep container closed when not in use. Use normal methods for fire prevention.

Storage: Store in a suitable area, dry and well ventilated.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: (consult local authorities for acceptable exposure limits)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Regulatory List</th>
<th>Value and type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium diethyldithiocarbamate</td>
<td>USA OSHA PEL</td>
<td>No values established</td>
</tr>
<tr>
<td></td>
<td>USA ACGIH TLV</td>
<td>No values established</td>
</tr>
<tr>
<td></td>
<td>USA NIOSH REL</td>
<td>No values established</td>
</tr>
<tr>
<td></td>
<td>OSHA IDLH</td>
<td>No values established</td>
</tr>
</tbody>
</table>

TWA: Time Weighted Average over 8 hours of work.  
TLV: Threshold Limit Value over 8 hours of work.  
REL: Recommended Exposure Limit  
STEL: Short Term Exposure Limit during x minutes.  
IDLH: Immediately Dangerous to Life or Health

**Ventilation:** Provide local exhaust, preferably mechanical.

**Respiratory protection:** If necessary use an approved respirator with acid vapor cartridges.

**Eye protection:** Wear chemical safety glasses with a face shield for splash protection.

**Skin and body protection:** Wear neoprene or rubber gloves, apron and other protective clothing appropriate to the risk of exposure.

**Other Recommendations:** Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance:** Solid
- **Physical state:** Solid
- **Odor:** Not available
- **Odor Threshold:** Not available
- **Density:** 1.100 g/cm³
- **pH:** Not available
- **Melting Point/Freezing Point:** 95-98.5 C (203-209.3 F) (literature value)
- **Boiling Point/Range:** Not available
- **Flammability:** Not available
- **Flash point:** Not available
- **Evaporation Rate (Butyl Acetate =1):** Not available
- **Explosive Limits:** Not available
- **Vapor Pressure (at 20°C):** Not available
- **Vapor Density (air =1):** 5.9
- **Solubility:** Soluble
- **Partition coefficient/n-octanol/water:** Not available
- **% Volatile:** Not available
- **Autoignition Temperature:** Not available
10. STABILITY AND REACTIVITY

**Stability:** Stable

**Conditions to avoid:** Not available

**Incompatibility:** Strong oxidizing agents

**Hazardous decomposition products:** Oxides of carbon, nitrogen, and sulfur

**Hazardous polymerization:** Not available

11. TOXICOLOGICAL INFORMATION

**Acute Effects:** see Section 2

**Acute Toxicity Data:** LD50 – oral (rat): 1500 mg/kg

**Chronic Effects:** None Available

**Genetotoxicity:**
- in vitro – rat (liver): DNA damage
- in vitro – rat (lymphocyte): DNA inhibition
- in vitro – hamster (ovary): cytogenetic analysis

**Reproductive toxicity:** Not available

**Specific target organ toxicity – repeated exposure (GHS):** Not available

**Aspiration hazard:** Not available

**Teratogenicity:** Not Available

**Mutagenicity:** Not Available

**Embryotoxicity:** Not Available

**Synergistic Products/Effects:** Not Available

**Other:** RTECS EZ6550000

12. ECOLOGICAL INFORMATION

**Ecotoxicity (aquatic and terrestrial):** Not available

**Persistence and Degradability:** Not available

**Bioaccumulative Potential:** Not available

**Mobility in Soil:** Not available

**Other Adverse Effects:** Not available
13. DISPOSAL CONSIDERATIONS

**Waste Residues:** Dispose of through a licensed contractor. Users should review their operations in terms of the applicable federal/nation or local regulations and consult with appropriate regulatory agencies if needed before discharging or disposing of waste material.

**Product containers:** Containers, if thoroughly cleaned, preferably by rinsing three times and handling the rinse water as waste residues, may be disposed of or recycled as non-hazardous waste. Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies as needed before discharging or disposing of waste material.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

**DOT:** Not dangerous goods

**IDMG:** Not dangerous goods

**IATA/ICAO:** Not dangerous goods

15. REGULATORY INFORMATION

**OSHA Hazards:** harmful by ingestion; irritant

**TSCA Inventory Status:** All ingredients are listed on the TSCA inventory.

**Federal and State Regulations**
- SARA 302/304/311/312 extremely hazardous substances: Not listed
- SARA 313 toxic chemical notification and release reporting: Not Listed
- CERCLA: Hazardous Substances: Not Listed

**California Proposition 65:** Not Listed

**DSL/NDSL:** Listed on the DSL list

**HMIS (U.S.A.)**

| Health Hazard | 2 |
| Fire Hazard   | 0 |
| Reactivity    | 0 |
16. OTHER INFORMATION

Current Issue Date: May 5, 2011

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