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SECTION 5 Health Hazard Information

A. EXPOSURE / HEALTH EFFECTS

Inhalation:
Lead can be absorbed through the respiratory system. Local irritation of bronchi and lungs may occur and, in cases of acute exposure, symptoms such as metallic taste, chest and abdominal pain, and increased lead levels may follow. See also Ingestion.

Ingestion:
POISON! The symptoms of lead poisoning include abdominal pain and spasms, nausea, vomiting, headache. Acute poisoning can lead to muscle weakness, "lead line" on the gums, metallic taste, definite loss of appetite, insomnia, dizziness, high lead levels in blood and urine with shock, coma and death in extreme cases. Soluble lead compounds, e.g., the acetate or nitrate, are the most dangerous. The reduced solubility of the chloride or materials forming the chloride in the stomach (metal, oxides, carbonate, etc.) while still toxic, may not act as rapidly.

Skin Contact:
Lead and lead compounds may be absorbed through the skin on prolonged exposure. Contact over short periods may cause local irritation or redness.

Eye Contact:
Absorption can occur through eye tissues but the more common hazards are local irritation or abrasion.

Chronic Exposure:
Lead is a cumulative poison and exposure even to small amounts can raise the body's content to toxic levels. The symptoms of chronic exposure are like those of ingestion poisoning; restlessness and irritability may also be noted.

Aggravation of Pre-existing Conditions:
Persons with pre-existing nerve or circulatory disorders or with skin or eye problems may be more susceptible to the effects of this substance.

B. FIRST AID

Inhalation:
Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion:
If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. CALL A PHYSICIAN IMMEDIATELY. Never give anything by mouth to an unconscious person.

Skin Exposure:
Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Exposure:
Wash eyes with plenty of water for at least 15 minutes. Call a physician.

C. TOXICITY DATA

(RTECS, 1986)
No LD50/LC50 information found relating to normal routes of occupational exposure. Mutation data cited. Lead and other smelter emissions are human reproductive hazards. (Chemical Council on Environmental Quality; Chemical Hazards to Human Reproduction, 1981)

SECTION 6 Occupational Control Measures

Airborne Exposure Limits:
- OSHA Permissible Exposure Limit (PEL): 0.05 mg(Pb)/m³ (TWA)
- ACGIH Threshold Limit Value (TLV): 0.15 mg(Pb)/m³ (TWA)

VENTILATION SYSTEM:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

PERSONAL RESPIRATORS: (NIOSH Approved)
If the PEL is exceeded, a half-mask air-purifying respirator equipped with a high-efficiency filter, or any half-mask supplied air respirator may be worn up to concentrations of 50 mg per cubic meter (1000X PEL). See OSHA Standard for additional information.

SKIN PROTECTION:
Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls to prevent skin contact.

EYE PROTECTION:
Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area. Eating, drinking, and smoking should not be permitted in areas where solids or liquids containing soluble lead compounds are handled, processed, or stored.

See OSHA Standard for more information on personal protective equipment, engineering and work practice controls, medical surveillance, record keeping, and reporting requirements. (29 CFR 1910.1025)

SECTION 7 Storage and Special Information

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Areas in which exposure to lead metal or lead compounds may occur should be identified by signs or appropriate means, and access to the area should be limited to authorized persons.

********************************************************************************

LEAD MONOXIDE

Effective Date: 04-06-89 Supersedes 08-08-85
**Addendum to Material Safety Data Sheet**

**REGULATORY STATUS**

<table>
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<tr>
<th>Hazard Categories for SARA Section 311/312 Reporting</th>
<th>Acute</th>
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<th>Fire</th>
<th>Pressure</th>
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<table>
<thead>
<tr>
<th>Product or Components of Product:</th>
<th>SARA EHS Sect. 302 RQ (lbs.)</th>
<th>SARA Section 313 Chemicals Name List</th>
<th>CERCLA Sec. 103 RQ (lbs.)</th>
<th>RCRA Sec. 261.33</th>
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<tr>
<td>LEAD MONOXIDE (1317-36-8)</td>
<td>No</td>
<td>No</td>
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<td>No</td>
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</tbody>
</table>

**SARA Section 302 EHS RQ**: Reportable Quantity of Extremely Hazardous Substance, listed at 40 CFR 355.

**SARA Section 302 EHS TPQ**: Threshold Planning Quantity of Extremely Hazardous Substance. An asterisk (*) following a Threshold Planning Quantity signifies that if the material is a solid and has a particle size equal to or larger than 100 micrometers, the Threshold Planning Quantity = 10,000 LBS.

**SARA Section 313 Chemicals**: Toxic Substances subject to annual release reporting requirements listed at 40 CFR 372.65.

**CERCLA Sec. 103**: Comprehensive Enviromental Response, Compensation and Liability Act (Superfund). Releases to air, land or water of these hazardous substances which exceed the Reportable Quantity (RQ) must be reported to the National Response Center, (800-424-8802); Listed at 40 CFR 302.4

**RCRA**: Resource Conservation and Reclamation Act. Commercial chemical product wastes designated as acute hazards and toxic under 40 CFR 261.33

Effective Date: 04-06-89 Superseded 08-08-85

LEAD MONOXIDE