MATERIAL SAFETY DATA SHEET

SECTION I: IDENTIFICATION
Product Name: HI GRADE & SPECIAL HI GRADE U.S. ZINC
Synonym: ZINC SLABS OR INGOTS
Emergency: Chemtrec 1-800-424-9300
For Information: (713) 926-1705
Date Prepared: 05/20/91

SECTION II - HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component</th>
<th>CAS No.</th>
<th>% (Range)</th>
<th>ACGIH (TLV) mg/m³</th>
<th>PEL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc Metallic</td>
<td>7440-06-6</td>
<td>99.00 min</td>
<td>5 (fume)</td>
<td>50.0 ug/m³</td>
</tr>
<tr>
<td>Lead</td>
<td>7439-62-1</td>
<td>0.03 max</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION III - PHYSICAL CHEMICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point (Zn)</td>
<td>1686°F</td>
</tr>
<tr>
<td>Melting Point (Zn)</td>
<td>788°F</td>
</tr>
<tr>
<td>Evaporation Rate (Butyl Acetate)</td>
<td>NA</td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>Bluish-Grey Lustrous metallic</td>
</tr>
<tr>
<td>Particle Size</td>
<td>NA</td>
</tr>
</tbody>
</table>

SECTION IV - REACTIVITY DATA

Stability: Stable In itself. However resulting dust particles & fumes should avoid moisture, alkalis or acids. Storage in unventilated areas could retain gases that may be formed.

Incompatibility (Materials To Avoid): Moisture, acids and alkalis

Hazardous Decomposition Products: If material forms dust and moisture is present; hydrogen gas may evolve.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Extinguishing Media: Dry Powder extinguisher preferred; dry chemical. AVOID WATER IF DUST PRESENT

Special Fire Fighting Procedures: Slabs (Ingot) are stable. Do not add water to molten bath. Dry Zinc Dust will not ignite spontaneously; but once ignited, may burn readily in air. DO NOT SPREAD MATERIAL. Smother and allow fire to go out. Wear self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Slabs (Ingot) are stable.

Bulk dust in contact with water or damp air can evolve hydrogen. The heat produced during this reaction could ignite the hydrogen. An explosive condition may exist if this happens in a confined space. Dry dust forms explosive mixtures with air, if ignited.

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SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry: Inhalation, Mechanical irritation to skin and eyes.

Health Hazards (Acute and Chronic): Exposure to dust and fumes can cause metal fume fever. Metal fume fever is a delayed, generally benign, transient, flu-like condition.

Carcinogenicity: NTP IARC
Cadmium YES YES

Signs and Symptoms of Exposure: Metallic taste, respiratory irritation, and, with metal fume fever, flu-like symptoms.

Emergency and first aid procedures:
Remove from exposure & call for medical assistance.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:
If spilled, dust should be removed by vacuuming or sweeping to prevent heavy concentrations of airborne dust. Return all clean up material to properly labeled containers. Clean up personnel should wear respirators. Prohibit smoking and avoid all ignition sources.

Waste disposal method:
Dispose of dust in a dry closed container and away from ignition sources. Material has Recyclable Value. Follow Federal, State, and Local Regulations for disposal.

Precautions to be taken in handling and storing:
Good housekeeping. Avoid moisture. Store in well-ventilated and dry area. Keep area free of dust.

SECTION VIII - CONTROL MEASURES

Respiratory protection: Use NIOSH approved dust filter respirator.
Ventilation: Local exhaust recommended.
Protective gloves: Yes Eye protection: Yes
Other protective clothing or equipment: Wear required safety PPE and dust mask.

Work / Hygienic Practices:
Wash well to remove material after handling.

HMIS HAZARD RATING

HEALTH 1 FLAMMABLE 0 REACTIVITY 1
Based on National Paint & Coatings Association HMIS rating system

SECTION IX - REGULATORY INFORMATION

TOXIC SUBSTANCE CONTROL ACT (TSCA):
Components of this product are listed on the TSCA Inventory.

SECTION 313 SUPPLIER NOTIFICATION:
This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372):

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Chemical Name</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-86-8</td>
<td>Zinc Metallio</td>
<td>99.9</td>
</tr>
</tbody>
</table>

This information should be included in all MSDSs that are copied and distributed for this material.