Section 1 - Chemical Product / Company Information

Product Name: Zinc Filler  
Revision Date: 09/26/2008

Identification Number: PLMSDS 0231B1NL  
Revision Supersedes: 09/26/2008

Product Use/Class: Filler for Zinc Coatings - FOR INDUSTRIAL USE ONLY

Manufacturer: Carbolene Company  
350 Hanley Industrial Ct.  
St. Louis, MO 63144

Preparer: Regulatory, Department

Section 2 - Composition / Information On Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Weight % Less Than</th>
<th>ACGIH TLV-TWA</th>
<th>ACGIH TLV-STEL</th>
<th>OSHA PEL-TWA</th>
<th>OSHA CEIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZINC (DUST OR FUME)</td>
<td>7440-66-6</td>
<td>100.0</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>LEAD</td>
<td>7439-92-1</td>
<td>0.05</td>
<td>0.05 MG/M3</td>
<td>N/E</td>
<td>0.05 MG/M3</td>
<td>N/E</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview: NOTICE: Contains LEAD which may cause blood disorders and lead poisoning. This product has been tested and shown to fall well below the level of gas emission when exposed to water (49CFR Part 173 E, 4) and is, therefore, not a regulated product and is not defined as dangerous when wet. Product is packaged in steel or plastic water tight containers. Lead is listed as a Group 2 (Reasonably anticipated to be a human carcinogen) by NTP. IARC classifies lead as a Group 2A carcinogen (probably carcinogenic to humans).

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: May cause skin irritation.

Effects Of Overexposure - Inhalation: Overexposure will be irritating to mucous membranes.

Effects Of Overexposure - Ingestion: May cause gastrointestinal disturbance.

Effects Of Overexposure - Chronic Hazards: Pure Zinc Dust is relatively non-toxic to humans by inhalation. Minor inhalation may irritate respiratory tract causing coughing whereas larger doses will give zinc shakes or metal fume fever; a benign transient flu-like condition.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Medical Conditions Prone to Aggravation by Exposure: If you have a condition that could be aggravated by exposure to dust or organic vapors, see a physician prior to use.

Section 4 - First Aid Measures
**First Aid - Eye Contact:** Flush eyes with running water for at least 15 minutes. Seek medical attention if irritation persists.

**First Aid - Skin Contact:** Wash skin thoroughly with soap and water.

**First Aid - Inhalation:** If inhaled, remove to fresh air. Administer oxygen if necessary. Consult a physician if symptoms persist or exposure was severe.

**First Aid - Ingestion:** Give 2 - 3 cupfuls of water or milk if victim is conscious. Do NOT induce vomiting. Get medical attention immediately.

## Section 5 - Fire Fighting Measures

- **Flash Point, F:** N/A
- **Lower Explosive Limit, %:** N/D
- **Upper Explosive Limit, %:** N/D

**Extinguishing Media:** Carbon Dioxide, Dry Chemical, Foam

**Unusual Fire And Explosion Hazards:** Bulk Dust in contact with water or damp air evolves hydrogen. The heat produced during this reaction could ignite the hydrogen, an explosive condition could exist if this happens in a confined space. Dry dust forms explosive mixtures with air, if ignited.

**Special Firefighting Procedures:** 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.

## Section 6 - Accidental Release Measures

**Steps To Be Taken If Material Is Released Or Spilled:** Personal Precaution: Wear approved respirator. 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. Prohibit smoking and avoid all ignition sources.

## Section 7 - Handling And Storage

**Handling:** Avoid spillage. Keep nuisance dust cloud formation to a minimum. No smoking while handling. Avoid breathing vapors or spray mist.

**Storage:** Keep away from heat, sparks, open flames and oxidizing agents. Keep containers closed. Store in a cool, dry place with adequate ventilation.

## Section 8 - Exposure Controls / Personal Protection

**Engineering Controls:** Use appropriate equipment to keep nuisance dust cloud levels low.

**Respiratory Protection:** Wear appropriate NIOSH approved respirator when dusting cannot be controlled.

**Skin Protection:** Recommend impervious gloves and clothing to avoid skin contact. If material penetrates to skin, change gloves and clothing. The use of protective creams may be beneficial to certain individuals. Protective creams should be applied before exposure.

**Eye Protection:** Recommend safety glasses with side shields or chemical goggles to avoid eye contact.

**Other protective equipment:** Eye wash and safety showers should be readily available.

**Hygienic Practices:** Handle in accordance with good industrial hygiene and safety practices. These practices include: avoiding unnecessary exposures to dusts and fibers by using good local exhaust ventilation; removal of the material from the skin and eyes after exposure; removal of material from clothing (Use vacuum equipment to remove fibers and dusts from clothing. Compressed air should never
be used. Always wash contaminated work clothes separately from other laundry and wipe out washer / sink to prevent loose glass fibers from getting on other articles); keep the work area clean of dusts and fibers generated during fabrication (Use vacuum equipment to clean up dusts and fibers. Avoid sweeping or using compressed air as these techniques re-suspend dusts and fibers into the air.) and; have access to safety showers and eye wash stations.

**Section 9 - Physical And Chemical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Range</td>
<td>N/A</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Appearance</td>
<td>Blue - Grey Powder</td>
</tr>
<tr>
<td>Solubility in H2O</td>
<td>N/D</td>
</tr>
<tr>
<td>Freeze Point</td>
<td>N/D</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>N/A</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>N/A</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>N/D</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>N/A</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>7.109</td>
</tr>
</tbody>
</table>

(See section 16 for abbreviation legend)

**Section 10 - Stability And Reactivity**

**Conditions To Avoid:** Avoid water contact with opened zinc powder containers.

**Incompatibility:** Avoid contact with strong oxidizing agents, either acids or bases.

**Hazardous Decomposition Products:** Under fire conditions, hot zinc dust that is exposed to water could generate Hydrogen gas. When welding, heating or torch cutting surfaces coated with a zinc coating, Zinc Oxide Fume can be produced and could cause “metal fume fever”. Use exhaust systems and proper breathing protection to avoid breathing the fumes resulting from these conditions.

**Hazardous Polymerization:** Will not occur under normal conditions.

**Stability:** This product is stable under normal storage conditions.

**Section 11 - Toxicological Information**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>LD50</th>
<th>LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZINC (DUST OR FUME)</td>
<td>7440-66-6</td>
<td>NOT AVAILABLE</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>LEAD</td>
<td>7439-92-1</td>
<td>NOT AVAILABLE</td>
<td>NOT AVAILABLE</td>
</tr>
</tbody>
</table>

**Section 12 - Ecological Information**

**Ecological Information:** Zinc: Zinc in the metallic dust form is insoluble, but its processing or extended exposure in the aquatic and terrestrial environments may lead to the release of zinc in bioavailable forms. Zinc is mobile and can be toxic in the aquatic environment with water hardness, pH and dissolved organic carbon content being regulating factors. It bioaccumulates in both plants and animals in terrestrial and aquatic systems. Zinc is moderately mobile in soils and is dependent on soil conditions, such as cation exchange capacity, pH, redox potential, and chemical species present in the soil. Zinc also bioaccumulates in terrestrial plants, vertebrates, and mammals with plant uptake dependent on soil composition.

**Section 13 - Disposal Information**

**Disposal Information:** Dispose of in accordance with State, Local, and Federal Environmental regulations. Responsibility for proper waste disposal is with the owner of the waste.

**Section 14 - Transportation Information**

<table>
<thead>
<tr>
<th>DOT Proper Shipping</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Regulated</td>
<td>N/A</td>
</tr>
</tbody>
</table>
CERCLA - SARA HAZARD CATEGORY

This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

CHRONIC HEALTH HAZARD

SARA SECTION 313

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<table>
<thead>
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<tbody>
<tr>
<td>ZINC (DUST OR FUME)</td>
<td>7440-86-6</td>
</tr>
<tr>
<td>LEAD</td>
<td>7439-92-1</td>
</tr>
</tbody>
</table>

TOXIC SUBSTANCES CONTROL ACT

All components of this product are listed on the TSCA inventory.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(B) Substances exist in this product

U.S. STATE REGULATIONS AS FOLLOWS:

NEW JERSEY RIGHT-TO-KNOW

The following materials are non-hazardous, but are among the top five components in this product.

PENNSYLVANIA RIGHT-TO-KNOW

The following non-hazardous ingredients are present in the product at greater than 3%.

CALIFORNIA PROPOSITION 65

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

No California Proposition 65 Carcinogens exist

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards:

No California Proposition 65 Reproductive Toxins exist

INTERNATIONAL REGULATIONS AS FOLLOWS:

CANADIAN WHMIS
This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

**CANADIAN WHMIS CLASS:** No WHMIS class assigned

### Section 16 - Other Information

**HMIS Ratings**
- **Health:** 3
- **Flammability:** 0
- **Reactivity:** 0
- **Personal Protection:** X

**VOLATILE ORGANIC COMPOUNDS, GR/LTR MIXED (UNTHINNED):** 0

**REASON FOR REVISION:** Changes made in Section 2

**Legend:** N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.