1. Identification
Product Identifier: Zinc Metal: Special High Grade
Manufacturer: Hohmann & Barnard, Inc.
Telephone Numbers
During normal business hours call: (800) 645-0616
24-hour emergency call Chemtrec: (800) 255-3924
30 Rasons Court
Hauppauge, NY 11788
(631) 234-0600
www.h-b.com

2. Hazards Identification
EMERGENCY OVERVIEW:
Short Term Overexposure: ZINC: Inhalation of high levels of zinc vapor (zinc oxide fumes) may result in tightness of chest, metallic taste, cough, dizziness, fever, chills, headache, nausea, and dry throat. Overexposure may produce symptoms known as metal fume fever or “zinc shakes”; an acute, self-limiting condition without recognized complications. Symptoms of metal fume fever include: chills, fever, muscular pain, nausea and vomiting.
Long Term Overexposure: ZINC: Chronic exposure to zinc may cause respiratory tract irritation with nasopharyngitis and laryngitis.
Medical Conditions Generally Aggravated By Exposure: Inhalation of dust may be an irritant to pre-existing respiratory conditions
Prevention: Avoid contact with acids and alkalis.
Route of Exposure: PRIMARY: Inhalation, if material has been heated above the boiling point, driving off zinc fume.
SECONDARY: Ingestion of dusts.

GHS Ratings:
Inhalation Toxicity: Acute 4

GHS Hazards
H332 May be harmful if inhaled

GHS Precautions
P261 Avoid breathing dust/fume/gas/mist/vapours/spray
P271 Use only outdoors or in a well-ventilated area
P312 Call a POISON CENTER or doctor/physician if you feel unwell
P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing

Signal Word: Warning

POTENTIAL HEALTH EFFECTS:
Inhalation: Inhaling dust may be an irritant to pre-existing respiratory conditions.
Skin: No data found.
Ingestion: No data found.
Eyes: No data found.
Carcinogenicity: N/A.
3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZINC</td>
<td>7440-66-6</td>
<td>99.9</td>
</tr>
</tbody>
</table>

Hazardous Material Information System (HMIS)  National Fire Protection Association (NFPA)

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal Protection</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HMIS & NFPA Hazard Rating Legend

* = CHRONIC HEALTH HAZARD
0 = INSIGNIFICANT
1 = SLIGHT
2 = MODERATE
3 = HIGH

4. First-Aid Measures
Symptoms resulting from inhalation overexposure usually disappear within 24 hours. Symptomatic treatment, such as bed rest and possibly aspirin is recommended to provide relief from fever and chills. In all cases, consult physician for medical attention.

5. Fire-fighting measures

FLASH POINT: N/A

EXTINGUISHING MEDIA: Smother and cool with a suitable dry extinguishing agent (class D fires) such as dry powder (Ansul Met-L-X), zinc oxide or dry sand. Water should not be used; however wherever it is necessary to cool exposures, extreme caution should be taken to prevent contact with molten zinc or burning zinc products.

HAZARDOUS COMBUSTION PRODUCTS: No data found.

FIRE FIGHTING PROCEDURES: No Data Found.

FIRE FIGHTER PROTECTION: Use NIOSH/MSHA approved self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Heating of metal beyond boiling point results in evolution of zinc vapors, which immediately reacts with air to form zinc oxide fume. Slabs must be completely dry before charging into molten metal to prevent a steam explosion.

6. Accidental release measures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Material should be contained for recycling.

WASTE DISPOSAL METHODS: Material may be recycled or disposed of in accordance with Federal, State, and Local Environmental Regulations. This material may be regulated under CERCLA, TSCA, SARA, and/or RCRA Regulations.

CLEAN WATER ACT REQUIREMENTS: No data found

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) REQUIREMENTS: No data found

7. Handling and storage

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in a dry location, separate from acids and alkalis. Keep metal dry so it does not contain any moisture when ready for use.

OTHER PRECAUTIONS: Damp slabs placed in molten metal may result in a steam explosion. Always practice good personal hygiene when working in areas where this material exists.

REGISTRATIONS/CERTIFICATIONS: No data found.

8. Exposure controls/personal protection

ENGINEERING CONTROLS: No data found

ADMINISTRATIVE CONTROLS: No data found

VENTILATION: Local exhaust or other ventilation that will reduce dust concentrations to less than permissible exposure limits

PROTECTIVE GLOVES: Recommended to prevent skin irritation in hypersensitive individuals

EYE PROTECTION: Use safety eyewear for protection against airborne particulate matter.

RESPIRATORY PROTECTION (SPECIFIC TYPE): Use NIOSH/MSHA approved type respirator for protection against dust and metal fume.

OTHER: To prevent burns from contact with molten metal, appropriate protective garments should be worn. Such garments may include aprons, face shields, leggings, etc., depending on conditions of use.

LOCAL EXHAUST: N/A

MECHANICAL (GENERAL): N/A

SPECIAL: N/A

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9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Physical Form</td>
<td>Solid</td>
<td>Taste</td>
<td>No data found</td>
</tr>
<tr>
<td>Appearance</td>
<td>Silver-white, or Bluish-white metal</td>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Color</td>
<td>No data found</td>
<td>Odor Threshold</td>
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</tr>
<tr>
<td>Boiling Point</td>
<td>1665°F</td>
<td>Vapor Pressure</td>
<td>0.13kPa @ 909°F</td>
</tr>
<tr>
<td>Melting Point</td>
<td>788°F</td>
<td>Vapor Density</td>
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</tr>
<tr>
<td>Freezing Point</td>
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<td>Evaporation Rate</td>
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<tr>
<td>Specific Gravity</td>
<td>7.12</td>
<td>VOC (Weight)</td>
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<tr>
<td>Density</td>
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<td>VOC (Volume)</td>
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<tr>
<td>Bulk Density</td>
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<td>Volatiles (Weight)</td>
<td>No data found</td>
</tr>
<tr>
<td>Viscosity</td>
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<td>Volatiles (Volume)</td>
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<tr>
<td>pH</td>
<td>No data found</td>
<td>Flash Point</td>
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<td>Water Solubility</td>
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<td>Upper Explosion Limit</td>
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<tr>
<td>Partition Coefficient-Octanol / Water</td>
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<td>Lower Explosion Limit</td>
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<td>Molecular Weight</td>
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<td>Auto Ignition</td>
<td>No data found</td>
</tr>
<tr>
<td>Decomposition Temp.</td>
<td>No data found</td>
<td>Flammability (Solid, Gas)</td>
<td>No data found</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

| Stability                  | Stable                      |
| HAZARDOUS DECOMPOSITION    | Zinc boils off as vapor at elevated temperatures. |
| HAZARDOUS POLYMERIZATION   | Will not occur.             |
| CONDITIONS TO AVOID        | None.                       |
| INCOMPATIBLE MATERIALS     | Avoid contact with acids and alkalis. |

11. Toxicological information

| ROUTES OF ENTRY            | PRIMARY: Inhalation, if material has been heated above the boiling point, driving off zinc fume. |
| SECONDARY: Ingestion of dusts. |
| TARGET ORGANS             | No data found.               |
| EFFECTS OF OVEREXPOSURE   | Short Term Overexposure: ZINC: Inhalation of high levels of zinc vapor (zinc oxide fumes) may result in tightness of chest, metallic taste, cough, dizziness, fever, chills, headache, nausea, and dry throat. Overexposure may produce symptoms known as metal fume fever or “zinc shakes”; an acute, self-limiting condition without recognized complications. Symptoms of metal fume fever include: chills, fever, muscular pain, nausea and vomiting. |
| Long Term Overexposure: ZINC: Chronic exposure to zinc may cause respiratory tract irritation with nasopharyngitis and laryngitis. |
| CARCINOGENICITY           | None.                       |

12. Ecological Information

No data available for this product.

13. Disposal Considerations

Material may be recycled or disposed of in accordance with Federal, State, and Local Environmental Regulations. This material may be regulated under CERCLA, TSCA, SARA, and/or RCRA Regulations.

14. Transport information

D.O.T. Shipping Information: Not data found.
I.M.O. Shipping Information: Not data found.
15. Regulatory Information
No data found.

16. Other information
Issue Date: May 31, 2015
Revision Date: May 31, 2015

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