1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: INDALLOY 176 (ZINC METAL MIX)

MSDS Number: MSDS-4405

Revised Date: 25 SEPTEMBER 2006

Product Use: METAL ALLOY MIX CONSISTING OF ALUMINUM AND ZINC

MANUFACTURER:

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Suchun Industrial Square
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Jiangsu Province, China 215126
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2. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>% wt</th>
<th>CAS Registry #</th>
<th>PEL mg/m³</th>
<th>TLV-TWA mg/m³</th>
<th>TLV-STEL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALUMINUM</td>
<td>5</td>
<td>7429-90-5(US)</td>
<td>15</td>
<td>10</td>
<td>-</td>
</tr>
</tbody>
</table>

  (EU) 4(respirable dust) 10(inhalable dust) -

  (Canada) - 10 20

  (Singapore) 10(dust) 5(welding fume) -

  (Mexico) - 5 -

  (China) - 3 -
3. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:  CARCINOGEN LISTED IN:

- Eye  - Inhalation  - Skin  - Ingestion  NTP  IARC  OSHA  - Not Listed

POTENTIAL HEALTH EFFECTS:

Eye Contact:  Contact with powered metal alloy or fume from molten metal may cause irritation. Severe eye damage may result from hot molten metal being splashed into the eyes. Wear safety glasses and face shield when working with molten metal. Zinc dust particles can irritate the eyes.

Ingestion:  Ingestion of dust may cause headache, nausea, abdominal pain, fatigue and pain in the legs, arms and joints. May be harmful.

Inhalation:  Inhalation of fume or dust may cause local irritation to the respiratory system. Inhalation of fume or dust may cause headache, nausea, abdominal pain, fatigue and pain in the legs, arms and joints.

Skin Contact:  Normal handling should not cause any adverse health effects. May cause skin irritation. Hot molten metal may cause burns to the skin. Wear protective equipment when handling molten metal. Zinc is a skin irritant.

Chronic:  Zinc: Fresh fume inhaled may cause a disease known as "brass founders", throat dryness, cough weakness, generalized aching, fever, nausea and vomiting.

WARNING: This product contains a chemical known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (trace levels of listed metals)

NOTE: The Indium Corporation does not recommend, manufacture, market or endorse any of its products for human consumption.

4. FIRST AID MEASURES

Eye Contact:  Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.

Ingestion:  If patient is conscious, ONLY induce vomiting as directed by trained personnel. NEVER give anything by mouth to an unconscious person. Seek medical attention immediately.

Inhalation:  Remove to fresh air. If not breathing, give artificial respiration or oxygen by trained personnel. Seek immediate medical attention.

Skin Contact:  Remove contaminated clothing. Wash affected area with soap and water. Wash clothing before reuse. If irritation persists, obtain medical attention.
5. FIRE FIGHTING MEASURES

Flash Point: Not established.
Method: Not established.
Auto-ignition Temperature: Not established.
Flammable Limits: Limits not established. Zinc is combustible.

Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions. Do not use water or foam. Use dry chemical, sand, lime or Class D extinguisher.

Special Fire Fighting Procedures: Firefighters must wear NIOSH approved self-contained breathing apparatus and full protective clothing. Fire can cause irritating, corrosive and/or toxic gases.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Contain spill. If molten, cool to allow metal to solidify. If a solid metal, wear gloves, pick up and return to process. If dust, wear recommended personal protective equipment. DO NOT SWEEP. Use a vacuum, place in barrels and return to process if applicable. Eliminate sources of ignition. Otherwise, dispose of following all Federal, State and Local regulations. In the EU refer to the Special Waste Regulations. Metal may have reclaim value.

7. HANDLING AND STORAGE

Handling Precautions: Only dry metals should be added to molten bath. If working with molten metals, or exposed to fume or dust, use appropriate personal protective equipment. Dust forms explosive mixtures with water. Dust is flammable, may ignite spontaneously in air.

Storage Precautions: Store product in a cool, dry area away from incompatible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation is recommended to control any air contaminants dispersion. Control concentration of all components so that their exposure levels are not exceeded. Ensure that dust levels remain as low as possible.

Personal protection:
Eyes: Chemical safety glasses/goggles and face shield with molten metal.
Respirator: A NIOSH approved or EU compliant CE marked air-purifying respirator with a fume/dust chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated. Additional levels of respiratory protection may be required based on the work environment. An assessment should be performed. Air purifying respirator will not protect the worker in an oxygen deficient atmosphere.
Skin: Gloves-leather or impervious (vinyl) type. Heat resistant gloves if handling hot metal. Safety type boots. Personal protective equipment is recommended when working with molten metal to avoid burns.
Other: Lab coat, safety shower and eye-wash fountain in work area. Avoid the use of contact lenses in high fume areas.
Work/Hygienic Practices: Maintain good housekeeping. Clean up spills immediately. Good personal hygiene is essential. Avoid eating, smoking or drinking in the work area. Wash hands thoroughly with soap and water.
immediately upon leaving the work area. Separate contaminated work clothes from street clothes. Launder before reuse. Contaminated work clothes, should be cleaned by an industrial laundry service.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Silver white grey solid metal</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>6.60</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>(air=1) Not applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting Point</td>
<td>382C/720F</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Insoluble</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Stable.</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Not established.</td>
</tr>
<tr>
<td>Incompatible Materials</td>
<td>Avoid contact with mineral acids.</td>
</tr>
<tr>
<td>Hazardous Decomposition</td>
<td>Harmful organic fumes and toxic oxide fumes may form at elevated temperatures.</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Will not occur.</td>
</tr>
</tbody>
</table>

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogenicity NTP</td>
<td>No</td>
</tr>
<tr>
<td>OSHA</td>
<td>No</td>
</tr>
<tr>
<td>IARC</td>
<td>No</td>
</tr>
<tr>
<td>LD50</td>
<td>Not established</td>
</tr>
<tr>
<td>LC50</td>
<td>Not established</td>
</tr>
<tr>
<td>Irritancy of Product</td>
<td>Not established</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>Not established</td>
</tr>
<tr>
<td>Sensitization to Product</td>
<td>Not established</td>
</tr>
<tr>
<td>Teratogenicity</td>
<td>Not established</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>No specific data is available</td>
</tr>
<tr>
<td>Synergistic Products</td>
<td>Not established</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Fate</td>
<td>Zinc can persist in water indefinitely.</td>
</tr>
<tr>
<td>Aquatic Toxicity</td>
<td>Data not established</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATION

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Disposal Method</td>
<td>Scrap metal alloy usually has value. Contact a commercial reclaimer for recycling. Otherwise, dispose of in accordance with all Federal, State and Local</td>
</tr>
</tbody>
</table>
environmental regulations. In Europe follow the Special Waste Regulations.

14. TRANSPORT INFORMATION
Transport in accordance with applicable regulations and requirements. Not regulated under US DOT (United States Department of Transportation). Solid metal is rated as not hazardous in shipping. Zinc powder or Zinc dust is classified as hazardous “Dangerous when wet material”.

North American Emergency Guide Book – Not applicable

15. REGULATORY INFORMATION
The information in this Material Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated hereunder (29 CFR 1910.1200 ET. SEQ.).

The information in this Material Safety Data Sheet meets the requirements of the EU under Chemicals (Hazard Information and Packaging for Supply) Regulations 1994 (CHIP 2) Regulation 6.

This product has been classified in accordance with the hazard criteria of the Commission Directive 91/155/EEC and EH40.

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR).

This product has been classified in accordance with the guidelines set by the Dept of Industrial Health of the Republic of Singapore.

This product has been classified in accordance with the Mexican regulations NOM –018-STPS-2000 and NOM –010-STPS-1999.

California PROP 65: WARNING : This product contains a chemical known to the State of California to cause cancer and/or birth defects (or other reproductive harm).

SARA 313 Listing - 40 CFR 372.65: Zinc CAS# 7440-66-6

All ingredients are listed on the EPA TSCA Inventory.
Ingredients are listed on the Canadian Domestic Substance List.
EC Classification, Packaging and Labeling Requirements:
Symbol and Hazard Classification of Product

Risk Phrases:
R36/37/38 Irritating to eyes, respiratory system and skin

Safety Phrases:
S20/21 When using do not eat, drink or smoke
S22 Do not breathe dust
S23 Do not breathe fumes
S24/25 Avoid contact with skin and eyes
S27 Take off immediately all contaminated clothing
S28 After contact with skin wash immediately with plenty of soap and water
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection

16. OTHER INFORMATION

HMIS Hazard Rating:
- Health: 1
- Fire: 1
- Reactivity: 1

Revised Date: 25 SEPTEMBER 2006
Prepared by: Nancy Swarts, Indium Corporation of America
Approved by: Nancy Swarts, Indium Corporation of America

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