1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION:
Product Name: Aluminum
Date of Prep: 15 November 2011
MSDS #: 901156.001
Revision: G

2. COMPOSITION/INFORMATION ON INGREDIENTS:

<table>
<thead>
<tr>
<th>CHEMICAL INGREDIENT NAME</th>
<th>CAS NUMBER</th>
<th>EC NUMBER</th>
<th>% BY WT.</th>
<th>EXPOSURE LIMITS</th>
<th>EU LABEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>231-07-23</td>
<td>&gt;99</td>
<td>8H TWA 15mg/m³</td>
<td>TWA 10mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OSHA</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION: TWA 10 mg/m³

4. FIRST AID MEASURES:

Inhalation: Remove to fresh air.
Skin Contact: Wash with soap and water.
Eye Contact: Immediately flush with water for a minimum of 15 minutes.
Ingestion: Get medical attention. Wash out mouth with water if person is conscious.

After following first aid measures, seek medical attention.

5. FIRE-FIGHTING MEASURES:

Flammable Properties: Non-flammable
Extinguishing Media: Water spray, carbon dioxide, dry chemical powder
Unique Aspects Contributing To a Fire: Not Applicable
Special Fire Fighting Procedures: Emits toxic fumes under fire conditions.
   Note: As in any fire, wear self-contained breathing apparatus, and full protective gear.

6. ACCIDENTAL RELEASE MEASURES: Sweep up, place in a bag and hold for waste disposal.

7. HANDLING AND STORAGE: Store in cool, dry place tightly closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Handle in accordance with good laboratory practices.
Respiratory Protection: Not normally needed. If exposure limits are exceeded, use approved respirator.
Eye Protection: Safety glasses with side shields.
Skin Protection: Neoprene or other chemical resistant gloves. Disposable nitrile are acceptable for light intermittent exposure.
Engineering Controls: No special requirements. Handle in an area with good general room ventilation.
9. PHYSICAL AND CHEMICAL PROPERTIES:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Silvery metal</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Odor</td>
<td>N/A</td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>2.7 g/mL</td>
</tr>
<tr>
<td>Flash Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Explosion Limits</td>
<td>N/A</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>2460°C</td>
</tr>
<tr>
<td>Melting Point</td>
<td>660°C</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>1mm @ 1284°C</td>
</tr>
<tr>
<td>Vapor Density (air=1)</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Will Not Occur</td>
</tr>
<tr>
<td>Stability</td>
<td>Stable</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY:

Hazardous Decomposition/Combustion Products: Emits toxic fumes under fire conditions.

Conditions & Materials to Avoid:
Avoid oxidizing agents, acids.

11. TOXICOLOGICAL INFORMATION:

Primary Route(s) of Exposure Under Normal Use:

Target Organ(s): Not Established

Acute Effects: Not Established

Chronic Effects: Not Established

Other Information: Chemical Ingredient(s) not classified as carcinogen(s) by OSHA, IARC, NTP, ACGIH, or California.

12. ECOLOGICAL INFORMATION: No data available.

13. DISPOSAL CONSIDERATIONS: Recover for recycling.

14. TRANSPORT INFORMATION:

<table>
<thead>
<tr>
<th>U.S. DOT</th>
<th>IATA/ICAO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Name: None</td>
<td>Non-hazardous for transport</td>
</tr>
<tr>
<td>Hazard Class: Non-hazardous for transport</td>
<td>Non-hazardous for air transport</td>
</tr>
<tr>
<td>UN/NA #:</td>
<td></td>
</tr>
<tr>
<td>Packing Group #:</td>
<td></td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION:

EU Risk/Safety Phrases:

U.S. TOSCA: Yes

Canada: This product has been classified according to the hazard criteria of the CPR and this MSDS contains all the information required by the CPR.

16. OTHER INFORMATION:

<table>
<thead>
<tr>
<th>U.S. EPA SARA</th>
<th>National Fire Protection Association Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>313 Chemicals</td>
<td></td>
</tr>
<tr>
<td>Not listed</td>
<td></td>
</tr>
<tr>
<td>CERCLA RQ</td>
<td></td>
</tr>
<tr>
<td>Not listed</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Not Established (NE) means a value has not been set or there is no information available. Not Applicable (NA) means that the topic is not pertinent.

The information contained herein has been compiled from data presented in various technical sources believed to be accurate. Waters makes no warranties and assumes no liability in connection with the use of this information. It is the user’s responsibility to determine the suitability of this information and to assure the adoption of necessary precautions.