MATERIAL SAFETY DATA SHEET

LITHIUM

HONJO METAL

MSDS No. HM-110

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Lithium foil, battery grade    SUPPLIER: HONJO METAL CO., LTD.
CHEMICAL FORMULA: Li    ADDRESS: 2-3-8 Hishie, Higashi-Osaka, Osaka 578-0984, Japan
CHEMICAL FAMILY: Alkali Metals
CREATION DATE: 6/10/2002    PHONE NUMBER: (81)72-966-1800
REVISION DATE: 10/31/2009

EMERGENCY TELEPHONE NUMBER FOR THE SHIPMENTS OF HAZARDOUS MATERIALS:
CHEMTREC (703)-527-3887

SECTION 2 HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>% w/w</th>
<th>Exposure Limits in Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>7439-93-2</td>
<td>&gt;99</td>
<td>ACGIH-TLV: Not Established, OSHA-PEL: Not Established, OTHER: Not Established</td>
</tr>
</tbody>
</table>

SECTION 3 PHYSICAL DATA

| PHYSICAL STATE | Solid | MELTING POINT | 180.5°C |
| APPEARANCE     | Silvery-white metal | BOILING POINT | 1336°C |
| ODOR           | None  | SPECIFIC GRAVITY | 0.534 g/cm³ |

SECTION 4 FIRE OR EXPLOSION HAZARD

CONDITIONS OF FLAMMABILITY:
Flammable solid.
React vigorously with water generating flammable and/or explosive hydrogen gas and corrosive dust (Li oxide).
Presents fire and explosion risk when exposed to water, nitrogen, acids or oxidizing agents.
Elevated temperatures above melting point (180°C) can result in spontaneous ignition in humid air.

SPECIAL FIRE FIGHTING PROCEDURES:
DO NOT USE WATER, SAND OR CARBON DIOXIDE. Use dry graphite like Lith-X or copper powder.
Wear self-contained breathing apparatus and full fire fighting protective clothing when fighting significant-sized fires.
Lithium fires can throw off molten lithium metal particles. Burning lithium releases corrosive lithium oxide dust and fumes.
Lithium metal can reignite after fire is initially extinguished. Never leave extinguished fire unattended. After all material has apparently burned and cooled, carefully turn over remaining residue and be prepared to re-extinguish should this reignition occur. Carefully place residue in a steel drum, using a long-handled shovel, and cover with extinguish media.
SECTION 5 REACTIVITY DATA

STABILITY: Normally stable.

CONDITIONS TO AVOID: Contact with water and moisture or humid air. Temperatures above the melting point (180°C).

MATERIALS TO AVOID: Reacts with moisture, oxygen, nitrogen, and carbon dioxide. Reacts violently with: water, oxidizers, chlorinated solvents, halogens.

HAZARDOUS DECOMPOSITION PRODUCTS:
Lithium does not decompose. However, it is highly reactive in contact with many other substances, releasing large quantities of heat and/or hazardous products. It can react violently with water, the humidity in air and the moisture in other substances, releasing hydrogen gas and/or corrosive fumes of lithium oxide and/or lithium hydroxide.

SECTION 6 PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:
Wear safety glasses or goggles and dry rubber gloves. Full flame-resistant face shield is required if the metal is in a molten state. Avoid inhalation, contact with eyes, skin and clothing.

ENGINEERING CONTROLS:
Provide adequate ventilation, quick-drench eyewash and safety shower.

LEAK OR SPILL:
Remove all sources of ignition. To prevent ignition, cover with mineral oil and place in an oiled steel drum which is approved for transport. Keep water and moisture away from spilled material.

HANDLING:
Can be handled in open atmosphere at room temperature either coated with mineral oil or in low conditions of relative humidity or under inert atmosphere. (Note: nitrogen is not an inert atmosphere for lithium). To maintain best quality, humidity levels of less than 2%(dew point -30°C) are recommended.

STORAGE REQUIREMENTS:
Store in original unopened shipping container. Once opened, store in argon atmosphere, dry air or mineral oil. Store in cool place. Keep away from water, humid air, acids and oxidizing materials. Keep away from sparks, heat and flame. Protect shipping container from physical damage.

SECTION 7 TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY:
Inhalation: corrosive  Ingestion: corrosive  Skin absorption: corrosive

EXPOSURE BY CONTACT:
Eye contact: Corrosive (may cause blindness)  Skin contact: corrosive (causes burns)

ACUTE EFFECTS:
Lithium metal is extremely destructive to tissue of the mucous membranes and upper respiratory tract. It is extremely reactive with body moisture and is corrosive to skin, nose, throat, stomach and eyes. Harmful if swallowed, inhaled or absorbed through skin.
SECTION 8  FIRST AID MEASURES

EYES:
Immediately wipe away any particles; then flush with very large amounts of water occasionally lifting the upper and lower lids, for at least 15 minutes. See a physician immediately.

SKIN:
Quickly brush away as much of the material as possible. If particles are embedded in the skin and cannot be removed, cover area with USP Grade mineral oil and see a physician immediately. If particles are not embedded, flush with large amounts of water. Obtain medical attention.

INHALATION:
Remove to fresh air. If breathing difficulty occurs, administer oxygen. See a physician immediately.

INGESTION:
Quickly wipe from the mouth as much of the material as possible and immediately rinse the mouth with large amounts of water. See a physician immediately. DO NOT induce vomiting.

SECTION 9  TRANSPORTATION INFORMATION

Proper shipping name: Lithium  UN number: UN 1415
Classification: 4.3  Labels: Dangerous when wet
Packing Group: PG I