SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers
Product name : Lithium Metal
CAS-No. : 7439-93-2

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses : Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet
Company : Central Drug House (P) Ltd
7/28 Vardaan House
New Delhi-10002
INDIA
Telephone : +91 11 49404040
Email : care@cdhfinechemical.com

1.4 Emergency telephone number
Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Substances, which in contact with water, emit flammable gases (Category 1), H260
Skin corrosion (Category 1B), H314
For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC
F Highly flammable R15
C Corrosive R34
R14
For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word Danger
Hazard statement(s) In contact with water releases flammable gases which may ignite
spontaneously.

Precautionary statement(s)
- P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire.
- P231 + P232 Handle under inert gas. Protect from moisture.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
- P422 Store contents under inert gas.

Supplemental Hazard information (EU)
- EUH014 Reacts violently with water.

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances
- Formula: Li
- Molecular weight: 6.94 g/mol
- CAS-No.: 7439-93-2
- EC-No.: 231-102-5
- Index-No.: 003-001-00-4

Hazardous ingredients according to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>Water-react. 1; Skin Corr. 1B;</td>
<td>&lt;= 100 %</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>7439-93-2</td>
<td></td>
</tr>
<tr>
<td>EC-No.</td>
<td>231-102-5</td>
<td>H260, H314, EUH014</td>
</tr>
<tr>
<td>Index-No.</td>
<td>003-001-00-4</td>
<td></td>
</tr>
</tbody>
</table>

Hazardous ingredients according to Directive 1999/45/EC

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</tr>
<tr>
<td>CAS-No.</td>
<td>7439-93-2</td>
<td>F, C, R14/15 - R34</td>
</tr>
<tr>
<td>EC-No.</td>
<td>231-102-5</td>
<td></td>
</tr>
<tr>
<td>Index-No.</td>
<td>003-001-00-4</td>
<td></td>
</tr>
</tbody>
</table>

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media
   Suitable extinguishing media
   Use approved class D extinguishers or smother with dry sand, dry ground limestone, or dry clay. Dry powder
   Unsuitable extinguishing media
   Do not use water, foam, or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
   Lithium oxides

5.3 Advice for firefighters
   Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
   No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
   Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions
   Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
   Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
   For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
   Avoid formation of dust and aerosols.
   Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking.
   For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
   Store under argon. Handle under argon. Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
   Never allow product to get in contact with water during storage.

7.3 Specific end use(s)
   Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Complete suit protecting against chemicals, Flame retardant protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance       Form: granular
b) Odour            No data available
c) Odour Threshold  No data available
d) pH               No data available
e) Melting point/freezing point Melting point/range: 180 °C - lit.
f) Initial boiling point and boiling range 1,342 °C - lit.
g) Flash point      Not applicable
h) Evaporation rate No data available
i) Flammability (solid, gas) No data available
j) Upper/lower flammability or explosive limits No data available
k) Vapour pressure 1 hPa at 723 °C
l) Vapour density   No data available
m) Relative density 0,534 g/mL at 25 °C
n) Water solubility  No data available
o) Partition coefficient: n-octanol/water  No data available
p) Auto-ignition temperature  No data available
q) Decomposition temperature  No data available
r) Viscosity  No data available
s) Explosive properties  No data available
t) Oxidizing properties  No data available

9.2 Other safety information
  No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
  No data available

10.2 Chemical stability
  Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
  Reacts violently with water.

10.4 Conditions to avoid
  Exposure to moisture

10.5 Incompatible materials
  Forms shock-sensitive mixtures with certain other materials., Iron and iron salts., Heavy metals, Phosphorus, Sulphur compounds, Oxygen, Nickel, Do not store near acids., Metals

10.6 Hazardous decomposition products
  Other decomposition products - No data available
  In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

  Acute toxicity
  LD50 Intraperitoneal - Mouse - 1.000 mg/kg

  Skin corrosion/irritation
  No data available

  Serious eye damage/eye irritation
  No data available

  Respiratory or skin sensitisation
  No data available

  Germ cell mutagenicity
  No data available

  Carcinogenicity
  IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

  Reproductive toxicity
  No data available

  Specific target organ toxicity - single exposure
  No data available
Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: OJ5540000
Large doses of lithium ion have caused dizziness and prostration, and can cause kidney damage if sodium intake is limited. Dehydration, weight loss, dermatological effects, and thyroid disturbances have been reported. Central nervous system effects that include slurred speech, blurred vision, sensory loss, ataxia, and convulsions may occur. Diarrhea, vomiting, and neuromuscular effects such as tremor, clonus, and hyperactive reflexes may occur as a result of repeated exposure to lithium ion., Cough, Shortness of breath, Headache, Nausea

SECTION 12: Ecological information

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 1415        IMDG: 1415        IATA: 1415

14.2 UN proper shipping name
ADR/RID: LITHIUM
IMDG: LITHIUM
IATA: Lithium
Passenger Aircraft: Not permitted for transport

14.3 Transport hazard class(es)
ADR/RID: 4.3        IMDG: 4.3        IATA: 4.3

14.4 Packaging group
ADR/RID: I        IMDG: I        IATA: I

14.5 Environmental hazards
ADR/RID: no        IMDG Marine pollutant: no        IATA: no
14.6 Special precautions for user
No data available

SECTION 15: Regulatory information
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
No data available

15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information
Full text of H-statements referred to under sections 2 and 3.
EUH014 Reacts violently with water.
H260 In contact with water releases flammable gases which may ignite spontaneously.
H314 Causes severe skin burns and eye damage.
Skin Corr. Skin corrosion
Water-react. Substances, which in contact with water, emit flammable gases

Full text of R-phrases referred to under sections 2 and 3
C Corrosive
F Highly flammable
R14 Reacts violently with water.
R14/15 Reacts violently with water, liberating extremely flammable gases.
R15 Contact with water liberates extremely flammable gases.
R34 Causes burns.

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.