1 Identification of substance:

Product details:
Product name: Magnesium slug
Stock number: 43299

Manufacturer/Supplier:
Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Emergency Phone: (978) 521-6300
CHEMTREC: (800) 424-9300
Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency information:
During normal hours the Health, Safety and Environmental Department.
After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization:
Description: (CAS#)
Magnesium (CAS# 7439-95-4), 100%

Identification number(s):
EINECS Number: 231-104-6
EU Number: 000-000-00-4

3 Hazards identification

Hazard description: Not applicable
Information pertaining to particular dangers for man and environment
Not applicable
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FIRE</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Health (acute effects) = 0
Flammability = 0
Reactivity = 0

4 First aid measures

General information No special measures required.
After inhalation Seek medical treatment in case of complaints.
After skin contact Generally the product does not irritate the skin.
After eye contact Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing Seek medical treatment.

5 Fire fighting measures

Suitable extinguishing agents
Special powder for metal fires. Do not use water.
For safety reasons unsuitable extinguishing agents
Water

(Contd. on page 2)
6 Accidental release measures

Person-related safety precautions: Not required.
Measures for environmental protection:
Do not allow material to be released to the environment without proper governmental permits.
Measures for cleaning/collecting: Pick up mechanically.
Additional information:
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

Handling
Information for safe handling:
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
No special precautions are necessary if used correctly.
Information about protection against explosions and fires:
Fine powder: highly flammable

Storage
Requirements to be met by storerooms and receptacles:
No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: None.

8 Exposure controls and personal protection

Additional information about design of technical systems:
No further data; see item 7.

Components with limit values that require monitoring at the workplace:
Not required.
Additional information: No data

Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Breathing equipment: Not required.
Protection of hands: Not required.
Eye protection: Safety glasses
Body protection: Protective work clothing.

9 Physical and chemical properties:

General Information

<table>
<thead>
<tr>
<th>Form:</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Silver-colored</td>
</tr>
</tbody>
</table>
Material Safety Data Sheet  
acc. to OSHA and ANSI

Product name: Magnesium slug

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Change in condition</td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>650°C (1202°F)</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>1107°C (2025°F)</td>
</tr>
<tr>
<td>Sublimation temperature / start</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gaseous)</td>
<td>Product is not flammable.</td>
</tr>
<tr>
<td></td>
<td>Powder: contact with water liberates</td>
</tr>
<tr>
<td></td>
<td>extremely flammable gases.</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Danger of explosion</td>
<td>Product does not present an explosion</td>
</tr>
<tr>
<td></td>
<td>hazard.</td>
</tr>
<tr>
<td>Explosion limits</td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Not determined</td>
</tr>
<tr>
<td>Upper</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor pressure at 621°C (1150°F)</td>
<td>1.33 hPa (1 mm Hg)</td>
</tr>
<tr>
<td>Density at 20°C (68°F)</td>
<td>1.74 g/cm³</td>
</tr>
<tr>
<td>Solubility in / Miscibility with Water</td>
<td>Insoluble</td>
</tr>
<tr>
<td></td>
<td>Not determined</td>
</tr>
</tbody>
</table>

10 Stability and reactivity

**Thermal decomposition / conditions to be avoided:**
Decomposition will not occur if used and stored according to specifications.

**Materials to be avoided:**
- Oxidizing agents
- Halogens
- Halocarbons
- Acid chlorides

**Dangerous reactions**
No dangerous reactions known
Powder: contact with water liberates extremely flammable gases.

**Dangerous products of decomposition:**
Metal oxide fume

11 Toxicological information

**Acute toxicity:**

**Primary irritant effect:**
- **on the skin:** Powder: irritant effect
- **on the eye:** Powder: irritant effect

**Sensitization:** No sensitizing effects known.

**Subacute to chronic toxicity:**
Inhalation of magnesium compounds may cause metal fume fever. Metallic magnesium which perforates the skin may cause local lesions. Some magnesium salts have produced muscle weakness, cardiac arrhythmias, respiratory effects and changes in blood chemistry following ingestion.
Product name: Magnesium slug

Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:

General notes:
Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

Product:
Recommendation
Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information
Not a hazardous material for transportation.

DOT regulations:
Hazard class: None

Land transport ADR/RID (cross-border)
ADR/RID class: None

Maritime transport IMDG:
IMDG Class: None

Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class: None

Transport/Additional information:
Not dangerous according to the above specifications.

15 Regulations

Product related hazard informations:
Observe the general safety regulations when handling chemicals

National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

Information about limitation of use:
For use only by technically qualified individuals.
16 Other information:
Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department.
Contact: Darrell R. Sanders