

Magnesium Ferrosilicon

Appearance and Odor: Metallic grey color - no odor

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

**Special Fire Fighting Procedures:** Fire may be isolated and allowed to burn itself out.

**Unusual Fire and Explosive Hazards:** Lump alloy is not flammable. Very fine dust (minus 325 mesh) may present an explosion hazard when airborne.

### SECTION V - REACTIVITY DATA

**Stability:** Stable as lump and when dry.

**Incompatibility (Materials to Avoid):** Avoid contact with halogen acids and oxidizing materials. Reacts rapidly in hydrofluoric/nitric acid as well as molten alkali.

**Hazardous Decomposition or by Products:** Small amounts of arsine, phosphine, and hydrogen may evolve if moisture contacts fine sized material.

### SECTION VI - HEALTH HAZARD DATA

**Route(s) of Entry:** Inhalation? Yes      Skin? No      Ingestion? Yes      Eyes? Yes

**Health Hazards (Acute and Chronic):** Airborne dust generated through the use or handling of the product may result in respiratory tract and/or eye discomfort.

**Carcinogenicity:** NTP? No      IARC Monographs? No      OSHA Regulated? No

**Emergency and First Aid Procedure:** Wash skin with soap and water. Flush eyes with water for 15 minutes. Remove victim to well ventilated area. Seek medical attention if symptoms persist.

**Signs and Symptoms of Exposure:** Respiratory tract and/or eye discomfort and cough may result from exposure to elevated concentrations of airborne material.

### SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

**If Material is Spilled:** Observe health and safety precautions. Collect using methods that minimize creation of airborne dust. High efficiency vacuum cleaning is recommended to recover spilled material. Place in a suitable container for recycling or disposal.



**Magnesium Ferrosilicon**

**Waste Disposal Method:** Dispose of in accordance with applicable federal, state, and local regulations.

**Precautions to be taken in Handling and Storage:** Prevent airborne emissions. Keep material dry when storing for extended periods. Do not reseal wet material. Inert atmosphere advised when sizing to minus 20 mesh or lower.

**Other precautions:** Contact between molten metal and water or any wet materials may cause an eruption. Grinding wet material may be hazardous due to possible hydrogen evolution.

### **SECTION VIII - CONTROL MEASURES**

**Respiratory Protection:** Use 42CFR84 approved respiratory protection when airborne concentrations equal or exceed the Permissible Exposure Limit.

**Ventilation:** Local exhaust suggested in processing areas.

**Eye Protection:** Safety glasses with sideshields. Safety goggles are recommended if airborne dusts are created.

**Other:** Lump material may have sharp edges. Protective gloves should be used while handling lump material.

### **SECTION IX - ADDITIONAL INFORMATION**

These products may contain chromium in the metallic state. The International Agency for Research on Cancer (IARC) has determined that hexavalent chromium compounds are "Causally associated with Cancer in humans". The IARC and OSHA have determined that chromium metal is "not classifiable as a human carcinogen".

All information, recommendations, and suggestions, appearing herein concerning our products are based on data believed to be accurate and reliable. Since the actual use by others is beyond our control, it is the user's responsibility to determine the suitability of the product for its use and to adopt such safety precautions as may be necessary. Since the conditions of use are not under our control, Globe Metallurgical Inc. disclaims all liability with respect to the use of any material supplied by Globe Metallurgical Inc.

**POTENTIAL HAZARDS**

**FIRE OR EXPLOSION**

- Produce flammable gases on contact with water.
- May ignite on contact with water or moist air.
- Some react vigorously or explosively on contact with water.
- May be ignited by heat, sparks or flames.
- May re-ignite after fire is extinguished.
- Some are transported in highly flammable liquids.
- Runoff may create fire or explosion hazard.

**HEALTH**

- Inhalation or contact with vapors, substance or decomposition products may cause severe injury or death.
- May produce corrosive solutions on contact with water.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control may cause pollution.

**PUBLIC SAFETY**

- **CALL EMERGENCY RESPONSE Telephone Number on Shipping Paper first.** If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- As an immediate precautionary measure, isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate the area before entry.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

**EVACUATION**

**Spill**

- See Table 1 - Initial Isolation and Protective Action Distances for highlighted materials. For non-highlighted materials, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

## EMERGENCY RESPONSE

## FIRE

- DO NOT USE WATER OR FOAM.

## Small Fire

- Dry chemical, soda ash, lime or sand.

## Large Fire

- DRY sand, dry chemical, soda ash or lime or withdraw from area and let fire burn.
- Move containers from fire area if you can do it without risk.

## Fire Involving Metals or Powders (Aluminum, Lithium, Magnesium, etc.)

- Use dry chemical, DRY sand, sodium chloride powder, graphite powder or Met-L-X<sup>®</sup> powder; in addition, for Lithium you may use Lith-X<sup>®</sup> powder or copper powder.

Also, see GUIDE 170.

## Fire involving Tanks or Car/Trailer Loads

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Do not get water inside containers.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

## SPILL OR LEAK

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.

## DO NOT GET WATER on spilled substance or inside containers.

## Small Spill

- Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
- Dike for later disposal; do not apply water unless directed to do so.

## Powder Spill

- Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.
- DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.

## FIRST AID

- Move victim to fresh air.
- Call 911 or emergency medical service.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, wipe from skin immediately; flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.



Magnesium Ferrosilicon

**Product:** Magnesium Ferrosilicon (MgFeSi)  
**CAS No.:** N.A.  
**Trade Names:** Ferrosilicon Magnesium, Inmold, CG Alloys, Flotret, Glomag, Minoc, R5-10, R5-8M, R5-MCa, R6-MCa, C6-Ba, L5-10, R5-10FC, Modified R5-10, R3-M, R4-MCa, C7-MCa, Procaloy 142, R5-6HP, C6-3MCa, R5-12, C5-6, R5-8, C5-10, R5-9, Inmold II, R4-4, IM6-La, C5-3, R6-12, GLOFLEX, C9-6, C-9, R3-20, R9-12, R6-2

**SECTION I - SUPPLIER INFORMATION**

**Manufacturer:** Globe Metallurgical Incorporated      **Telephone:** (740) 984-2361  
**Address:** P.O. Box 157, County Rd. 32, Beverly, OH 45715  
**Emergency Phone:** Chemtrec 800-424-9300

**SECTION II - HAZARDOUS INGREDIENT INFORMATION**

| COMPONENTS: | CAS NO.:  | %WT:      | OSHA PEL:<br>(mg/M <sup>3</sup> ) | ACGIH TLV:<br>(mg/M <sup>3</sup> ) |
|-------------|-----------|-----------|-----------------------------------|------------------------------------|
| Silicon     | 7440-21-3 | 40 - 50   | 5 Resp. Fract.                    | 10 Total Dust                      |
| Magnesium   | 7439-95-4 | 2 - 13    | 5 Resp. Fract.                    |                                    |
| Chromium    | 7440-47-3 | <0.5      | 0.5                               | 0.5                                |
| Barium      | 7440-39-3 | 0.0 - 1.5 | 0.5 Total Dust                    | 0.5 Total Dust                     |

All components are listed in the TSCA.

ACGIH      American Conference of Governmental Industrial Hygienists  
CAS        Chemical Abstract Services  
OSHA      Occupational Safety and Health Administration  
TSCA      Toxic Substance Control Act

**SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS**

**Melting Point:** 1250 °C - 1400 °C      **Specific Gravity:** 3 - 5 (H<sub>2</sub>O = 1.0)  
**Solubility in Water:** Insoluble