Italmagnésio
Nordeste S.A.

Material Safety Data Sheet

(29 CFR Part 1910.1200 – Harzard Communication)

SECTION 1 – PRODUCER

Material/Product: Ferrosilicon Magnesium
Commercial Name: Ferrosilicon Magnesium MG 5R2, MG 4R, MG 9R1 Special and Liga in mold

Manufacturer/Distributor:	Italmagnésio Nordeste S/A	MSDS Rev
Address:	R. Salvador Roberto, 1963	Preparer: Eng. Michele Sarlo
	Varzea da Palma, MG Brazil	Date Prepared: **January 15th, 07**
	CEP 39260 – 000	Telephone: (55 38) 3731 1451

SECTION 2 – HARZARDOUS COMPONETS

Harzardous Components	*CAS Nº*	*%*	*OSHA PEL* mg/m^3	*ACGIH TLV* mg/m^3	*Other Limits*
Silicon	7440-21-3	43 - 48	15	10	N/A
Magnesium	7439-95-4	3 – 10	N/K	N/K	N/A
Calcium	7440-70-2	0.8 / 3.5	5	2	N/A
Rare Earth	N/A	0 – 2,0	N/K	N/K	N/A
Aluminium	7429-90-5	0 / 1.2	15	10	N/A
Iron	7439-89-6	balance	10 as FeO and 5 as Fe_2O_3	5	N/A

N/A = Not Applicable N/K = Not Known

SECTION 3 – PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: N/A
Vapor Pressure: N/A
Vapor Density:N/A
Reactivity in Water: Ferrosilicon alloys may react with moisture to form toxic or explosive gases
Density: 3,5 / 4,5 g/cm^3
Evaporation Rate: N/A
Solubility in Water: nil
Melting Point Range: 930 – 1200° C
Appearance and Odor: Silvery metallic. Ferrosilicon alloys are 100% solid. May be in powdered form or granular form. No odor.

SECTION 4 – FIRE AND EXPLOSION DATA

Flash Point: 280 milijoules
Flammable Limits: Lel – 800 g/m^3 Uel – N/A
Extinguishing Media: Class D fire, use dry powder, dry sand or CO2 to smother fire. Fire may also be isolated and allowed to burn itself out. Do not disturb burning metal while extinguishing the fire.

SECTION 5 – REACTIVITY DATA

Stability: Stable in all sizes. Conditions to avoid: prolonged contact with moisture. Avoid adding wet product to molten materials. Ventilation should be supplied for areas of extended storage. Avoid generation of airborne dust. Avoid generation of sparks or other ignition sources in the present of dust.
Materials to Avoid: Contact with moisture and/or acids may liberate a few phosphine, hydrogen, arsine, silanes and other toxic or explosive gases.
Hazardous Polymerization Reactions / Decomposition Products: Phosphine, hydrogen and arsine may involve due to excessive handling, the presence of moisture or the disintegration of the alloys. Phosphine and arsine are highly toxic gases which if allowed to concentrate can cause serious health problems.

SECTION 6 – HEALTH HAZARD DATA

Routes of Entry: Inhalation (Yes), Skin (No), Eyes (No), Ingestion (No)
Health Hazards: Acute – Ferrosilicon alloys are of low toxicity in lump form. High concentrations of dust will cause some irritation to the eyes, nose and throat.
Chronic – Similar to Acute. No residual injury is expected. Inhalation of ferrosilicon dust may cause benign pneumoconiosis similar to the caused by inhalation of a nuisance dust. Magnesium poisoning can occur from excessive intake of magnesium via inhalation. The most notable effects of magnesium poisoning are central nervous system disorders which may occur as early as 6 months after initial exposure. Symptoms, which resemble Parkinson disease, include apathy, drowsiness, sleep disturbance, muscular twitching, spastic gait and emotional control problems permanent injury may occur if chronic magnesium poisoning is not treated.
Emergency and First Aid Procedures: Inhalation – remove to fresh air. Skin – wash with mild soap and water. Eyes: flush with water to remove particles. Ingestion: N/A

SECTION 7 – PRECAUTIONS FOR SAFE HANDLING AND USE

Spills / Leaks: Cleanup personnel should wear appropriate respiratory protective equipment. Avoid the use of compressed air to maneuver spills or leaks of fine material. Fine material should be swept up or vacuumed using explosive proof equipment.
Waste Disposal: Dispose of in accordance with local, state and federal regulations. Avoid repacking material which is wet in closed or sealed containers.
Handling, Use and Storage: Avoid generation of airborne dusts. Use gloves because the shape is irregular and can cut the hand skin. Keep material dry when storing for long periods of time. Avoid add wet product to the molten metal to reduce the potential for explosion. Avoid contact with fumes generated during the addiction to the melting metal.
Grinding or Crushing: Precautions such as the use of inert atmosphere are advisable when size to minus 200 mesh. Grinding wet material may be hazardous due to the possible evolution hydrogen, a highly explosive gas.
Labeling: Dangerous when wet

SECTION 8 – CONTROL MEASURES

Respiratory Protection: In enclosed areas with excessive dusting and minimal ventilation a self contained breathing apparatus is required for entry. In well ventilated open areas, the use of a respirator equipped is recommended.

Gloves: Protective gloves are recommended during handling as lump material may have sharp edges
Eye Protection: Safety glasses
Clothing: As with other metal dusts, avoid contamination with clothing
Other: N/A

Please ensure that all persons coming into contact with this product are aware of the information contained in this MSDS sheet. Information presented herein has been compiled from sources considered to be reliable and accurate to the best of our knowledge and belief but is not guaranteed to be so. It is the user's responsibility to determinate for himself the suitability of any specific use and to adopt such safety precautions as may be necessary. If you need any further information from us to make the determination which you must make to use this material safely, please contact the above named preparer.

SUPPLER NOTIFICATION

The above listed product contains no toxic chemical or chemicals subject to the reporting requirements of Sections 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372, based upon our knowledge of the raw materials comprising product.

This notification is attached to the Materials Safety Data Sheet (MSDS) and must not be detached from the MSDS. Any copying or redistribution of the MSDS shall include copying and redistribution of this notice attached to copies of the MSDS subsequently redistributed.

Signature of Preparer :