



Material Safety Data Sheet

SECTION 1 – PRODUCT:

Product Name: Ferrosilicon
Cas No. 8049-17-0
Formula: FeSi, Fe₂, Si₅
Synonyms: 50 FeSi, 75 FeSi
Manufacturer's Name: Miller and Company LLC
Address: 9700 W. Higgins Road
Suite 1000
Rosemont, IL 60018
Phone: 874-696-2400
Emergency Phone: Chemtrec 800-262-8200
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Date: January 13, 2009

SECTION 2 – PHYSICAL DATA:

Appearance: Metallic Silver
Form: Product is in lump or granule form.
Solubility: Product is insoluble in water.
Reactivity: Product may react slightly with water.
Odor: None
Specific Gravity: (Approx.) 2 to 5.
Melting Point: (Approx.) 1200°C to 1250°C.

SECTION 3 – COMPOSITION:

TYPICAL ANALYSIS (WT % RANGE)

Silicon	45-85%
Iron	15-55%
Chromium	Less 0.5%

SECTION 4 – HAZARDS:

Part A – Air Contaminants

No permissible exposure limits or threshold limit values are known for Ferrosilicon. Values for ingredients in the product may be appropriate.

<u>Ingredient</u>	<u>Pel*</u>	<u>TLV**</u>
Silicon	10	10
Iron	10	5

* Permissible Exposure Limit (mg/m³) OSHA 29CFR 1910

** Threshold Limit Value (mg/m³) American Conference of Governmental Industrial Hygienists.

Part B – Short Term Exposure

Ferrosilicon is a low toxicity in lump form. Overexposure to dusts may irritate eye, nose or throat.

Part C – Long Term Exposure

Long term exposure to dust or to fumes emitted from the melting of ferrosilicon may cause obstructive lung disease such as chronic bronchitis. No residual injury is expected from long term exposure to dusts. OSHA classifies ferrosilicon dust as a “nuisance dust”.

Other Precautions:

These products contain chromium in the metallic state. The International Agency for Research on Cancer has determined that chromium and certain compounds are “causally associated with cancer in humans” but “the compounds responsible for the carcinogenic effect in humans cannot be specified.” This requires that chromium in all forms be identified as carcinogenic under OSHA (29 CFR1910.1200). The American Conference of Governmental Industrial Hygienists has reviewed that available data and concluded that chromium metal is not carcinogenic to humans.

THERE IS NO DATA TO INDICATE THAT FERROSILICON IS A CARCINOGEN.

First Aid Procedures:

Inhalation: Remove from dust area to fresh air
 Skin Contact: No hazard associated with skin contact.
 Eye Contact: Flush with water until all particles are removed from the eye.

Part D – Fire hazard

Lump ferrosilicon is not flammable; very fine dust (minimum 325 mesh) may present an explosion hazard when airborne.

Class D Fires: Use dry chemical, sand or CO₂ to smother fire. Fire may be isolated and allowed to burn itself out. Do not disturb burning metal while extinguishing the fire.

SECTION 5 – PRECAUTIONS:

A) Atmosphere

Avoid generation of dust and collect fumes emitted by melting of ferrosilicon in compliance with OSHA regulations.

B) Spill and leak Information

Fine material should be swept or vacuumed. Spill or leak of lump material presents no hazard. Disposal should be in accordance with regulations that apply. Avoid placing wet material in sealed containers. Also, avoid comingling wet and dry material.

C) Employees

Respirator that are NIOSH approved in accordance with 29CFR 1910.134 to control inhalation of fine dust are necessary when exposure limits must be exceeded due to inadequate ventilation. Industrial Hygiene monitoring is required to establish exposure levels.

Ferrosilicon may have sharp edges, therefore, protective gloves are recommended for handling. Eye protection should conform with local safety regulations. It is recommended that safety goggles be worn.

D) Stable as Lump and Dry

When fine sized, avoid contact with moisture. Avoid contact with halogen acids. Ventilations would be supplied in areas of extended storage. Reacts rapidly in hydrofluoric/nitric acids as well as molten alkali. Small amounts of arsine, phosphine, and hydrogen may evolve if moisture is present.

References:

1. OSHA (29CFR 1910) Department of Labor.
2. Documentation of the Threshold Limit Values, Fourth Edition, 1980
3. Third Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Commerce.

Important Notice:

This information relates only to the specific product or material designed and may not be valid for such product or material used in combination with any other material or products or any process. The information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or

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