



Material Safety Data Sheet  
Iron Metal Filings, Fine MSDS# 89410

### Section 1 - Chemical Product and Company Identification

MSDS Name: Iron Metal Filings, Fine  
Catalog Numbers: 157500  
Synonyms: None  
Company Identification: Fisher Scientific UK  
Bishop Meadow Road, Loughborough  
Leics. LE11 5RG  
For information in Europe, call: (01509) 231166  
Emergency Number, Europe: 01509 231166

### Section 2 - Composition, Information on Ingredients

CAS#: 7439-89-6  
Chemical Name: Iron Metal  
%: 100.0  
EINECS#: 231-096-4

Hazard Symbols: F



Risk Phrases: 11

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Warning! Flammable solid. Moisture sensitive. May cause liver damage. May cause cardiac disturbances. May cause lung damage. May cause mechanical eye and skin irritation. Inhalation of fumes may cause metal-fume fever. May cause blood abnormalities. Target Organs: Liver, respiratory system, cardiovascular system, pancreas.

#### Potential Health Effects

Eye: Exposure to particulates or solution may cause conjunctivitis, ulceration, and corneal abnormalities. Deposition of particles may cause corneal discoloration.  
Skin: May cause skin irritation.  
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.  
Inhalation: Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count. May cause lung damage.  
Chronic: Chronic exposure may lead to liver and lung damage. Repeated exposure may cause pancreatic damage, diabetes, and cardiac abnormalities. Chronic exposure may lead to chronic bronchitis and a benign pneumoconiosis (siderosis).

### Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.  
Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.  
Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Antidote: The use of Deferoxamine as a chelating agent should be determined only by qualified medical personnel.

#### Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dusts at sufficient concentrations can form explosive mixtures with air. Combustion generates toxic fumes. Flammable solid.

Extinguishing Media: Use only graphite powder, soda ash, powdered sodium chloride, or an appropriate metal-fire-extinguishing dry powder.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 2; flammability: 2; instability: 0;

#### Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Remove all sources of ignition. Provide ventilation.

#### Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Keep container closed when not in use. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances.

#### Section 8 - Exposure Controls, Personal Protection

| Chemical Name | ACGIH       | NIOSH       | OSHA - Final PELs |
|---------------|-------------|-------------|-------------------|
| Iron Metal    | none listed | none listed | none listed       |

OSHA Vacated PELs: Iron Metal: None listed

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

#### Section 9 - Physical and Chemical Properties

Physical State: Solid

Color: black to gray

Odor: none reported

pH: Not available

Vapor Pressure: 1 mm Hg @ 1787 deg C

Vapor Density: Not available

Evaporation Rate: Negligible.

Viscosity: Not available

Boiling Point: 2750 deg C ( 4,982.00°F)

Freezing/Melting Point: 1535 deg C ( 2,795.00°F)

Decomposition Temperature: Not available

Solubility in water: Insoluble in water.

Specific Gravity/Density: 7.86 @ 20°C

Molecular Formula: Fe

Molecular Weight: 55.847

#### Section 10 - Stability and Reactivity

|  |   |
|--|---|
| Chemical Stability:                    | Decomposes when heated. Oxidizes when exposed to air.           |
| Conditions to Avoid:                   | Incompatible materials, moisture, exposure to air, excess heat. |
| Incompatibilities with Other Materials | Not available   |
| Hazardous Decomposition Products       | Oxides of iron.   |
| Hazardous Polymerization               | Has not been reported.  |

#### Section 11 - Toxicological Information

RTECS#: CAS# 7439-89-6: NO4565500 NO8225000

RTECS:

LD50/LC50: CAS# 7439-89-6: Oral, rat: LD50 = 30 gm/kg;

Carcinogenicity: Iron Metal - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

#### Section 12 - Ecological Information

Other: No information available.

#### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

#### Section 14 - Transport Information

US DOT

Shipping Name: METAL POWDERS, FLAMMABLE, N.O.S.

Hazard Class: 4.1

UN Number: UN3089

Packing Group: II

Canada TDG

Shipping Name: METAL POWDER FLAMMABLE NOS (IRON)

Hazard Class: 4.1

UN Number: UN3089

Packing Group: III

#### Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: F

Risk Phrases:

R 11 Highly flammable.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

WGK (Water Danger/Protection)

CAS# 7439-89-6: 0

Canada

CAS# 7439-89-6 is listed on Canada's DSL List

Canadian WHMIS Classifications: B4

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7439-89-6 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 7439-89-6 is listed on the TSCA Inventory.

*Carla Rutherford* | Reviewed  
2012.08.15  
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Section 16 - Other Information

MSDS Creation Date: 12/02/1998

Revision #7 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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