

SAFETY DATA SHEET

Preparation Date: 9/16/2015

Revision Date: 10/12/2018

Revision Number: G3

1. IDENTIFICATION

Product identifier

Product code: I1040
Product Name: IRON METAL, REDUCED, 100 MESH, POWDER

Other means of identification

Synonyms: No information available
CAS #: 7439-89-6
RTECS # NO4565500
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Not classified

Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Iron Metal, powder, reduced	7439-89-6	100

4. FIRST AID MEASURES

First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.
- Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops.
- Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.
- Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. In case of shortness of breath, give oxygen. Get medical attention.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

- Symptoms** May cause eye/skin irritation
Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea
Central nervous system effects
May affect the liver

Indication of any immediate medical attention and special treatment needed

- Notes to Physician:** Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

- Suitable Extinguishing Media:** The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

- Unsuitable Extinguishing Media:** No information available.

Specific hazards arising from the chemical

- Hazardous Combustion Products:** No information available.

- Specific hazards:** No information available.

Special Protective Actions for Firefighters

- Specific Methods:** No information available.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Avoid creating dust. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Moisture sensitive.

Incompatible Materials:

Acids
Oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Iron Metal, powder, reduced	7439-89-6	None	None	None	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Iron Metal, powder, reduced	7439-89-6	None	None	None	None

Australia and Mexico

Components	CAS-No.	Australia	Mexico
Iron Metal, powder, reduced	7439-89-6	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles or Safety glasses with side-shields.

Skin and body protection: Chemical resistant apron
Gloves
Long sleeved clothing

Respiratory protection: Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Solid

Appearance:

Metal.

Color:

Black. Gray.

Odor:

Odorless.

Taste

Tasteless.

Formula:

No information available

Molecular/Formula weight (g/mole):

55.85

Flammability:

No information available

Flashpoint (°C/°F):

No information available.

Flash Point Tested according to:

Not available

Autoignition Temperature (°C/°F):

No information available

Lower Explosion Limit (%):

No information available

Upper Explosion Limit (%):

No information available

Melting point/range(°C/°F):

1535°C/2795°F

Decomposition temperature(°C/°F):

No information available

Boiling point/range(°C/°F):

3000°C/5432°F

Bulk density:

No information available

Density (g/cm3):

No information available

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Specific gravity:
7.86

pH:
No information available

Vapor pressure @ 20°C (kPa):
No information available

Evaporation rate:
No information available

Vapor density:
No information available

VOC content (g/L):
No information available

Odor threshold (ppm):
No information available

**Partition coefficient
(n-octanol/water):**
No information available

Viscosity:
No information available

Miscibility:
No information available

Solubility:
Insoluble in Alcohol
Insoluble in alkalis
Insoluble in cold water
Insoluble in diethyl ether
Insoluble in hot water
Soluble in acids

10. STABILITY AND REACTIVITY

Reactivity

Reactive with acids

Reactive with oxidizing agents

Hot iron(wire) burns in Chlorine gas. Violent decomposition of hydrogen peroxide (53% by weight or greater) may be caused by contact with iron. Readily oxidizes in moist air forming rust. Reactive with halogens. Incompatible with acetaldehyde, ammonium peroxodisulfate, chloroformamidinium, chloric acid, ammonium nitrate, dinitrogen tetroxide, nitril fluoride, polystyrene, sodium acetylide, potassium dichromate, peroxyformic acid, sulfuric acid, sodium carbide. Readily attacked by dilute mineral acids and or attacked or dissolved by organic acids. Not appreciably attacked by cold sulfuric acid, or nitric acid, but is attacked by hot acids. Chlorine Trifluoride reacts with iron with incandescence. Powdered iron reacts with fluorine below redness with incandescence. Reduced iron decomposes with nitrogen dioxide at ordinary temperature with incandescence. Reacting mass formed by mixture of phosphorus and iron can become incandescent when heated. This material is flammable in fine powder form only. Material in fine powdered form can explode when exposed to heat or flame.

Chemical stability

Stability: Moisture Sensitive. Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Avoid dust formation. Exposure to moisture. Incompatible materials.

Incompatible Materials: Acids
Oxidizing agents

Hazardous decomposition products: No information available.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document
Component Information

Iron Metal, powder, reduced	
CAS-No.	7439-89-6

LD50/oral/rat = 30 g/kg Oral LD50 Rat; 750 mg/kg

LD50/oral/mouse = No information available

LD50/dermal/rabbit = No information available

LD50/dermal/rat = No information available

LC50/inhalation/rat = No information available

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information = 20 g/kg Oral LD50 Guinea Pig;
200 mg/kg Oral LD50 Human;

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = 30000 mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = No information available

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:

Iron metal filings, granular, or dust: May cause skin irritation by mechanical action.

Eye Contact:

Iron metal filings, granular, or dust: Can irritate eyes by mechanical action.

Inhalation

Iron dust: Can irritate the respiratory tract by mechanical action. Iron metal wire, granular, or filings: Not an inhalation hazard unless metal is heated. If metal is heated, fumes will be released. Inhalation of these fumes may cause "fume metal fever", which is characterized by flu-like symptoms. Symptoms may include metallic taste, fever, nausea, vomiting, chills, cough, weakness, chest pain, generalized muscle pain/aches, and increased white blood cell count.

Ingestion

Iron metal filings, granular, or dust: The amount of ingested iron which constitutes a toxic dose is not well defined. Proposed toxic doses of elemental iron are 20 mg/kg for gastrointestinal irritation to greater than 60 mg/kg for systemic toxicity. Gastrointestinal effects are the first signs to appear, with hemorrhagic vomiting

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and diarrhea, hematochezia, abdominal pain, lethargy, metabolic acidosis, coagulaopathy, shock, coma and convulsions developing from 0 to 6 hours after ingestion. Leukocytosis may also occur. An asymptomatic phase may ensue at 6 to 12 hours postingestion, followed by hypoglycemia or hyperglycemia, hepatic and renal failure, severe acidosis, cyanosis, fever, CNS depression (lethargy, restlessness and/or confusion seizures), hypotension, and cardiovascular collapse/cardiac failure in 12 to 48 hours. Hepatic cirrhosis, gastrointestinal scarring and/or strictures may arise in 2 to 6 weeks. It may also cause an anaphylactoid reaction. Non-cardiogenic pulmonary edema also develop in severe cases of iron intoxication.

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Inhalation: Chronic inhalation of iron dust can lead to accumulation in the lungs and a characteristic stippled appearance on X-rays. This condition, called SIDEROSIS, is considered benign in that it does not interfere with lung function and does not predispose to other disease. Chronic inhalation of iron dust may also cause fibrosis in the lungs. Ingestion: Clinical signs of iron overload appear when the total body iron is 5 to 10 times higher than normal. Neurobehavioral defects including depression, decreased activity, habituation, reflex startle, and conditioned avoidance response performance may occur. However, similiar effects were also seen in iron defficiency. It is therefore likely that these behavioral effects are secondary to general toxicity. High serum iron levels may be associated with an increased risk of fatal acute myocardial infarction (MI). Skin: Prolonged or repeated contact may cause hypersensitivity.

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Iron Metal, powder, reduced	7439-89-6	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Iron Metal, powder, reduced - 7439-89-6

Freshwater Fish Species Data: 13.6 mg/L LC50 Morone saxatilis 96 h static 1

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Iron Metal, powder, reduced	7439-89-6	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN3089
Proper Shipping Name: Metal powders, flammable, n.o.s.
Hazard Class: 4.1
Subsidiary Class: No information available
Packing group: III
Emergency Response Guide Number: 170
Marine Pollutant: No data available
DOT RQ (lbs): No information available
Special Provisions: IB8, IP2, IP4, T1, TP33, W100
Symbol(s): No information available
Description: UN3089, Metal powders, flammable, n.o.s., 4.1, III

TDG (Canada)

UN-No: UN3089
Proper Shipping Name: Metal powder, flammable, n.o.s.
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant: No Information available
Description: UN3089, Metal powder, flammable, n.o.s., 4.1, III

ADR

UN-No: UN3089

Product code: I1040

Product name: IRON METAL,
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Proper Shipping Name: Metal powder, flammable, n.o.s.
Hazard Class: 4.1
Packing Group: III
Subsidiary Risk: No information available
Special Provisions 552
Description: UN3089, Metal powder, flammable, n.o.s., 4.1, III

IMO / IMDG

UN-No: UN3089
Proper Shipping Name: Metal powders, flammable, n.o.s.
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant No information available
EMS: F-G
Special Provisions 223
Description UN3089, Metal powder, flammable, n.o.s., 4.1, III

RID

UN-No: UN3089
Proper Shipping Name: Metal powder, flammable, n.o.s.
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III
Special Provisions 552
Description: UN3089, Metal powder, flammable, n.o.s., 4.1, III

ICAO

UN-No: UN3089
Proper Shipping Name: Metal powder, flammable, n.o.s.
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III
Description: UN3089, Metal powder, flammable, n.o.s., 4.1, III
Special Provisions A3

IATA

UN-No: UN3089
Proper Shipping Name: Metal powder, flammable, n.o.s.
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 3L
Special Provisions No information available
Description: UN3089, Metal powder, flammable, n.o.s., 4.1, III

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Iron Metal, powder, reduced</i>	7439-89-6	PresentACTIVE	Present KE-21059	Present	Not present	Present	Present	Present 231-096-4

U.S. Regulations

Iron Metal, powder, reduced

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Product name: IRON METAL, REDUCED, 100 MESH, POWDER

California Directors List of Hazardous Substances: Present
 FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1375
 FDA - 21 CFR - Total Food Additives 111.50, 184.1375, 582.5375, 582.80
 - List Sourced from EAFUS

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Iron Metal, powder, reduced	7439-89-6	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Iron Metal, powder, reduced	7439-89-6	None	None	None	None	None

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Iron Metal, powder, reduced	7439-89-6	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component
 Iron Metal, powder, reduced
 7439-89-6 (100)

WHMIS 2015 Hazard Classification
 Combustible Dust - Category 1: May form combustible dust concentrations in air

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Iron Metal, powder, reduced	7439-89-6	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Iron Metal, powder, reduced	7439-89-6	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Iron Metal, powder, reduced	7439-89-6	Not listed

EU Classification

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EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Iron Metal, powder, reduced	7439-89-6	

EU - CLP (1272/2008)

R-phrase(s)

not determined (not applicable)

S -phrase(s)

none

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Iron Metal, powder, reduced	7439-89-6		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Not dangerous

16. OTHER INFORMATION

Preparation Date: 9/16/2015
Revision Date: 10/12/2018
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet