



## Safety Data Sheet

Date of Issue: 09.07.2024

Date of Expiry: 09.07.2029

### 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Company Name** : ECP Limited  
**Address** : PO Box 34125, Birkenhead, Auckland 0746  
**Telephone** : +64 9 480 4386  
**Facsimile** : +64 9 480 4385  
**Emergency phone number** : 0800 243 622 (24 hours)

<b>Product Name</b>	<b>IRON (METAL) POWDER</b>
<b>Product Code</b>	28018
<b>CAS No.</b>	7439-89-6

**Recommended use** : Laboratory Investigations

### 2: Hazard's identification

#### 2.1 GHS Classification

Flammable Solids (Category 1)

#### 2.2 GHS Label elements, including precautionary statements

##### Pictogram



**Signal word** : **Danger**

##### Hazard statement(s)

H228 Flammable solid.

##### Precautionary statement(s)

###### Prevention

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

###### Response

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

### 3: Composition/information on ingredients

#### 3.1 Substances

**Formula** : Fe  
**Molecular weight** : 55.85 g/mol  
**CAS-No.** : 7439-89-6  
**EC-No.** : 231-096-4

## 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Special powder against metal fire. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2 Special hazards arising from the substance or mixture

Iron oxides

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

## 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

## 6.4 Reference to other sections

For disposal see section 13.

## 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Avoid formation of dust and aerosols.

#### Advice on protection against fire and explosion

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Store under inert gas. Moisture sensitive.

#### Storage class

Storage class (TRGS 510): 4.1B: Flammable solid hazardous materials

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8: Exposure controls/personal protection

### 8.1. Control parameters

#### National occupational exposure and biological limit values

No additional information available

### 8.2. Exposure controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

#### Personal protection equipment

##### Eye and face protection

##### Eye protection:

Chemical goggles or safety glasses. Safety glasses

##### Skin protection

##### Skin and body protection:

Wear suitable protective clothing

##### Hand protection:

Protective gloves

##### Respiratory protection:

Wear respiratory protection.

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls

Avoid release to the environment.

## 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Grey colour powder.
Molecular mass	:	55.85 g/mol
Colour	:	No data available
Odour	:	odourless.
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	1535 °C
Freezing point	:	Not applicable
Boiling point	:	3000 °C
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Flammable solid.
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Density	:	7.86 g/cm <sup>3</sup>
Solubility	:	Water: Insoluble in water
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	Not applicable

## 10: Stability and reactivity

### 10.1. Reactivity

Flammable solid.

### 10.2. Chemical stability

Flammable solid. May form flammable/explosive vapour-air mixture.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Open flame. Overheating. Direct sunlight. Heat. Sparks. Avoid contact with hot surfaces. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

May release flammable gases

## 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - 30,000 mg/kg

Remarks: (RTECS)

Inhalation: No data available

Dermal: No data available

**Skin corrosion/irritation** : No data available

**Serious eye damage/eye irritation** : No data available

**Respiratory or skin sensitization** : No data available

**Germ cell mutagenicity** : No data available

**Carcinogenicity** : No data available

**Reproductive toxicity** : No data available

**Specific target organ toxicity - single exposure** : No data available

**Specific target organ toxicity - repeated exposure** : No data available

**Aspiration hazard** : No data available

### 11.2 Additional Information

Overdose of iron compounds may have a corrosive effect on the gastrointestinal mucosa and be followed by necrosis, perforation, and stricture formation. Several hours may elapse before symptoms that can include epigastric pain, diarrhoea, vomiting, nausea, and hematemesis occur. After apparent recovery a person may experience metabolic acidosis, convulsions, and coma hours or days later. Further complications may develop leading to acute liver necrosis that can result in death due to hepatic coma., Long term inhalation exposure to iron (oxide fume or dust) can cause siderosis. Siderosis is considered to be a benign pneumoconiosis and does not normally cause significant physiologic impairment. Siderosis can be observed on x-rays with the lungs having a mottled appearance. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12: Ecological information

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

No data available

### 13: Disposal considerations

#### 13.1 Waste treatment methods

##### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

##### Contaminated packaging

Dispose of as unused product.

### 14: Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	3089	3089	3089
14.2	UN Proper Shipping name	METAL POWDER, FLAMMABLE, N.O.S	METAL POWDER, FLAMMABLE, N.O.S	Metal powder, flammable, n.o.s.
14.3	Transport Hazard Class	4.1	4.1	4.1
14.4	Packaging group	III	III	III
14.5	Environmental Hazards	No	No	No
14.6	Special precautions for user	none		
14.7	Incompatible materials	Acids, Oxygen, Strong oxidizing agents, Halogens, Phosphorus		

#### Other regulations

Hazchem Code : 1Z

### 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

##### National regulatory information

HSNO Approval Code: HSNO Group Standard Approval: HSR002692 - Laboratory Chemicals

and Reagent Kits (Class 4) Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

### 16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further

information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product 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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