

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.07.2021

Revision: 20.07.2021

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Iron powder (99.99%)
- **Item number:** 93-2605
- **CAS Number:**
7439-89-6
- **EC number:**
231-096-4
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Strem Chemicals, Inc.
7 Mulliken Way
NEWBURYPORT, MA 01950
USA
info@strem.com
- **Further information obtainable from:** Technical Department
- **1.4 Emergency telephone number:**
EMERGENCY: CHEMTREC: + 1 (800) 424-9300
During normal opening times: +1 (978) 499-1600

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Sol. 1 H228 Flammable solid.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02

- **Signal word** *Danger*
- **Hazard statements**
H228 Flammable solid.
- **Precautionary statements**
 - P101 *If medical advice is needed, have product container or label at hand.*
 - P102 *Keep out of reach of children.*
 - P103 *Read label before use.*
 - P210 *Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*
 - P280 *Wear protective gloves/protective clothing/eye protection/face protection.*
 - P240 *Ground/bond container and receiving equipment.*
 - P241 *Use explosion-proof electrical/ventilating/lighting equipment.*
 - P403+P233 *Store in a well-ventilated place. Keep container tightly closed.*

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- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description**
7439-89-6 iron
- **Identification number(s)**
- **EC number:** 231-096-4

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** No special measures required.
- **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.

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- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

9.1 Information on basic physical and chemical properties

General Information

Appearance:

- **Form:** Powder
- **Colour:** Grey
- **Odour:** Odourless
- **Odour threshold:** Not determined.

· **pH-value:** Not applicable.

Change in condition

- **Melting point/freezing point:** 1.535 °C
- **Initial boiling point and boiling range:** 3.000 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Flammable.

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· Ignition temperature:	
· Decomposition temperature:	Not determined.
· Auto-ignition temperature: Not determined.	
· Explosive properties: Not determined.	
· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Vapour pressure: 1 hPa	
· Density at 20 °C: 7.86 g/cm ³	
· Bulk density at 20 °C: 2.900 kg/m ³	
· Relative density: Not determined.	
· Vapour density: Not applicable.	
· Evaporation rate: Not applicable.	
· Solubility in / Miscibility with water: Insoluble.	
· Partition coefficient: n-octanol/water: Not determined.	
· Viscosity:	
· Dynamic:	Not applicable.
· Kinematic:	Not applicable.
· Solvent content:	
· Organic solvents:	0.0 %
· VOC (EC)	0.00 %
· Solids content: 100.0 %	
· 9.2 Other information: No further relevant information available.	

SECTION 10: Stability and reactivity

- **10.1 Reactivity:** No further relevant information available.
- **10.2 Chemical stability:**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions:** No dangerous reactions known.
- **10.4 Conditions to avoid:** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects:**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

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- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.


SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Not known to be hazardous to water.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|--|---|
| · 14.1 UN-Number | |
| · ADR, IMDG, IATA | UN3089 |
| · 14.2 UN proper shipping name | |
| · ADR | 3089 METAL POWDER, FLAMMABLE, N.O.S. |
| · IMDG, IATA | METAL POWDER, FLAMMABLE, N.O.S. |
| · 14.3 Transport hazard class(es) | |
| · ADR, IMDG, IATA | |
| |  |
| · Class | 4.1 Flammable solids, self-reactive substances and solid desensitised explosives. |
| · Label | 4.1 |
| · 14.4 Packing group | |
| · ADR, IMDG, IATA | II |

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<ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: 	<p>No</p>
<ul style="list-style-type: none"> · 14.6 Special precautions for user · Segregation groups · Stowage Category · Handling Code · Segregation Code 	<p>Warning: Flammable solids, self-reactive substances and solid desensitised explosives.</p> <p>Heavy metals and their salts (including their organometallic compounds), powdered metals</p> <p>B</p> <p>H1 Keep as dry as reasonably practicable</p> <p>SG17 Stow "separated from" class 5.1</p> <p>SG25 Stow "separated from" goods of classes 2.1 and 3.</p> <p>SG26 In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained.</p>
<ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 	<p>Not applicable.</p>
<ul style="list-style-type: none"> · Transport/Additional information: 	
<ul style="list-style-type: none"> · ADR · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>1 kg</p> <p>Code: E2</p> <p>Maximum net quantity per inner packaging: 30 g</p> <p>Maximum net quantity per outer packaging: 500 g</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>1 kg</p> <p>Code: E2</p> <p>Maximum net quantity per inner packaging: 30 g</p> <p>Maximum net quantity per outer packaging: 500 g</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p>UN 3089 METAL POWDER, FLAMMABLE, N.O.S., 4.1, II</p>

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Technical Department.
- **Contact:** Technical Director
- **Abbreviations and acronyms:**
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association

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GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Sol. 1: Flammable solids – Category 1

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