

Safety Data Sheet



according to 29 CFR 1910.1200(g)

Iron chips and powder

Revision date: 15.12.2015

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1. Identification

Product identifier

Iron chips and powder

CAS No: 7439-89-6

Details of the supplier of the safety data sheet

Company name: Powder Technology Inc.
Street: 1300 Grey Fox Road
Place: USA-55112 Arden Hills, MN
Telephone: +1 952 894 -8737
e-mail: sales@powdertechologyinc.com
Internet: <http://www.powdertechologyinc.com>

Emergency phone number: +1 952 894 -8737

Further Information

This safety data sheet was created by: ECI EnviroConsult Ingenieurbüro Dr. Lux e.K.

2. Hazard(s) identification

Classification of the chemical

Hazard categories:
Flammable solid: Flam. Sol. 2
Hazard Statements:
Flammable solid

Label elements

Signal word: Warning
Pictograms: flame



Hazard statements

Flammable solid

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Wear protective gloves/protective clothing/eye protection/face protection.
In case of fire: Use D -powder to extinguish.

Special labelling of certain mixtures

May form combustible dust concentrations in air.

Hazards not otherwise classified

No information available.

3. Composition/information on ingredients

Substances

Chemical characterization

Iron. Metal powder.

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4. First-aid measures

Description of first aid measures

General information

The powder is ferro-magnetic. A magnet may be used in the removal of powder residues from the eyes or on the skin.

After inhalation

Provide fresh air. In case of irregular breathing or respiratory arrest provide artificial respiration. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. In all cases of doubt, or when symptoms persist, seek medical advice.

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), Foam, Extinguishing powder.

Unsuitable extinguishing media

Water.

Specific hazards arising from the chemical

Flammable. In case of fire may be liberated: Dust can form an explosive mixture with air.

Special protective equipment and precautions for fire-fighters

In case of fire: Wear self-contained breathing apparatus. Fire class D.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Wear personal protection equipment. Avoid generation of dust. Do not breathe dust.

Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Danger of explosion

Methods and material for containment and cleaning up

Take up mechanically. Take up dust-free and set down dust-free. Treat the recovered material as prescribed in the section on waste disposal.

Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

7. Handling and storage

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Precautions for safe handling

Advice on safe handling

Avoid generation of dust. Filling and transfer: If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges. Dust can form an explosive mixture with air.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Advice on storage compatibility

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

Further information on storage conditions

Keep container tightly closed and dry. Keep in a cool, well-ventilated place.

8. Exposure controls/personal protection

Control parameters

Exposure controls

Protective and hygiene measures

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

Eye/face protection

Wear eye/face protection. Suitable eye protection: Tightly sealed safety glasses. Required properties: dust proof.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Required properties: dust proof.

Skin protection

Flame-retardant protective clothing. Wear anti-static footwear and clothing

Respiratory protection

Respiratory protection necessary at: dust formation, Suitable respiratory protective equipment: particulates filter device (DIN EN 143). Filtering device (full mask or mouthpiece) with filter: P 2 / P 3 , white

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	solid
Color:	grey
Odor:	odourless

Test method

pH-Value:	not determined
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Changes in the physical state

Melting point/freezing point:	not determined
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Initial boiling point and boiling range: 2861 °C

Flash point: >700 °C

Flammability

Solid: not determined

Gas: not applicable

Explosive properties

dust explosive, Dust explosion category: ST 1

Lower explosion limits: 125 g/m³

Upper explosion limits:

Ignition temperature: 370 °C

Auto-ignition temperature

Solid: >700 °C

Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidizing.

Vapor pressure: not determined

Density: 7,86 g/cm³

Water solubility: insoluble

Solubility in other solvents

not determined

Partition coefficient: not determined

Vapour density: not determined

Evaporation rate: not determined

Other information

Solid content: 100,00 %

10. Stability and reactivity

Reactivity

Flammable, Ignition hazard.

Chemical stability

Stability: Stable

The product is stable under storage at normal ambient temperatures.

Possibility of hazardous reactions

Hazardous reactions: May occur

No known hazardous reactions.

Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Danger of explosion

Incompatible materials

Acid, concentrated. Oxidising agent.

Hazardous decomposition products

In case of fire may be liberated:

11. Toxicological information

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Information on toxicological effects

Route(s) of Entry

Inhalation

Irritation and corrosivity

Inhalation of dust may cause irritation of the respiratory system.

12. Ecological information

Ecotoxicity

The product is not: Ecotoxic.

Persistence and degradability

The product has not been tested.

Bioaccumulative potential

The product has not been tested.

Mobility in soil

The product has not been tested.

Other adverse effects

No information available.

Further information

Avoid release to the environment.

13. Disposal considerations

Waste treatment methods

Advice on disposal

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

14. Transport information

US DOT 49 CFR 172.101

<u>UN/ID number:</u>	UN 3089
<u>Proper shipping name:</u>	Metal powders, flammable, n.o.s. (iron.)
<u>Transport hazard class(es):</u>	4.1
<u>Packing group:</u>	II
Hazard label:	4.1

Marine transport (IMDG)

<u>UN number:</u>	UN 3089
<u>UN proper shipping name:</u>	METAL POWDER, FLAMMABLE, N.O.S. (iron.)
<u>Transport hazard class(es):</u>	4.1
<u>Packing group:</u>	II
Hazard label:	4.1
Limited quantity:	1 kg
Excepted quantity:	E2
EmS:	F-G, S-G

Air transport (ICAO)

<u>UN number:</u>	UN 3089
<u>UN proper shipping name:</u>	METAL POWDER, FLAMMABLE, N.O.S. (iron.)

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Transport hazard class(es):	4.1
Packing group:	II
Hazard label:	4.1
Limited quantity Passenger:	5 kg
Passenger LQ:	Y441
Excepted quantity:	E2
IATA-packing instructions - Passenger:	445
IATA-max. quantity - Passenger:	15 kg
IATA-packing instructions - Cargo:	448
IATA-max. quantity - Cargo:	50 kg

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

Special precautions for user

No information available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

15. Regulatory information

U.S. Regulations

State Regulations

Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

This product contains no chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

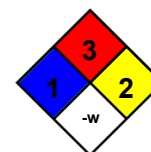
16. Other information

Hazardous Materials Information Label (HMIS)

Health:	1
Flammability:	3
Physical Hazard:	2

NFPA Hazard Ratings

Health:	1
Flammability:	3
Reactivity:	2
Unique Hazard:	-w
Revision date:	15.12.2015
Revision No:	1,07



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
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

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Other data

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.