Safety Data Sheet

according to Regulation (EC) No 1907/2006

Iron powder

Revision Date: 5/7/2024
Date Issued: 5/14/2024 Version: 2

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name	Iron powder
Product code	NM-0029
CAS	7439-89-6
REACH No.	A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration envisaged for a later registration deadline.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Supplier	IoLiTec Ionic Liquids Technologies GmbH Im Zukunftspark 9 D – 74076 Heilbronn Germany
Telephone	+49 (0)7131-89839-0
Fax	+49 (0)7131-89839-109
Email	msds@iolitec.de

1.4 Emergency telephone number

Emergency telephone	+49 (0)151-41255671

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2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULTATION (EC) No 1272/2008)

Flammable solids (Category 1)

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Pictogram

Signal word Warning

Hazard statements

H-phrases

H228	Flammable solid.

Precautionary statements

P phrases

P210	Keep away from heat/ sparks/ open flames/ hot surfaces. - No smoking.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P370 + P378	In case of fire: Use sand or fire extinguisher class D for extinction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Iron

CAS: 7439-89-6

Ingredient name	Contents	Classification
Iron	99.7%	Flam. Sol. 1

Formula	Molecular Weight
Fe	55.8450 g/mol

4 FIRST AID MEASURES

4.1 Description of first aid measures

General

Contaminated clothing should be removed and washed before being reused.

Inhalation

Move the exposed person to fresh air at once. If respiratory problems, provide artificial respiration/oxygen.

Ingestion

Immediately rinse mouth and provide fresh air. Do not induce vomiting. Get medical attention immediately.

Skin

Wash the skin immediately with soap and water.

Eyes

Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

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 FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use suitable fire-fighting measures depending on the surrounding environment.

Use: Dry chemicals, sand, dolomite etc. Do not use water.

5.2. Special hazards arising from the substance or mixture

Avoid water in straight hose stream, will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control. Fire causes formation of toxic gases.

5.3. Advice for firefighters

Wear self-contained breathing apparatus as combustion may produce hazardous fumes.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective clothing and avoid inhalation of vapor, skin or eye contact.

6.2 Environmental precautions

Avoid washing into water courses. Avoid contaminating public drains or water supply. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Avoid contact with skin or inhalation of spillage, dust or vapor. Avoid dust formation. Collect and reclaim or dispose in sealed containers in license waste.

6.4 Reference to other sections

For disposal see section 13.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Minimize dust generation and accumulation. Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Avoid ingestion and inhalation. Do not use in confined spaces without adequate ventilation and/or respirator. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry and well-ventilated place. Keep container tightly closed. Keep away from heat and sources of ignition. Store contents under inert gas (nitrogen or argon).

7.3 Specific end use(s)

Chemical storage.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

Ingredients with workplace control parameters.

8.2 Exposure controls

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace**.**

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Solid.
Color	Grayish.
Odor/taste	No characteristic odor.
Boiling Point	3000°C
Melting Point	1536°C
Relative Density	7.87 g/cm^3

9.2 Other safety information

No data available.

10 STABILITY AND REACTIVITY

10.1 Reactivity

Risk of ignition.

10.2 Chemical stability

Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

Violent reaction with: strong oxidizer, Aldehydes, Ammonium compounds, Chlorine, Fluorine, Nitrate, Perchlorates, Peroxides, Acids, Hydrogen sulphide (H_2S), Water, Hydrogen peroxide => Explosive properties.

10.4 Conditions to avoid

Water/Moisture. Air. Heat.

10.5 Incompatible materials

Strong oxidizing agents. Acids. Halogens.

10.6 Hazardous decomposition products

Metal oxide fume.

11 TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes

Acute toxicity

LD50 oral	20000 mg/kg (gpg)
LD50 oral	30000 mg/kg (rat)
LDLo	20 mg/kg (rbt)

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

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available.

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available.

11.2 Information on other hazards

Potential health effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. Causes skin irritation.

Eyes Causes serious eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information

RTECS: Not available.

12 ECOLOGICAL INFORMATION

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent**,** bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available.

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Contact specialist disposal companies. Dispose of in accordance with Local Authority requirements. Recover and reclaim or recycle, if practical.

14 TRANSPORT INFORMATION

14.1 UN number

ADR/RID: UN3089 IMDG: UN3089 IATA: UN3089

14.2 UN proper shipping name

ADR/RID: METAL POWDER, FLAMMABLE, N.O.S. (IRON)

IMDG: METAL POWDER, FLAMMABLE, N.O.S. (IRON)

IATA: Metal powder, flammable, n.o.s. (iron)

14.3 Transport hazard class(es)

ADR/RID: 4.1 IMDG: 4.1 IATA: 4.1

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

No data available.

15 REGULATORY INFORMATION

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

No data available.

Country specific information

Germany WGK: 3 (Self-Classification)

16 OTHER INFORMATION

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