

## SAFETY DATA SHEET

According to JIS Z 7253:2019  
Revision date 18-May-2023  
Revision Number 3.03

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Iron Powder E-200, Special
Product Code	098-02141

Manufacturer	FUJIFILM Wako Pure Chemical Corporation 1-2 Doshomachi 3-Chome Chuo-ku, Osaka 540-8605, Japan Phone: +81-6-6203-3741 Fax: +81-6-6203-5964
Supplier	FUJIFILM Wako Pure Chemical Corporation 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan Phone: +81-6-6203-3741 Fax: +81-6-6203-2029
Emergency telephone number	+81-6-6203-3741 / +81-3-3270-8571
Recommended uses	For research use only
Restrictions on use	Seek expert judgment when using for purposes other than those recommended.

## Section 2: HAZARDS IDENTIFICATION

## GHS classification

Classification of the substance or mixture

## Carcinogenicity

Category 1A

## Specific target organ toxicity (single exposure)

Category 1

Category 1 respiratory system

## Specific target organ toxicity (repeated exposure)

Category 1

Category 1 respiratory system

## Pictograms



## Signal word

Danger

## Hazard statements

H350 - May cause cancer

H370 - Causes damage to the following organs: respiratory system

H372 - Causes damage to the following organs through prolonged or repeated exposure: respiratory system

## Precautionary statements-(Prevention)

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required
- Do not breathe dust/fume/gas/mist/vapors/spray
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product

## Precautionary statements-(Response)

- IF exposed: Call a POISON CENTER or doctor/physician

## Precautionary statements-(Storage)

- Store locked up

**Precautionary statements-(Disposal)**

- Dispose of contents/container to an approved waste disposal plant

**Others****Other hazards** Not available**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS****Single Substance or Mixture** Mixture

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Iron	85	55.845	-	N/A	7439-89-6
Iron(III) oxide	<15	159.69	(1)-357,(5)-5188	*	1309-37-1
Silicagel	0.5 - 2.0	60.08	(1)-548	*	7631-86-9

**Note on ISHL No.:** \* in the table means announced chemical substances.**Impurities and/or Additives:** Not applicable**Section 4: FIRST AID MEASURES****Inhalation**

Remove to fresh air. If symptoms persist, call a physician.

**Skin contact**

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

**Eye contact**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

**Ingestion**

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

**Protection of first-aiders**

Use personal protective equipment as required.

**Section 5: FIRE FIGHTING MEASURES****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

**Unsuitable extinguishing media**

No information available

**Specific hazards arising from the chemical product**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**Special extinguishing method**

No information available

**Special protective actions for****fire-fighters**

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

**Section 6: ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

**Environmental precautions**

To be careful not discharged to the environment without being properly handled waste water contaminated.

**Methods and materials for contaminant and methods and materials for cleaning up**

Sweep up and gather scattered particles, and collect it in an empty airtight container.

**Recovery, neutralization**

No information available

**Secondary disaster prevention measures**

Clean contaminated objects and areas thoroughly observing environmental regulations.

**Section 7: HANDLING AND STORAGE****Handling****Technical measures**

Avoid contact with strong oxidizing agents. Use with local exhaust ventilation.

**Precautions**

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle In places other than those specified, should not be smoking or eating and drinking Should not be brought contaminated protective equipment and gloves to rest stops Deny unnecessary entry of non-emergency personnel to the handling area

**Safety handling precautions**

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

**Storage****Safe storage conditions****Storage conditions**

Store away from sunlight in well-ventilated place at room temperature (preferably cool). Keep container tightly closed.

**Safe packaging material**

Polyethylene

**Incompatible substances**

Strong oxidizing agents

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****Engineering controls**

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

**Exposure limits**

Chemical Name	JSOH (Japan)	ISHL (Japan)	ACGIH
Iron(III) oxide 1309-37-1	TWA: 1 mg/m <sup>3</sup> OEL TWA: 4 mg/m <sup>3</sup> OEL	N/A	TWA: 5 mg/m <sup>3</sup> respirable particulate matter
Silicagel 7631-86-9	TWA: 0.03 mg/m <sup>3</sup> OEL	N/A	TWA 10mg/m <sup>3</sup>

**Personal protective equipment****Respiratory protection**

Dust mask ( JIS T 8151 )

**Hand protection**

chemical protective gloves ( JIS T 8116 )

**Eye protection**

protective eyeglasses or chemical safety goggles

**Skin and body protection**

Long-sleeved work clothes

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES****Form****Color**

grayish brown

**Appearance**

powder or small granules

**Odor**

no data available

**Melting point/freezing point**

1535 °C

**Boiling point, initial boiling point and boiling range**

3000 °C

**Flammability**

no data available

**Evaporation rate:**

no data available

**Flammability (solid, gas):**

no data available

**Upper/lower flammability or explosive limits****Upper:**

no data available

**Lower:**

no data available

**Flash point**

320 °C

**Auto-ignition temperature:**

no data available

**Decomposition temperature:**

no data available

**pH**

no data available

**Viscosity (coefficient of viscosity)**

no data available

**Dynamic viscosity**

no data available

**Solubilities**

dil. hydrochloric acid , dil. sulfuric acid , dil. nitric acid : soluble .

**n-Octanol/water partition coefficient:(log Pow)**

no data available

**Vapour pressure**

no data available

**Specific Gravity / Relative density**

7.3

**Vapour density**

no data available

**Particle characteristics**

no data available

**Section 10: STABILITY AND REACTIVITY****Stability****Reactivity**

no data available

**Chemical stability**

Stable under recommended storage conditions.

**Hazardous reactions**

None under normal processing

**Conditions to avoid**

Extremes of temperature and direct sunlight

**Incompatible materials**

Strong oxidizing agents

**Hazardous decomposition products**

Metal oxides, Silicon compounds

**Section 11: TOXICOLOGICAL INFORMATION****Acute toxicity**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Silicagel	> 3160 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	N/A

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
Iron(III) oxide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Silicagel	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust- source information	Acute toxicity -inhalation mist- source information
Iron(III) oxide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Silicagel	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

**Skin irritation/corrosion**

Chemical Name	Skin corrosion/irritation source information
Iron(III) oxide	Based on the NITE GHS classification results.
Silicagel	Based on the NITE GHS classification results.

**Serious eye damage/ irritation**

Chemical Name	Serious eye damage/irritation source information
Iron(III) oxide	Based on the NITE GHS classification results.
Silicagel	Based on the NITE GHS classification results.

**Respiratory or skin sensitization**

Chemical Name	Respiratory or Skin sensitization source information
Iron(III) oxide	Based on the NITE GHS classification results.
Silicagel	Based on the NITE GHS classification results.

**Reproductive cell mutagenicity**

Chemical Name	germ cell mutagenicity source information
Iron(III) oxide	Based on the NITE GHS classification results.
Silicagel	Based on the NITE GHS classification results.

**Carcinogenicity**

Chemical Name	Carcinogenicity source information
Iron(III) oxide	Based on the NITE GHS classification results.
Silicagel	Based on the NITE GHS classification results.

Chemical Name	NTP	IARC	ACGIH	JSOH (Japan)
Iron(III) oxide 1309-37-1	-	Group 3	-	-
Silicagel 7631-86-9	Known	Group 1 Group 3		Group 1

**Reproductive toxicity**

Chemical Name	Reproductive toxicity source information
Iron(III) oxide	Based on the NITE GHS classification results.
Silicagel	Based on the NITE GHS classification results.

**STOT-single exposure**

Chemical Name	STOT -single exposure- source information
Iron(III) oxide	Based on the NITE GHS classification results.
Silicagel	Based on the NITE GHS classification results.

**STOT-repeated exposure**

Chemical Name	STOT -repeated exposure- source information
Iron(III) oxide	Based on the NITE GHS classification results.
Silicagel	Based on the NITE GHS classification results.

**Aspiration hazard**

Chemical Name	Aspiration Hazard source information
Iron(III) oxide	Based on the NITE GHS classification results.
Silicagel	Based on the NITE GHS classification results.

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity** No information available

**Other data**

Chemical Name	Short-term (acute) hazardous to the aquatic environment source information	Long-term (chronic) hazardous to the aquatic environment source information
Iron(III) oxide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Silicagel	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

**Persistence and degradability** No information available  
**Bioaccumulative potential** No information available  
**Mobility in soil** No information available  
**Hazard to the ozone layer** No information available

## Section 13: DISPOSAL CONSIDERATIONS

**Waste from residues**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated container and contaminated packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

## Section 14: TRANSPORT INFORMATION

<b>ADR/RID</b>	Not regulated
UN number	-
Proper shipping name:	
UN classification	
Subsidiary hazard class	
Packing group	
Marine pollutant	Not applicable
<b>IMDG</b>	Not regulated
UN number	-
Proper shipping name:	
UN classification	
Subsidiary hazard class	
Packing group	
Marine pollutant (Sea)	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available
<b>IATA</b>	Not regulated
UN number	-
Proper shipping name:	
UN classification	
Subsidiary hazard class	
Packing group	
Environmentally Hazardous Substance	Not applicable

## Section 15: REGULATORY INFORMATION

### International Inventories

<b>EINECS/ELINCS</b>	-
<b>TSCA</b>	-

### Japanese regulations

<b>Fire Service Act</b>	Not applicable
<b>Poisonous and Deleterious Substances Control Law</b>	Not applicable
<b>Industrial Safety and Health Act</b>	Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18) Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Attached Table No.9)No.192,165-2 Substances designated by the Minister of Health, Labor and Welfare as carcinogenic(Ordinance on Industrial Safety and Health Art.577, Para.2)
<b>Regulations for the carriage and storage of dangerous goods in ship</b>	Not applicable
<b>Civil Aeronautics Law</b>	Not applicable
<b>Pollutant Release and Transfer Register Law (2023.4.1-)</b>	Not applicable
<b>Water Pollution Control Act</b>	Specified substances(Law Art.2 Para.4, Enforcement Order Art.3-3)
<b>Export Trade Control Order</b>	Not applicable

Chemical Name	Poisonous and Deleterious Substances Control Law	Industrial Safety and Health Act Substances (Law Art.57-2) (~2024.3.31)	Pollutant Release and Transfer Register Law (2023.4.1-)
Iron(III) oxide 1309-37-1 ( <15 )	-	Applicable	-

Chemical Name	Poisonous and Deleterious Substances Control Law	Industrial Safety and Health Act Substances (Law Art.57-2) (~2024.3.31)	Pollutant Release and Transfer Register Law (2023.4.1-)
Silicagel 7631-86-9 ( 0.5 - 2.0 )	-	Applicable	-

## Section 16: OTHER INFORMATION

### Key literature references and sources for data etc.

NITE: National Institute of Technology and Evaluation (JAPAN)  
<http://www.safe.nite.go.jp/japan/db.html>  
 IATA dangerous Goods Regulations  
 RTECS:Registry of Toxic Effects of Chemical Substances  
 Japan Industrial Safety and Health Association GHS Model SDS  
 Dictionary of Synthetic Organic Chemistry , SSOCJ, Koudansha Scientific Co.Ltd.  
 Chemical Dictionary, Kyouritsu Publishing Co., Ltd.  
 etc

### Record of SDS revisions

The following contents were revised. Product and company Identification. Hazards identification. Composition/information on ingredients. Fire fighting measures. Exposure controls/personal protection. Regulatory information.

### Disclaimer

This SDS is according to JIS Z 7253: 2019. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GHS Classification is according to JIS Z 7252:2019. \*JIS: Japanese Industrial Standards

**End of Safety Data Sheet**