

## SAFETY DATA SHEET

According to JIS Z 7253:2019

Issue Date 24-Jul-2025

Revision Number 2.04

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Titanium, Powder
Product Code	200-05202,204-05205

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

Flammable solids

Category 1

Pyrophoric solids

Category 1

Self-heating substances and mixtures

Category 1

## Pictograms



Signal word

Danger

## Hazard statements

H228 - Flammable solid

H250 - Catches fire spontaneously if exposed to air

H251 - Self-heating: may catch fire

## Precautionary statements-(Prevention)

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- Ground/bond container and receiving equipment
- Use explosion-proof electrical/ ventilating / lighting / equipment
- Wear protective gloves/protective clothing/eye protection/face protection
- Do not allow contact with air
- Keep cool. Protect from sunlight

## Precautionary statements-(Response)

- Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages
- In case of fire: Use suitable extinguishing media for extinction

## Precautionary statements-(Storage)

- Maintain air gap between stacks/pallets
- Store away from other materials

## Precautionary statements-(Disposal)

- Not applicable

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

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Titanium	98.0	47.867	-	N/A	7440-32-6

**Note on ISHL No.:** \* in the table means announced chemical substances.**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**Water spray (fog), Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder, Sand**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**

Flammable. 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**

Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

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

**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**

Glass

**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**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**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 (JIS T 8147)

**Skin and body protection**

Long-sleeved work clothes

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice.

If this product is classified as "Chemical Substances Hazardous to Skin, etc.", use appropriate protective equipment to them.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

**Form****Color**

grey

**Appearance**

powder

**Odor**

no data available

**Melting point/freezing point**

1677 °C

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

3285 °C

**Flammability**

Flammable solid

**Evaporation rate:**

no data available

**Flammability (solid, gas):**

no data available

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

427.2 g/m<sup>3</sup>

Lower:	no data available
Flash point	no data available
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	hydrochloric acid , sulfuric acid : soluble .
n-Octanol/water partition coefficient:(log Pow)	no data available
Vapour pressure	no data available
Specific Gravity / Relative density	4.5 g/mL
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 normal conditions.
Hazardous reactions	
None under normal processing	
Conditions to avoid	
Extremes of temperature and direct sunlight, Heat, flames and sparks, static electricity, spark	
Incompatible materials	
Strong oxidizing agents	
Hazardous decomposition products	
Metal oxides	

## Section 11: TOXICOLOGICAL INFORMATION

\*NITE: National Institute of Technology and Evaluation (JAPAN)  
[https://www.chem-info.nite.go.jp/en/chem/chrip/chrip\\_search/srhInput](https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput)

### Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Titanium	> 10000 mg/kg ( Rat )	> 10000 mg/kg ( Rabbit )	N/A

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
Titanium	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
Titanium	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
Titanium	Based on the NITE GHS classification results.

### Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
Titanium	Based on the NITE GHS classification results.

### Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
Titanium	Based on the NITE GHS classification results.

### Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
Titanium	Based on the NITE GHS classification results.

### Carcinogenicity

Chemical Name	Carcinogenicity source information
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Titanium	Based on the NITE GHS classification results.
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**Reproductive toxicity**

Chemical Name	Reproductive toxicity source information
Titanium	Based on the NITE GHS classification results.

**STOT-single exposure**

Chemical Name	STOT -single exposure- source information
Titanium	Based on the NITE GHS classification results.

**STOT-repeated exposure**

Chemical Name	STOT -repeated exposure- source information
Titanium	Based on the NITE GHS classification results.

**Aspiration hazard**

Chemical Name	Aspiration Hazard source information
Titanium	Based on the NITE GHS classification results.

## Section 12: ECOLOGICAL INFORMATION

\*NITE: National Institute of Technology and Evaluation (JAPAN)

[https://www.chem-info.nite.go.jp/en/chem/chrip/chrip\\_search/srhInput](https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput)

**Ecotoxicity** no data 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
Titanium	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

**ADR/RID**

**UN number** UN2546  
**Proper shipping name:** Titanium powder, dry  
**UN classification** 4.2  
**Subsidiary hazard class**  
**Packing group** III  
**Marine pollutant** Not applicable

**IMDG**

**UN number** UN2546  
**Proper shipping name:** Titanium powder, dry  
**UN classification** 4.2  
**Subsidiary hazard class**  
**Packing group** III  
**Marine pollutant (Sea)** Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

**IATA**

UN number UN2546  
 Proper shipping name: Titanium powder, dry  
 UN classification 4.2  
 Subsidiary hazard class  
 Packing group III  
 Environmentally Hazardous Substance Not applicable

## Section 15: REGULATORY INFORMATION

**Japanese regulations**

Fire Service Act Not applicable  
 Poisonous and Deleterious Substances Control Law Not applicable  
 Industrial Safety and Health Act Not applicable  
 Industrial Safety and Health Act (2026~) 【2026.4.1~】 Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57)  
 【2026.4.1~】 Notifiable Substances (Law Art.57-2)  
 Regulations for the carriage and storage of dangerous goods in ship Substances liable to spontaneous combustion.  
 Civil Aeronautics Law Flammable Solids - Spontaneously Combustible Solids (Ordinance Art.194, MITL  
 Notification for Air Transportation of Explosives etc , Attached Table 1)  
 Pollutant Release and Transfer Register Law (2023.4.1-) Not applicable

**Industrial Safety and Health Law**

Law Name	Chemical Name in Regulation	Weight %	Scheduled enforcement date
Notifiable Substances (Law Art.57-2)	Titanium (powder)	98.0	2026/4/1

## Section 16: OTHER INFORMATION

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

NITE: National Institute of Technology and Evaluation (JAPAN)  
[https://www.chem-info.nite.go.jp/en/chem/chrip/chrip\\_search/srhInput](https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput)  
 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. Handling and storage. Exposure controls/personal protection. Toxicological information. Ecological information. 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**