

## SAFETY DATA SHEET

Issue Date 25-Jul-2025  
Revision Number 1.06

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

**Product identifier**

**Product Name** Titanium Tetraisopropoxide  
**Other means of identification**  
**Product Code(s)** 205-08172,207-08176

**Recommended use of the chemical and restrictions on use**

**Recommended Use** For research use only.  
**Uses advised against** Seek expert judgment when using for purposes other than those recommended.

**Details of the supplier of the safety data sheet**

<b>Manufacturer Address</b>	<b>Distributor</b>
FUJIFILM Wako Pure Chemical Corporation	FUJIFILM Irvine Scientific
1-2, Doshomachi 3-Chome,	E. Warner Avenue, Santa Ana, CA 92705-5505, U.S.A.: +1 949 261 7800
Chuo-ku Osaka 540-8605, Japan	Fax: +1 949 261 6522
Tel : +81-6-6203-3741	
Fax: +81-6-6201-5964	

## 2. HAZARDS IDENTIFICATION

**GHS classification****Classification of the substance or mixture**

**Flammable liquids** Category 4  
**Serious eye damage/eye irritation** Category 2A

**Pictograms**

**Signal word** Warning

**Hazard statements**

H227 - Combustible liquid  
H319 - Causes serious eye irritation

**Precautionary statements-(Prevention)**

Wash face, hands and any exposed skin thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

**Precautionary statements-(Response)**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention  
In case of fire: Use suitable extinguishing media for extinction

**Precautionary statements-(Storage)**

Store in a well-ventilated place. Keep cool

**Precautionary statements-(Disposal)**

Dispose of contents/container to an approved waste disposal plant

**Others**

**Other hazards** Not available

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Single Substance or Mixture** Substance**Formula**  $[(CH_3)_2CHO]_4Ti$ 

Chemical Name	Molecular weight	CAS RN	Weight-%
Titanium(IV) isopropoxide	284.22	546-68-9	95.0

**Impurities and/or Additives:** Not applicable**4. FIRST AID MEASURES****First aid measures****General Information** Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.**Skin contact** Wash skin with soap and water.**Inhalation** Remove to fresh air.**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.**Most important symptoms and effects, both acute and delayed****Symptoms** No information available.**Indication of any immediate medical attention and special treatment needed****Note to physicians** Treat symptomatically.**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing media**Carbon dioxide (CO<sub>2</sub>). Foam. Extinguishing powder. Sand.**Specific hazards arising from the chemical**

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

**Explosion data****Sensitivity to Mechanical** none.**Impact****Sensitivity to Static Discharge** none.**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures****Personal precautions, protective equipment and emergency** Ensure adequate ventilation, especially in confined areas.

**procedures****Environmental precautions**

**Environmental precautions** See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up**

**Methods and material for containment and cleaning up** Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

**Methods for cleaning up** Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Soak up with inert absorbent material.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Technical measures** Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use with local exhaust ventilation.

**Protective measures** Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded.

**Conditions for safe storage, including any incompatibilities**

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

**Packaging materials** Glass.

**Incompatible materials** Strong oxidizing agents.

## 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** Not applicable

**Personal protective equipment**

**Respiratory protection** Protective mask  
**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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form**

**Color** colorless ~ pale yellow

**Turbidity** clear

**Appearance** liquid

**Odor**

weak peculiar odor

**pH**

no data available

Melting point/freezing point	17 - 19 °C
Boiling point, initial boiling point and boiling range	232 °C
Flash point	74 °C
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
Vapour pressure	no data available
Vapour density	no data available
Specific Gravity / Relative density	0.955
Solubilities	Ethanol : freely soluble . water : practically insoluble, or insoluble .
n-Octanol/water partition coefficient:(log Pow)	no data available
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
Viscosity (coefficient of viscosity)	no data available
Dynamic viscosity	no data available
Particle characteristics	no data available

## 10. STABILITY AND REACTIVITY

### Stability

Chemical stability	Stable under recommended storage conditions.
Reactivity	no data available

### 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

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Metal oxides

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Titanium(IV) isopropoxide	7460 mg/kg ( Rat )	>16 g/kg ( Rat )	N/A

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

### Serious eye damage/ irritation

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

**Respiratory or skin sensitization**

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

**Reproductive cell mutagenicity**

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

**Carcinogenicity**

Chemical Name	Carcinogenicity source information
Titanium(IV) isopropoxide	Based on the NITE GHS classification results.

**Reproductive toxicity**

Chemical Name	Reproductive toxicity source information
Titanium(IV) isopropoxide	Based on the NITE GHS classification results.

**STOT-single exposure**

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

**STOT-repeated exposure**

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

**Aspiration hazard**

Chemical Name	Aspiration Hazard source information
Titanium(IV) isopropoxide	Based on the NITE GHS classification results.

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

no data available

**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available

**Mobility**

no data available

**Mobility in soil**

No information available

**Other Data**

No information available

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Disposal of wastes**

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

**Precautionary including method of disposing contaminated packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**14. TRANSPORT INFORMATION****DOT**

UN/ID No	UN2413
Proper shipping name:	Tetrapropyl orthotitanate
UN classification	3

Subsidiary hazard class  
Packing group III  
Marine pollutant Not applicable

**IATA**

UN/ID No UN2413  
Proper shipping name: Tetrapropyl orthotitanate  
UN classification 3  
Subsidiary hazard class  
Packing group III  
Environmentally Hazardous Substance Not applicable

**IMDG**

UN/ID No UN2413  
Proper shipping name: Tetrapropyl orthotitanate  
UN classification 3  
Subsidiary hazard class  
Packing group III  
Marine pollutant (Sea) Not applicable

## 15. REGULATORY INFORMATION

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS RN	Weight-%	SARA 313 - Threshold Values %
Titanium(IV) isopropoxide - 546-68-9	546-68-9	95.0	N/A

**SARA 311/312 Hazard Categories**

Acute health hazard No  
Chronic Health Hazard No  
Fire hazard Yes  
Sudden release of pressure hazard No  
Reactive Hazard No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**US State Regulations****California Proposition 65**

This product does not contain any chemicals regulated by Proposition 65

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated by state right-to-know regulations

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION****Issue Date** 25-Jul-2025**Revision Note**

No information available

**Disclaimer**

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, use, processing, storage, transportation, disposal and release 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.

End of Safety Data Sheet