

# SAFETY DATA SHEET

According to JIS Z 7253:2019  
**Revision date** 18-Mar-2022  
 Revision Number 3.04

**Section 1: PRODUCT AND COMPANY IDENTIFICATION**

<b>Product Name</b>	Carbon Tetrachloride
<b>Product Code</b>	039-01271,039-01276,035-01273

**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 and restrictions on use** For research use only

**Section 2: HAZARDS IDENTIFICATION**

**GHS classification**

**Classification of the substance or mixture**

<b>Acute toxicity - Inhalation (Vapors)</b>	Category 4
<b>Skin corrosion/irritation</b>	Category 2
<b>Serious eye damage/eye irritation</b>	Category 2A
<b>Carcinogenicity</b>	Category 2
<b>Reproductive Toxicity</b>	Category 2
<b>Specific target organ toxicity (single exposure)</b>	Category 1
<b>Category 1</b> central nervous system, liver, kidneys	
<b>Specific target organ toxicity (repeated exposure)</b>	Category 1, Category 2
<b>Category 1</b> liver, kidneys	
<b>Category 2</b> respiratory system	
<b>Acute aquatic toxicity</b>	Category 1
<b>Chronic aquatic toxicity</b>	Category 1
<b>Ozone</b>	Category 1

**Pictograms**



**Signal word**

Danger

**Hazard statements**

- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H332 - Harmful if inhaled
- H351 - Suspected of causing cancer
- H361 - Suspected of damaging fertility or the unborn child
- H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects  
 H420 - Harms public health and the environment by destroying ozone in the upper atmosphere  
 H370 - Causes damage to the following organs: central nervous system, liver, kidneys  
 H372 - Causes damage to the following organs through prolonged or repeated exposure: liver, kidneys  
 H373 - May cause 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
- Use only outdoors or in a well-ventilated area
- Wash face, hands and any exposed skin thoroughly after handling
- Do not breathe dust/fume/gas/mist/vapors/spray
- Do not eat, drink or smoke when using this product
- Avoid release to the environment

**Precautionary statements-(Response)**

- IF exposed: Call a POISON CENTER or doctor/physician
- 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
- IF ON SKIN: Wash with plenty of soap and water
- If skin irritation occurs: Get medical advice/attention
- Take off contaminated clothing and wash before reuse
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- Call a POISON CENTER or doctor/physician if you feel unwell
- Collect spillage

**Precautionary statements-(Storage)**

- Store locked up

**Precautionary statements-(Disposal)**

- Dispose of contents/container to an approved waste disposal plant
- Refer to manufacturer/supplier for information on recovery/recycling

**Others**

**Other hazards** Not available

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**Single Substance or Mixture** Substance

**Formula** CCl<sub>4</sub>

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Carbon Tetrachloride	99.5	153.82	(2)-38	2-(13)-47	56-23-5

**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

Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

### 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

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity)

### Storage

#### Safe storage conditions

##### Storage conditions

Keep container protect from light, store in well-ventilated place at room temperature (preferably cool). Keep container tightly closed. Store locked up.

##### 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**

Chemical Name	JSOH (Japan)	ISHL (Japan)	ACGIH
Carbon Tetrachloride 56-23-5	TWA: 5 ppm OEL TWA: 31 mg/m <sup>3</sup> OEL Skin ISHL/ACL: 5 ppm	ISHL/ACL: 5 ppm	STEL: 10 ppm TWA: 5 ppm Skin

**Personal protective equipment**

<b>Respiratory protection</b>	Protective mask
<b>Hand protection</b>	Impermeable protective gloves
<b>Eye protection</b>	protective eyeglasses or chemical safety goggles
<b>Skin and body protection</b>	Long-sleeved work clothes

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice.

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

<b>Color</b>	colorless
<b>Turbidity</b>	clear
<b>Appearance</b>	liquid

**Odor**

Pungent odor

**Melting point/freezing point**

-23 °C

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

77 °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**

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**

Ethanol , Diethyl ether : Very soluble . water : very slightly soluble.

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

2.64

**Vapour pressure**

12.2 kPa (20°C)

**Specific Gravity / Relative density**

1.592 - 1.598 g/mL (20°C )

**Vapour density**

5.32

**Particle characteristics**

no data available

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

<b>Reactivity</b>	no data available
<b>Chemical stability</b>	May be altered by light.

**Hazardous reactions**

None under normal processing

**Conditions to avoid**

Extremes of temperature and direct sunlight

**Incompatible materials**

Strong oxidizing agents

**Hazardous decomposition products**

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

## Section 11: TOXICOLOGICAL INFORMATION

### Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Carbon Tetrachloride	2350 mg/kg (Rat)	15000 mg/kg (Rabbit)	8000 ppm (Rat) 4 h

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

### Serious eye damage/ irritation

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

### Respiratory or skin sensitization

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

### Reproductive cell mutagenicity

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

### Carcinogenicity

Chemical Name	Carcinogenicity source information
Carbon Tetrachloride	Based on the NITE GHS classification results.

Chemical Name	NTP	IARC	ACGIH	JSOH (Japan)
Carbon Tetrachloride 56-23-5	Reasonably Anticipated	Group 2A Group 2B	A2	Group 2B

### Reproductive toxicity

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

### STOT-single exposure

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

### STOT-repeated exposure

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

### Aspiration hazard

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

## Section 12: ECOLOGICAL INFORMATION

### Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Carbon Tetrachloride	EC50: <i>Pseudokirchneriella subcapitata</i> 0.46 mg/L 72 h	LC50: <i>Lepomis macrochirus</i> 23 - 33 mg/L 96 h LC50: <i>Pimephales promelas</i> 36.3 - 47.3 mg/L 96 h LC50: <i>Pimephales promelas</i>	EC50: <i>Daphnia magna</i> 28 mg/L 24 h EC50: <i>Daphnia magna</i> 29 mg/L 48 h

		9.68 - 11.3 mg/L 96 h	
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**Other data**

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

<b>Persistence and degradability</b>	No information available
<b>Bioaccumulative potential</b>	No information available
<b>Mobility in soil</b>	No information available
<b>Hazard to the ozone layer</b>	
<b>Mobility</b>	

### 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**

<b>UN number</b>	UN1846
<b>Proper shipping name:</b>	carbon tetrachloride
<b>UN classification</b>	6.1
<b>Subsidiary hazard class</b>	
<b>Packing group</b>	II
<b>Marine pollutant</b>	Yes

**IMDG**

<b>UN number</b>	UN1846
<b>Proper shipping name:</b>	carbon tetrachloride
<b>UN classification</b>	6.1
<b>Subsidiary hazard class</b>	P
<b>Packing group</b>	II
<b>Marine pollutant (Sea)</b>	Yes
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	No information available

**IATA**

<b>UN number</b>	UN1846
<b>Proper shipping name:</b>	carbon tetrachloride
<b>UN classification</b>	6.1
<b>Subsidiary hazard class</b>	
<b>Packing group</b>	II
<b>Environmentally Hazardous Substance</b>	Yes

### Section 15: REGULATORY INFORMATION

**International Inventories**

<b>EINECS/ELINCS</b>	Listed
<b>TSCA</b>	Listed

**Japanese regulations**

<b>Fire Service Act</b>	Not applicable
<b>Poisonous and Deleterious</b>	Deleterious Substances 2nd. Grade

<b>Substances Control Law</b>	Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18)
<b>Industrial Safety and Health Act</b>	Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Attached Table No.9)No.226 Group 2 Specified Chemical Substance Substances with Health Hazards Prevention Guideline(Carcinogenicity Substance) Working Environment Evaluation Standards, Administrative Control Levels (Law Art.65-2, Para.1) Class II Specified Chemical Substances (Law Art.2, Para.3, Enforcement Order Art.1-2)
<b>Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc</b>	
<b>Regulations for the carriage and storage of dangerous goods in ship</b>	Toxic Substances - Poison (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
<b>Civil Aeronautics Law</b>	Toxic and Infectious Substances (Ordinance Art.194, MITL Notification for Air Transportation of Explosives etc., Attached Table 1)
<b>Marine Pollution Prevention Law</b>	Enforcement ordinance Appendix No. 1 Noxious liquid substance Category Y Marine pollutants (P and PP substances)
<b>Pollutant Release and Transfer Register Law</b>	Class 1
<b>(~2023.3.31)</b>	
<b>Class 1 - No.</b>	149
<b>Pollutant Release and Transfer Register Law</b>	Class 1
<b>(2023/4/1~)</b>	
<b>Class 1 - No.</b>	149
<b>Water Pollution Control Act</b>	Harmful Substances (Law Art.2, Enforcement Order Art.2, Ordinance Designating Wastewater Standards Art.1) Appendix 2 Export Approval Item B-2
<b>Export Trade Control Order</b>	
<b>Ozon protection act.(Japan)</b>	
<b>Air Pollution Control Law</b>	Hazardous Air Pollutants
<b>Soil Contamination Control Law</b>	Designated Hazardous Substances

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 (~2023.3.31)
Carbon Tetrachloride 56-23-5 ( 99.5 )	Applicable	Applicable	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

### 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 Z7252(2019). \*JIS: Japanese Industrial Standards

End of Safety Data Sheet