Wako Pure Chemical Industries, Ltd.

SAFETY DATA SHEET

According to JIS Z 7253:2012

Revision Date 30-Oct-2014
Version 1

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product name	Carbon Tetrachloride
Product code	039-01271,039-01276,035-01273
CAS No	56-23-5

Formula CCl4

Manufacturer
Wako Pure Chemical Industries, Ltd.
1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan
Phone: +81 (0)6-6203-3741
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Supplier
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Emergency telephone number +81-6-6203-3741 / +81-3-3270-8571

Recommended uses and restrictions on use For research purposes

Section 2: HAZARDS IDENTIFICATION

GHS classification

Classification of the substance or mixture

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 2
Reproductive Toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 1
Category 1 central nervous system, kidneys, liver	
Specific target organ toxicity (repeated exposure)	Category 1
Category 1 liver, blood, kidneys, respiratory system	
aquatic environment (acute hazard)	Category 1
aquatic environment (long-term hazard)	Category 1

Pictograms

Signal word Danger

Hazard statements

H315 - Causes skin irritation
H319 - Causes serious eye irritation
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

H370 - Causes damage to the following organs: central nervous system, kidneys, liver
H372 - Causes damage to the following organs through prolonged or repeated exposure: liver, blood, kidneys, 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.
- 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
- Collect spillage

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 Substance

Formula CCl4

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

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

Special extinguishing method

No information available

Specific hazards arising from the chemical product

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

Protection of 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 contaminent and methods and materials for cleaning up

Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed. Absorb the product flowing out on the water to soak the absorber.

Recoverly, 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 repeated and long-term exposure . Avoid contact with eyes and skin 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.

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	alkali metals

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. 5 ppm

Exposure limits

Chemical Name	Japan	ISHL Working Environmental Evaluation Standards - Administrative Control Levels	ACGIH
Tetrachlormethan 56-23-5	TWA: 5 ppm OEL TWA: 31 mg/m^3 OEL Skin ISHL/ACL: 5 ppm	ISHL/ACL: 5 ppm	STEL: 10 ppm TWA: 5 ppm Skin

Personal protective equipment

Respiratory protection	gas mask for organic gas
Hand protection	Impermeable protective gloves
Eye protection	protective eyeglasses or chemical safety goggles
Skin and body protection	Long-sleeved work clothes, protective boots

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form

Color	colorless
Turbidity	clear
Appearance	liquid
Odor	Pungent odor
pH	No data available
Melting point/freezing point	-23 °C
Boiling point, initial boiling point and boiling range	77 °C
Flash point	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
Vapour pressure	12.2 kPa (20°C)
Vapour density	5.32
Specific Gravity (relatinve density)	1.593
Solubilities	Ethanol , Diethyl ether : freely soluble . Water : very slightly soluble.
n-Octanol/water partition coefficient:(log Pow)	2.64
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity (coefficient of viscosity)	No data available
Dynamic viscosity	No data available

Section 10: STABILITY AND REACTIVITY

Stability

Stability	May be altered by light.
Reactivity	No data available

Hazardous reactions

None under normal processing

Conditions to avoid

Extremes of temperature and direct sunlight

Incompatible materials

alkali metals

Hazardous decomposition products

Chlorine gas, Hydrogen chloride, Phosgene

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

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

Component	Acute toxicity -oral- source information	Based on the NITE GHS classification results.	Acute toxicity -inhalation gas- source information
Tetrachlormethan 56-23-5 (99.5)	LD50(orl,rat):2350mg/kg(Risk Assessment of the Ministry of the EnvironmentVol. 3(2004))、LD50(orl,rat):2821mg/kg、10054mg/kg(EHC208(1999))、LD50(orl,rat):2800-10180mg/kg(NITEInitial Risk Assessment Report(2005))、7500mg/kg、10200mg/kg(ATSDR(2005))、LD50(orl,rat):2920mg/kg(IARCvol.20(1979))、LD50(orl,rat):7460mg/kg(JMPRNo.48(1965))	LD50(skn,rabbit):値15000mg/kg(ATSDR(2005))	Based on the NITE GHS classification results.

Component	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust- source information	Acute toxicity -inhalation mist- source information
Tetrachlormethan 56-23-5 (99.5)	LC50(ihl,rat): 8000ppm/4h(Ministry of the Environment Risk Assessment Vol3 (2004)).	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Skin irritation/corrosion

Component	Skin corrosion irritation source information
Tetrachlormethan 56-23-5 (99.5)	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Component	Serious eye damage source information
Tetrachlormethan 56-23-5 (99.5)	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Component	Respiratory, Skin sensitization source information
Tetrachlormethan 56-23-5 (99.5)	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Component	Mutagenic source information
Tetrachlormethan 56-23-5 (99.5)	Based on the NITE GHS classification results.

Carcinogenicity

Component	Carcinogenicity source infotmation
Tetrachlormethan 56-23-5 (99.5)	Based on the NITE GHS classification results.

Reproductive toxicity

Component	Reproductive toxicity source information
Tetrachlormethan 56-23-5 (99.5)	Based on the NITE GHS classification results.

STOT-single exposure

Component	STOT -single exporsure- source information
Tetrachlormethan 56-23-5 (99.5)	Based on the NITE GHS classification results.

STOT-repeated exposure

Component	STOT -repeated exposure- source information
Tetrachlormethan 56-23-5 (99.5)	Based on the NITE GHS classification results.

Aspiration hazard

Component	Aspiration Hazard source information
Tetrachlormethan 56-23-5 (99.5)	Based on the NITE GHS classification results.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Tetrachlormethan	*ErC50: Pseudokirchneriellasubcapitata 0.46 mg/L 72 h*	*LC50:Pimephales promelas 9.68 - 11.3 mg/L 96 h LC50:Lepomis macrochirus 23 - 33 mg/L 96 h*	*N/A*

Other data

Component	Aquatic toxicity -Acute- source information	Aquatic toxicity -Chronic- source information
Tetrachlormethan 56-23-5 (99.5)	ErC50(Pseudokirchneriellasubcapitata):0.46 mg/L/72h(Ministry of the Environment ecological effects test,2002)	Acute toxicity is a Category 1, but bioaccumulation is low(BCF=11(Existing chemical safety inspections data)、do not have rapid degradation.(BOD：0%(Existing chemical safety inspections data)).

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

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 UN1846
Proper shipping name: Carbon tetrachloride
UN classfication 6.1
Subsidiary hazard class
Packing group II
ERG Code 6L
Marine pollutant Yes

IMDG
UN number UN1846
Proper shipping name: Carbon tetrachloride
UN classfication 6.1
Subsidiary hazard class P
Packing group II
EmS-No F-A, S-A
Marine pollutant (Sea) Yes

IATA
UN number UN1846
Proper shipping name: Carbon tetrachloride
UN classfication 6.1
Subsidiary hazard class

Packing group	II
Enviromenntally Hazardous Substance	Yes

Section 15: REGULATORY INFORMATION

International Inventories

EINECS/ELINCS	Listed
TSCA	Listed

Japanese regulations

Fire Service Act	Firefighting Inhibitor
Poisonous and Deleterious Substances Control Law	Deleterious Substances 2nd. Grade
Industrial Safety and Health Act	Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18) Substances with Health Hazards Prevention Guideline(Carcinogenicity Substance) Notifiable Substances (Law Art.57-2, Enforcement Oder Art.18-2 Attached Table No.9, and Law Art.56-1) Working Environment Evaluation Standards, Administrative Control Levels (Law Art.65-2, Para.1) Group 2 Specified Chemical Substance, Special organic solvents.
Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc	Class II Specified Chemical Substances (Law Art.2, Para.3, Enforcement Order Art.1-2)
Regulations for the carriage and storage of dangerous goods in ship	Toxic Substances - Poison (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Civil Aeronautics Law	Toxic and Infectious Substances (Ordinance Art.194, MITL Nortification for Air Transportation of Explosives etc., Attached Table 1)
Marine Pollution Prevention Law	
Pollutant Release and Transfer Register Law	Class 1
Class 1 - No.	149
Water Pollution Control Act	Harmful Substances (Law Art.2, Enforcement Order Art.2, Ordinace Designating Wastewater Standards Art.1)
Export Trade Control Order	Appendix 2
Appendix 2-No.	35
Ozon protection act.(Japan)	
Air Pollution Control Law	Hazardous Air Pollutants
Soil Contamination Control Law	Designated Hazardous Substances

Section 16: OTHER INFORMATION

Literature and references

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, 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 acoording to JIS Z7252(2010). *JIS: Japanese Industrial Standards

End of Safety Data Sheet