

SAFETY DATA SHEET

Creation Date 24-Nov-2010

Revision Date 24-Dec-2021

Revision Number 4

1. Identification

Product Name Carbon tetrachloride

Cat No. : AC167720000; AC167720010; AC167720025; AC167720100;
AC167721000; AC167725000

Synonyms Tetrachloromethane

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|------------|
| Acute oral toxicity | Category 3 |
| Acute dermal toxicity | Category 3 |
| Acute Inhalation Toxicity - Vapors | Category 3 |
| Carcinogenicity | Category 2 |
| Specific target organ toxicity - (repeated exposure) | Category 1 |
| Target Organs - Liver. | |

Label Elements

Signal Word
Danger

Hazard Statements

Toxic if swallowed
Toxic in contact with skin
Toxic if inhaled
May cause cancer
Causes damage to organs through prolonged or repeated exposure

**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 eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray

Response

IF exposed or concerned: Get medical attention/advice

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician

Skin

IF ON SKIN: Wash with plenty of soap and water
Call a POISON CENTER or doctor/physician if you feel unwell
Remove/Take off immediately all contaminated clothing
Wash contaminated clothing before reuse

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth

Storage

Store locked up
Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Harmful to aquatic life with long lasting effects
Harms public health and the environment by destroying ozone in the upper atmosphere
WARNING. Cancer - <https://www.p65warnings.ca.gov/>.

3. Composition/Information on Ingredients

| Component | CAS No | Weight % |
|----------------------|---------|----------|
| Carbon tetrachloride | 56-23-5 | >95 |

4. First-aid measures

Eye Contact

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical

| | |
|--|--|
| | attention is required. |
| Inhalation | Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. If not breathing, give artificial respiration. |
| Ingestion | Do NOT induce vomiting. Call a physician or poison control center immediately. |
| Most important symptoms and effects | Drowsiness. Dizziness. Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting |
| Notes to Physician | Treat symptomatically |

5. Fire-fighting measures

| | |
|---|---|
| Suitable Extinguishing Media | Substance is nonflammable; use agent most appropriate to extinguish surrounding fire. |
| Unsuitable Extinguishing Media | No information available |
| Flash Point | No information available |
| Method - | No information available |
| Autoignition Temperature | 982 °C / 1799.6 °F |
| Explosion Limits | |
| Upper | No data available |
| Lower | No data available |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | No information available |

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂). Phosgene. Hydrogen chloride gas.

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.

NFPA

| | | | |
|---------------|---------------------|--------------------|-------------------------|
| Health | Flammability | Instability | Physical hazards |
| 3 | 0 | 0 | N/A |

6. Accidental release measures

| | |
|---|--|
| Personal Precautions | Use personal protective equipment as required. Ensure adequate ventilation. Avoid contact with skin and eyes. Keep people away from and upwind of spill/leak. |
| Environmental Precautions | Do not flush into surface water or sanitary sewer system. |
| Methods for Containment and Clean Up | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Do not let this chemical enter the environment. |

7. Handling and storage

| | |
|-----------------|---|
| Handling | Ensure adequate ventilation. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. |
| Storage. | Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Incompatible |

Materials. Strong oxidizing agents. Fluorine. Metals.

8. Exposure controls / personal protection

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH | Mexico OEL (TWA) |
|----------------------|------------------------------------|---|--|----------------------------|
| Carbon tetrachloride | TWA: 5 ppm STEL: 10 ppm Skin | (Vacated) TWA: 2 ppm (Vacated) TWA: 12.6 mg/m ³ Ceiling: 25 ppm TWA: 10 ppm | IDLH: 200 ppm STEL: 2 ppm STEL: 12.6 mg/m ³ | TWA: 5 ppm STEL: 10 ppm |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

| | |
|--|--------------------------|
| Physical State | Liquid |
| Appearance | Colorless |
| Odor | No information available |
| Odor Threshold | No information available |
| pH | No information available |
| Melting Point/Range | -23 °C / -9.4 °F |
| Boiling Point/Range | 76 °C / 168.8 °F |
| Flash Point | No information available |
| Evaporation Rate | No information available |
| Flammability (solid,gas) | Not applicable |
| Flammability or explosive limits | |
| Upper | No data available |
| Lower | No data available |
| Vapor Pressure | 121 mbar @ 20 °C |
| Vapor Density | No information available |
| Specific Gravity | 1.594 |
| Solubility | No information available |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | 982 °C / 1799.6 °F |
| Decomposition Temperature | > 100°C |
| Viscosity | 0.97 mPa.s at 20 °C |
| Molecular Formula | C Cl ₄ |
| Molecular Weight | 153.82 |

10. Stability and reactivity

| | |
|---|--|
| Reactive Hazard | None known, based on information available |
| Stability | Stable under normal conditions. |
| Conditions to Avoid | Incompatible products. |
| Incompatible Materials | Strong oxidizing agents, Fluorine, Metals |
| Hazardous Decomposition Products | Carbon monoxide (CO), Carbon dioxide (CO ₂), Phosgene, Hydrogen chloride gas |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information

Acute Toxicity

Product Information Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|----------------------|---------------------------|---------------------------|-----------------------------|
| Carbon tetrachloride | LD50 = 2350 mg/kg (Rat) | LD50 = 5070 mg/kg (Rat) | LC50 = 8000 ppm (Rat) 4 h |

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. Limited evidence of a carcinogenic effect.

| Component | CAS No | IARC | NTP | ACGIH | OSHA | Mexico |
|----------------------|---------|----------|------------------------|-------|------|--------|
| Carbon tetrachloride | 56-23-5 | Group 2B | Reasonably Anticipated | A2 | X | A2 |

Mutagenic Effects Not mutagenic in AMES Test

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure Liver

Aspiration hazard No information available

Symptoms / effects, both acute and delayed Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

The product contains following substances which are hazardous for the environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|----------------------|------------------|--|--|--------------------------------------|
| Carbon tetrachloride | Not listed | LC50: 36.3 - 47.3 mg/L, 96h flow-through (Pimephales promelas) LC50: 9.68 - 11.3 mg/L, 96h static (Pimephales promelas) LC50: 23 - 33 mg/L, 96h static (Lepomis macrochirus) | EC50 = 34 mg/L 10 min EC50 = 5.6 mg/L 5 min | EC50: = 29 mg/L, 48h (Daphnia magna) |

Persistence and Degradability Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its volatility.

| Component | log Pow |
|----------------------|---------|
| Carbon tetrachloride | 2.75 |

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

| Component | RCRA - U Series Wastes | RCRA - P Series Wastes |
|--------------------------------|------------------------|------------------------|
| Carbon tetrachloride - 56-23-5 | U211 | - |

14. Transport information

DOT

UN-No UN1846
 Proper Shipping Name CARBON TETRACHLORIDE
 Hazard Class 6.1
 Packing Group II

TDG

UN-No UN1846
 Proper Shipping Name CARBON TETRACHLORIDE
 Hazard Class 6.1
 Packing Group II

IATA

UN-No UN1846
 Proper Shipping Name CARBON TETRACHLORIDE
 Hazard Class 6.1
 Packing Group II

IMDG/IMO

UN-No UN1846
 Proper Shipping Name CARBON TETRACHLORIDE
 Hazard Class 6.1
 Packing Group II

15. Regulatory information

United States of America Inventory

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|----------------------|---------|------|---|-----------------------------|
| Carbon tetrachloride | 56-23-5 | X | ACTIVE | - |

Legend:**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA 12(b) - Notices of Export Not applicable**International Inventories**

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component | CAS No | DSL | NDL | EINECS | PICCS | ENCS | ISHL | AICS | IECSC | KECL |
|----------------------|---------|-----|-----|-----------|-------|------|------|------|-------|----------|
| Carbon tetrachloride | 56-23-5 | X | - | 200-262-8 | X | X | X | X | X | KE-04756 |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)**U.S. Federal Regulations****SARA 313**

| Component | CAS No | Weight % | SARA 313 - Threshold Values % |
|----------------------|---------|----------|-------------------------------|
| Carbon tetrachloride | 56-23-5 | >95 | 0.1 |

SARA 311/312 Hazard Categories See section 2 for more information**CWA (Clean Water Act)**

| Component | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|----------------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Carbon tetrachloride | X | 10 lb | X | X |

Clean Air Act

| Component | HAPS Data | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|----------------------|-----------|-------------------------|-------------------------|
| Carbon tetrachloride | X | X | - |

OSHA - Occupational Safety and Health Administration Not applicable**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Component | Hazardous Substances RQs | CERCLA EHS RQs |
|----------------------|--------------------------|----------------|
| Carbon tetrachloride | 10 lb 1 lb | - |

California Proposition 65 This product contains the following Proposition 65 chemicals.

| Component | CAS No | California Prop. 65 | Prop 65 NSRL | Category |
|----------------------|---------|---------------------|--------------|------------|
| Carbon tetrachloride | 56-23-5 | Carcinogen | 5 µg/day | Carcinogen |

U.S. State Right-to-Know Regulations

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|----------------------|---------------|------------|--------------|----------|--------------|
| Carbon tetrachloride | X | X | X | X | X |

U.S. Department of Transportation

Reportable Quantity (RQ): Y

DOT Marine Pollutant Y

DOT Severe Marine Pollutant N

U.S. Department of Homeland This product does not contain any DHS chemicals.

Security**Other International Regulations****Mexico - Grade** No information available**Authorisation/Restrictions according to EU REACH**

| Component | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|----------------------|---|---|---|
| Carbon tetrachloride | - | Use restricted. See item 75. (see link for restriction details) | - |

<https://echa.europa.eu/substances-restricted-under-reach>**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component | CAS No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|----------------------|---------|----------|------------------------------|--|--|
| Carbon tetrachloride | 56-23-5 | Listed | Not applicable | Annex I (Group IV substance) : ODP = 1.1 Annex B - Group II : ODP = 1.1 | Not applicable |

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|----------------------|---------|---|--|----------------------------|------------------------------------|
| Carbon tetrachloride | 56-23-5 | Not applicable | Not applicable | Not applicable | Annex I - Y45 |

16. Other information

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Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

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 SDS