

## Safety Data Sheet (MSDS)

(According to GB/T 16483, GB/T 17519, and GHS Standards)

### SECTION 1: Identification

#### 1.1 Product Identifiers

- Product Name: Carbon Tetrachloride (Tetrachloromethane)
- Product Number: CTC-20260212
- Brand: TECHPURE
- CAS-No.: 56-23-5
- Synonyms: Tetrachloromethane; Carbon tet
- Synonyms: Tetrachloromethane; Carbon tet

#### 1.2 Details of the supplier of the safety data sheet

- Company : NEWAY SINOPHC TECH. LIMITED
- RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI)PILOT FREE TRADE ZONE.
- Telephone : +86-021-50350029
- Fax : +86-021-50350029

#### 1.3 Emergency telephone

Emergency Phone # : +86-021-50350029  
(CHEMTREC)

#### 1.4 Uses & Restrictions

- Identified Uses: Industrial solvent, chemical synthesis intermediate, laboratory reagent.
- Uses Advised Against: Food contact, dry cleaning (unapproved use), and unventilated enclosed space use.

### SECTION 2: Hazards Identification

#### 2.1 GHS Classification

- Acute toxicity - Inhalation (Category 2)
- Acute toxicity - Oral (Category 3)
- Skin irritation (Category 2)
- Eye irritation (Category 2)
- Carcinogenicity (Category 2B)
- Aquatic toxicity (Category 1)

#### 2.2 GHS Label Elements

- Hazard Pictogram: Skull and crossbones; Irritant; Carcinogen; Environment
- Signal Word: Danger
- Hazard Statements: H331 (Toxic if inhaled); H302 (Harmful if swallowed); H315 (Causes skin irritation); H319 (Causes serious eye irritation); H351 (Suspected of causing cancer); H400 (Very toxic to aquatic life)

- Precautionary Statements: P260 (Do not breathe vapor); P280 (Wear protective gloves/eye protection/face protection/respiratory protection); P304+P340 (If inhaled: Remove to fresh air and keep at rest); P308+P313 (If exposed or concerned: Get medical advice); P391 (Collect spillage); P403+P233 (Store in a well-ventilated place; keep container tightly closed)
- 2.3 Physical & Chemical Hazards: Decomposes at high temperature (> 150°C) to release toxic gases (hydrogen chloride, phosgene); non-flammable but toxic by inhalation.2.4 Health Hazards: Toxic if inhaled/swallowed; causes skin/eye irritation; long-term exposure causes cancer (IARC Group 2B) and severe liver/kidney damage.2.5 Environmental Hazards: Very toxic to aquatic organisms; persistent and bioaccumulative.2.6 Other Hazards: None.

### SECTION 3: Composition/Information on Ingredients

- Substance / Mixture: Pure substance
- Active Component: Carbon Tetrachloride (CAS 56-23-5)
- Concentration: ≥ 99.5%
- Impurities: ≤ 0.5% (Halogenated hydrocarbon isomers)

### SECTION 4: First Aid Measures

- Inhaled: Remove to fresh air immediately. Keep patient calm; give oxygen if breathing is difficult. Seek emergency medical attention.
- Skin Contact: Remove contaminated clothing. Rinse skin thoroughly with plenty of running water for 15-20 minutes. Seek medical advice.
- Eye Contact: Hold eyes open and rinse continuously with plenty of running water for 15 minutes. Remove contact lenses if present. Seek emergency medical attention.
- Swallowed: Do not induce vomiting. Rinse mouth with water. Seek immediate medical attention; bring this MSDS.

### SECTION 5: Firefighting Measures

- Suitable Extinguishing Media: Dry powder, carbon dioxide (CO<sub>2</sub>), foam, water spray.
- Unsuitable Extinguishing Media: None.
- Special Hazards: Decomposes when heated to release toxic gases (hydrogen chloride, phosgene).
- Advice for Firefighters: Wear self-contained breathing apparatus and full protective clothing. Cool containers with water spray from a safe distance; avoid breathing fumes.

### SECTION 6: Accidental Release Measures

- Personal Precautions: Evacuate non-essential personnel. Wear full PPE and ensure good ventilation.
- Environmental Precautions: Prevent spillage from entering drains, watercourses, or soil. Use absorbents to contain aquatic contamination.

- Clean-Up Methods: Small spills: Absorb with inert materials (sand, vermiculite) and dispose of as hazardous waste. Large spills: Contain with dikes; transfer to sealed containers for professional disposal.

## **SECTION 7: Handling and Storage**

- Handling Precautions: Operate in well-ventilated areas with local exhaust. Avoid skin/eye contact and inhalation. Use non-sparking tools. Do not siphon by mouth.
- Storage Conditions: Store in cool, dry, well-ventilated warehouses (temperature  $\leq 30^{\circ}\text{C}$ ). Keep container tightly closed. Store away from oxidizing agents, strong bases, and heat sources.
- Incompatibilities: Strong bases (e.g., sodium hydroxide), oxidizing agents (e.g., hydrogen peroxide), active metals (aluminum, zinc).

## **SECTION 8: Exposure Controls/Personal Protection**

- Engineering Controls: Install local exhaust ventilation; use explosion-proof electrical equipment. Maintain negative pressure in handling areas.
- Personal Protective Equipment:
  - Eye/Face Protection: Chemical safety goggles and face shield.
  - Skin Protection: Nitrile rubber gloves, chemical-resistant protective clothing, and safety shoes.
  - Respiratory Protection: Respirator with organic vapor cartridge (P100) when ventilation is insufficient.
- Exposure Limits: TWA (8h): 5 ppm (OSHA); STEL (15min): 10 ppm (OSHA); IARC Group 2B (Suspected carcinogen).

## **SECTION 9: Physical and Chemical Properties**

- Physical State: Liquid
- Color: Colorless
- Odor: Faint sweet odor
- Melting Point:  $-22.9^{\circ}\text{C}$
- Boiling Point:  $76.7^{\circ}\text{C}$
- Flash Point (Closed Cup): None (Non-flammable)
- Autoignition Temperature:  $> 500^{\circ}\text{C}$
- Density ( $20^{\circ}\text{C}$ ):  $1.594\text{ g/cm}^3$
- Viscosity ( $20^{\circ}\text{C}$ ):  $0.97\text{ mPa}\cdot\text{s}$
- Water Solubility: Slightly soluble ( $8.0\text{ g/L}$  at  $25^{\circ}\text{C}$ )
- Vapor Pressure ( $20^{\circ}\text{C}$ ):  $11.9\text{ kPa}$
- Explosive Limits: None (Non-flammable)

## **SECTION 10: Stability and Reactivity**

- Stability: Stable under normal conditions; decomposes at  $> 150^{\circ}\text{C}$ .

- Hazardous Reactions: Reacts violently with strong bases and active metals (aluminum, zinc) to release flammable hydrogen gas.
- Conditions to Avoid: High temperature (> 60°C), direct sunlight, contact with strong bases/oxidizers.
- Incompatible Materials: Strong bases, oxidizing agents, aluminum, zinc.
- Hazardous Decomposition Products: Hydrogen chloride, phosgene (toxic), carbon monoxide.

## SECTION 11: Toxicological Information

- Acute Toxicity: Oral (Rat, LD<sub>50</sub>): 2390 mg/kg; Inhalation (Rat, LC<sub>50</sub>): 8000 ppm (4h).
- Skin Irritation: Causes moderate skin irritation; may cause dryness and cracking with prolonged contact.
- Eye Irritation: Causes serious eye irritation; may cause corneal damage if not irrigated promptly.
- Chronic Toxicity: Classified as suspected carcinogen (IARC Group 2B); long-term exposure causes severe liver/kidney damage and central nervous system depression.
- Reproductive Toxicity: May cause reproductive harm (fetal damage, reduced fertility) in high doses.

## SECTION 12: Ecological Information

- Aquatic Toxicity: Fish (Rainbow Trout, LC<sub>50</sub>): 28 mg/L (96h); Daphnia (EC<sub>50</sub>): 15 mg/L (48h).
- Biodegradability: Poorly biodegradable (BOD<sub>5</sub>/COD < 0.1).
- Bioaccumulative Potential: High bioaccumulation (log K<sub>oc</sub> = 2.6).
- Environmental Fate: Persists in water and soil; volatilizes moderately from water surfaces.

## SECTION 13: Disposal Considerations

- Waste Treatment: Dispose of as hazardous waste in accordance with local, national, and international regulations (e.g., RCRA, REACH). Incinerate in facilities equipped with acid gas scrubbers.
- Packaging Waste: Rinse containers thoroughly with compatible solvent; dispose of as hazardous waste or recycle per regulations.

## SECTION 14: Transport Information

- UN Number: 1846
- UN Proper Shipping Name: CARBON TETRACHLORIDE
- Transport Hazard Class: 6.1 (Toxic substances)
- Packaging Group: II
- Marine Pollutant: Yes
- Transport Precautions: Transport in UN-approved hazardous goods containers. Avoid direct sunlight, high temperature, and collision. Do not transport with strong bases or oxidizers.

## SECTION 15: Regulatory Information

- National Regulations (China): Hazardous Chemical Safety Management Regulation; Environmental Protection Law; Occupational Disease Prevention and Control Law.
- International Regulations: GHS (Rev. 9); REACH (EU, listed); TSCA (US, listed); IMDG Code; IATA-DGR; IARC Group 2B (Suspected carcinogen).

#### **SECTION 16: Other Information**

- Revision Date: 12 FEB 2026
- Disclaimer: This MSDS is based on current scientific data. The supplier is not liable for damages caused by improper use or non-compliance with safety precautions.

