Safety Data Sheet (MSDS)

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

SECTION 1: Identification

1.1 Product Identifiers

- Product Name: Methanol (Methyl Alcohol)
- Product Number: MEOH-20260214
- Brand: TECHPURE
- CAS-No.: 67-56-1
- Synonyms: Methyl Alcohol; Wood Alcohol; Carbinol

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, fuel additive.
- Uses Advised Against: Food/beverage use, medicinal purposes, and unventilated enclosed space use.

SECTION 2: Hazards Identification

2.1 GHS Classification

- Flammable liquids (Category 2)
- Acute toxicity - Oral (Category 3)
- Acute toxicity - Inhalation (Category 3)
- Skin corrosion/irritation (Category 1)
- Eye damage/eye irritation (Category 1)
- Aquatic toxicity (Category 1)

2.2 GHS Label Elements

- Hazard Pictogram: Flame; Skull and crossbones; Corrosion; Environment
- Signal Word: Danger

- Hazard Statements: H225 (Highly flammable liquid and vapor); H301 (Toxic if swallowed); H331 (Toxic if inhaled); H314 (Causes severe skin burns and eye damage); H400 (Very toxic to aquatic life)
- Precautionary Statements: P210 (Keep away from heat, hot surfaces, sparks, open flames); P260 (Do not breathe vapor); P280 (Wear protective gloves/eye protection/face protection/respiratory protection); P301+P310 (If swallowed: Immediately call a poison center or doctor); P305+P351+P338 (If in eyes: Rinse cautiously with water for several minutes); P391 (Collect spillage); P403+P233 (Store in a well-ventilated place; keep container tightly closed) 2.3 Physical & Chemical Hazards: Highly flammable vapor; forms explosive mixtures with air (6.0-36.5% v/v).2.4 Health Hazards: Toxic if swallowed/inhaled; causes severe skin/eye burns; chronic exposure may damage liver/kidneys.2.5 Environmental Hazards: Very toxic to aquatic organisms; persistent in the environment.2.6 Other Hazards: None.

SECTION 3: Composition/Information on Ingredients

- Substance / Mixture: Pure substance
- Active Component: Methanol (CAS 67-56-1)
- Concentration: ≥ 99.5%
- Impurities: ≤ 0.5% (Alcohol isomers, water)

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. Immediately call a poison center or doctor; bring this MSDS.

SECTION 5: Firefighting Measures

- Suitable Extinguishing Media: Dry powder, carbon dioxide (CO_2), foam, water spray.
- Unsuitable Extinguishing Media: None.
- Special Hazards: Vapors are heavier than air and may travel to ignition sources. Toxic fumes (formaldehyde, carbon monoxide) generated when burning.
- Advice for Firefighters: Wear self-contained breathing apparatus and full protective clothing. Cool containers with water spray from a safe distance.

SECTION 6: Accidental Release Measures

- Personal Precautions: Evacuate non-essential personnel. Wear full PPE and ensure good ventilation. Eliminate all ignition sources.

- 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 explosion-proof electrical equipment. Avoid skin/eye contact and inhalation. Use anti-static tools. Do not siphon by mouth.
- Storage Conditions: Store in cool, dry, well-ventilated warehouses (temperature ≤ 30℃). Keep container tightly closed. Store away from oxidizing agents, heat, and ignition sources.
- Incompatibilities: Strong oxidizers, acids, alkalis, metals (magnesium, aluminum).

SECTION 8: Exposure Controls/Personal Protection

- Engineering Controls: Install local exhaust ventilation; use explosion-proof 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): 200 ppm (OSHA); STEL (15min): 250 ppm (OSHA).

SECTION 9: Physical and Chemical Properties

- Physical State: Liquid
- Color: Colorless
- Odor: Faint alcoholic odor
- Melting Point: -97.8℃
- Boiling Point: 64.7℃
- Flash Point (Closed Cup): 11℃
- Autoignition Temperature: 464℃
- Density (20℃): 0.792 g/cm³
- Viscosity (20℃): 0.54 mPa·s
- Water Solubility: Fully miscible
- Vapor Pressure (20℃): 12.8 kPa
- Explosive Limits: 6.0-36.5% (v/v)

SECTION 10: Stability and Reactivity

- Stability: Stable under normal conditions.

- Hazardous Reactions: Reacts violently with strong oxidizers and active metals (magnesium, aluminum) to release flammable hydrogen gas.
- Conditions to Avoid: Heat, sparks, open flames, strong oxidizers.
- Incompatible Materials: Oxidizing agents (e.g., hydrogen peroxide, nitric acid), metals (magnesium, aluminum).
- Hazardous Decomposition Products: Formaldehyde, carbon monoxide, carbon dioxide (when burned).

SECTION 11: Toxicological Information

- Acute Toxicity: Oral (Rat, LD_{50}): 5628 mg/kg; Inhalation (Rat, LC_{50}): 64000 ppm (4h).
- Skin Corrosion/Irritation: Causes severe skin burns and irritation.
- Eye Damage/Irritation: Causes severe eye damage and permanent corneal injury.
- Chronic Toxicity: Long-term exposure causes liver/kidney damage and optic nerve damage.
- Reproductive Toxicity: May cause reproductive harm (fetal damage) in high doses.

SECTION 12: Ecological Information

- Aquatic Toxicity: Fish (Rainbow Trout, LC_{50}): 1500 mg/L (96h); Daphnia (EC_{50}): 2300 mg/L (48h).
- Biodegradability: Moderately biodegradable (BOD_5/COD = 0.4-0.5).
- Bioaccumulative Potential: Low bioaccumulation (log Koc = 0.7).
- Environmental Fate: Volatilizes rapidly from water; persists in soil.

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 emission control systems.
- Packaging Waste: Rinse containers thoroughly with compatible solvent; dispose of as hazardous waste or recycle per regulations.

SECTION 14: Transport Information

- UN Number: 1230
- UN Proper Shipping Name: METHANOL
- Transport Hazard Class: 3 (Flammable liquid)
- 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 oxidizers or metals.

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.

SECTION 16: Other Information

- Revision Date: 14 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.