

Safety Data Sheet (MSDS)

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

SECTION 1: Identification

1.1 Product Identifiers

- Product Name: Nitrobenzene
- Product Number:NIT-20260329
- Brand:TECHPURE
- CAS-No.:98-95-3
- Synonyms: Nitrobenzol; Oil of Mirbane

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: Chemical synthesis intermediate, dye precursor, laboratory reagent.
- Uses Advised Against: Food contact, medicinal purposes, unventilated enclosed space use.

SECTION 2: Hazards Identification

2.1 GHS Classification

- Flammable liquids (Category 3)
- 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: Flame; Skull and crossbones; Irritant; Carcinogen; Environment
- Signal Word: Danger
- Hazard Statements: H226 (Flammable liquid and vapor); H301 (Toxic if swallowed); H315 (Causes skin irritation); H319 (Causes serious eye irritation); H351 (Suspected of causing cancer); H400 (Very toxic to aquatic life)



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- Precautionary Statements: P210 (Keep away from heat/sparks); P260 (Do not breathe vapor); P280 (Wear protective gloves/eye/respiratory protection); P304+P340 (If inhaled: Remove to fresh air)

SECTION 3: Composition/Information on Ingredients

- Substance / Mixture: Pure substance
- Active Component: Nitrobenzene (CAS 98-95-3)
- Concentration: $\geq 99.0\%$
- Impurities: $\leq 1.0\%$ (Water, dinitrobenzene)

SECTION 4: First Aid Measures

- Inhaled: Move to fresh air; give oxygen if needed; seek emergency medical attention.
- Skin Contact: Rinse with running water for 15 minutes; remove contaminated clothing.
- Eye Contact: Rinse with plenty of water for 15 minutes; seek emergency medical attention.
- Swallowed: Do not induce vomiting; rinse mouth with water; seek immediate medical attention.

SECTION 5: Firefighting Measures

- Suitable Extinguishing Media: Dry powder, CO₂, foam, water spray.
- Special Hazards: Flammable vapor; toxic fumes (CO, NO_x) when burned.
- Advice for Firefighters: Wear self-contained breathing apparatus and full protective clothing.

SECTION 6: Accidental Release Measures

- Personal Precautions: Evacuate non-essential personnel; wear full PPE; eliminate ignition sources.
- Environmental Precautions: Prevent entry into drains/watercourses; use absorbents to contain contamination.
- Clean-Up Methods: Small spills: Absorb with inert materials; large spills: Contain and transfer to sealed containers.

SECTION 7: Handling and Storage

- Handling: Operate in well-ventilated areas with explosion-proof equipment; use anti-static tools.
- Storage: Cool, dark, well-ventilated warehouse ($\leq 30^{\circ}\text{C}$); sealed, away from heat/sparks/oxidizers.
- Incompatibilities: Strong oxidizers, strong reducers, acids.

SECTION 8: Exposure Controls/Personal Protection

- PPE: Chemical safety goggles/face shield; nitrile rubber gloves; organic vapor respirator (P100).
- Exposure Limits: TWA (8h): 1 ppm (OSHA); STEL (15min): 3 ppm (OSHA); IARC Group 2B.

SECTION 9: Physical and Chemical Properties

- Physical State: Liquid; Color: Pale yellow to yellow; Odor: Almond-like
- Melting Point: 5.7°C ; Boiling Point: 210°C ; Flash Point: 88°C



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- Density (20°C): 1.203 g/cm³; Viscosity (20°C): 2.1 mPa·s
- Water Solubility: Slightly soluble; Vapor Pressure (25°C): 0.02 kPa
- Explosive Limits: 1.8-8.7% (v/v); Autoignition Temperature: 482°C

SECTION 10: Stability and Reactivity

- Stability: Stable under normal conditions.
- Hazardous Reactions: Reacts violently with strong oxidizers/reducers; forms explosive mixtures with air.

SECTION 11: Toxicological Information

- Acute Toxicity: Oral (Rat, LD₅₀): 489 mg/kg; Inhalation (Rat, LC₅₀): 500 ppm (4h)
- Skin/Eye Irritation: Moderate skin irritation; serious eye irritation.
- Chronic Toxicity: Suspected carcinogen; long-term exposure may cause liver/kidney damage.

SECTION 12: Ecological Information

- Aquatic Toxicity: Fish (Rainbow Trout, LC₅₀): 50 mg/L (96h); Daphnia (EC₅₀): 80 mg/L (48h)
- Biodegradability: Moderately biodegradable (BOD₅/COD = 0.3-0.4)

SECTION 13: Disposal Considerations

- Product Waste: Dispose as hazardous waste; incinerate in approved facilities.
- Packaging Waste: Rinse with solvent; dispose as hazardous waste or recycle.

SECTION 14: Transport Information

- UN Number: 1662
- UN Proper Shipping Name: NITROBENZENE
- Transport Hazard Class: 6.1 (Toxic substances)
- Packaging Group: II
- Marine Pollutant: Yes
- Transport Precautions: Avoid direct sunlight, high temperature, and collision.

SECTION 15: Regulatory Information

- National Regulations: Hazardous Chemical Safety Management Regulation; Environmental Protection Law.
- International Regulations: GHS (Rev. 9); REACH (EU, listed); TSCA (US, listed); IMDG Code; IARC Group 2B.

SECTION 16: Other Information

- Revision Date: 29 MAR 2026
- Disclaimer: This MSDS is based on current data; supplier not liable for improper use.