

Safety Data Sheet (MSDS)

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

SECTION 1: Identification

1.1 Product Identifiers

- Product Name: Urea (Carbamide)
- Product Number:URE-20260328
- Brand:TECHPURE
- CAS-No.:57-13-6
- Synonyms: Carbamide; Urea

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: Agricultural fertilizer, chemical synthesis intermediate, pharmaceutical excipient.
- Uses Advised Against: No major restrictions; avoid excessive ingestion.

SECTION 2: Hazards Identification

2.1 GHS Classification

- Skin irritation (Category 2)
- Eye irritation (Category 2)
- Aquatic toxicity (Category 3)

2.2 GHS Label Elements

- Hazard Pictogram: Irritant; Environment
- Signal Word: Warning
- Hazard Statements: H315 (Causes skin irritation); H319 (Causes serious eye irritation); H402 (Harmful to aquatic life)
- Precautionary Statements: P260 (Do not breathe dust); P280 (Wear protective gloves/eye protection); P304+P340 (If inhaled: Remove to fresh air); P391 (Collect spillage)

2.3 Physical & Chemical Hazards: No physical/chemical hazards under normal use.2.4 Health Hazards: Mild skin/eye irritation; dust inhalation may cause respiratory discomfort.2.5 Environmental Hazards: Harmful to aquatic life; fully biodegradable.2.6 Other Hazards: None.

SECTION 3: Composition/Information on Ingredients

- Substance / Mixture: Pure substance
- Active Component: Urea (CAS 57-13-6)
- Concentration: $\geq 99.5\%$
- Impurities: $\leq 0.5\%$ (Water, biuret)

SECTION 4: First Aid Measures

- Inhaled: Move to fresh air; seek medical attention if discomfort persists.
- Skin Contact: Rinse with running water for 10 minutes; remove contaminated clothing.
- Eye Contact: Rinse with plenty of water for 15 minutes; consult a doctor if irritation remains.
- Swallowed: Rinse mouth with water; seek medical attention if large amounts are ingested.

SECTION 5: Firefighting Measures

- Suitable Extinguishing Media: Dry powder, CO₂, foam, water spray.
- Unsuitable Extinguishing Media: None.
- Special Hazards: Non-flammable; no hazardous combustion gases.
- Advice for Firefighters: Wear standard fire-fighting gear.

SECTION 6: Accidental Release Measures

- Personal Precautions: Wear dust mask and gloves; evacuate non-essential personnel for large spills.
- Environmental Precautions: Prevent entry into watercourses.
- Clean-Up Methods: Small spills: Sweep with inert materials; large spills: Transfer to sealed containers.

SECTION 7: Handling and Storage

- Handling: Operate in well-ventilated areas; avoid dust generation.
- Storage: Cool, dry, well-ventilated warehouse ($\leq 30^{\circ}\text{C}$); sealed, away from heat/moisture.
- Incompatibilities: Strong acids, strong bases, oxidizing agents.

SECTION 8: Exposure Controls/Personal Protection

- Engineering Controls: Local exhaust ventilation for dust control.
- PPE: Dust mask, safety glasses, nitrile rubber gloves.
- Exposure Limits: TWA (8h): 10 mg/m³ (proposed).

SECTION 9: Physical and Chemical Properties

- Physical State: Solid; Color: White; Odor: Odorless
- Melting Point: 133°C; Boiling Point: Decomposes at 190°C; Flash Point: $> 150^{\circ}\text{C}$
- Density (20°C): 1.33 g/cm³; Solubility: 108 g/100 mL water (25°C)

- Vapor Pressure (25°C): < 0.001 kPa; Autoignition Temperature: > 400°C

SECTION 10: Stability and Reactivity

- Stability: Stable under normal conditions.
- Hazardous Reactions: Reacts violently with strong acids/bases at high temperature; decomposes to release ammonia.
- Conditions to Avoid: Heat, moisture, strong acids/bases.

SECTION 11: Toxicological Information

- Acute Toxicity: Oral (Rat, LD₅₀): 15000 mg/kg; Inhalation (Rat, LC₅₀): > 5000 mg/m³ (4h)
- Skin/Eye Irritation: Mild skin irritation; reversible eye irritation.
- Chronic Toxicity: No known chronic effects.

SECTION 12: Ecological Information

- Aquatic Toxicity: Fish (Zebrafish, LC₅₀): > 3000 mg/L (96h); Daphnia (EC₅₀): > 2000 mg/L (48h)
- Biodegradability: Fully biodegradable (BOD₅ /COD = 0.7-0.8)

SECTION 13: Disposal Considerations

- Product Waste: Dispose as non-hazardous waste; dilute with water for biological treatment.
- Packaging Waste: Rinse with water; dispose as non-hazardous waste or recycle.

SECTION 14: Transport Information

- UN Number: None (Non-hazardous)
- UN Proper Shipping Name: Not dangerous goods
- Transport Hazard Class: None; Packaging Group: None
- Transport Precautions: Avoid collision, moisture, and direct sunlight.

SECTION 15: Regulatory Information

- National Regulations: Hazardous Chemical Safety Management Regulation (Non-hazardous); Environmental Protection Law.
- International Regulations: GHS (Rev. 9); REACH (EU, listed); TSCA (US, listed).

SECTION 16: Other Information

- Revision Date: 28 MAR 2026
- Disclaimer: This MSDS is based on current data; supplier not liable for improper use.