

Chemical Safety Technical Data Sheet

Product Name:Urea

Developed in accordance with GB/T 16483 and GB/T 17519

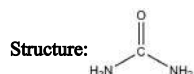
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Part 1: Identification of Chemicals and Enterprises

Chinese name of the chemical:Urea; Ure; Carbamide**Chemical English Name:**urea**Molecular formula:**H₂NCONH₂**Relative molecular mass:**60.06**Recommended and restricted uses of chemicals:**As fertilizer, animal feed, explosive, stabilizer, and raw material for urea-formaldehyde resin production, etc.

Part II Overview of Hazards

Summary of emergency situation:No information available.**GHS hazard class:**No information available.**Tag Elements:****Pictogram:**No data available.**Warning:**No data available.**Risk statement:**No data available.**Protection Explanation:****【 preventive measure 】 :**

non-avaible 。

[Accident Response]:

non-avaible 。

【 safe storage 】 :

non-avaible 。

[Disposal of Waste]:

non-avaible 。

Physical and chemical hazards:No data available.**Health hazards:**No data available.**Environmental hazards:**No data available.

Part III: Composition/Composition Information

√matter		Mixture
Component	Concentration	CAS No.
Urea	≥99 0%	57-13-6

Part IV Emergency Management Measures

Inhalation:Immediately remove the individual from the area to fresh air. Keep the airway clear. If breathing is difficult, administer oxygen. In case of respiratory or cardiac arrest, perform cardiopulmonary resuscitation (CPR) immediately. Seek medical attention.**Skin contact:**Immediately remove contaminated clothing and rinse thoroughly with running water. Seek medical attention.**Eye contact:**Immediately open the eyelids and rinse thoroughly with running water or saline solution. Seek medical attention.**Ingestion:**Rinse the mouth with water. Seek medical attention.**Advice for rescuers:**Use personal protective equipment as needed.**Special note for physicians:**Provide symptomatic treatment.

Part V Fire Safety Measures

Fire extinguishing agents:Use water mist, foam, dry powder, or carbon dioxide to extinguish the fire.

Special hazard:Flammable; upon ignition, it may produce hazardous gases or vapors.

Fire suppression precautions and protective measures:Firefighters must wear respirators and full-body fire-resistant clothing, and approach the fire from upwind. Spray water to cool the container and move it to an open area whenever possible. Evacuate immediately if the container suddenly emits abnormal sounds or exhibits unusual behavior.

Part VI: Emergency Response to Leaks

Protective measures, protective equipment, and emergency response procedures for personnel:Isolate the contaminated leakage area and restrict access. Emergency responders are advised to wear dust masks, chemical-resistant protective clothing, and rubber gloves. Do not handle ruptured containers or leaked substances before wearing appropriate protective gear. Try to cut off the source of the leak whenever possible.

Environmental protection measures:Prevent leaks from entering sewers, surface water, and groundwater.

Methods for containing and removing leaked chemicals, as well as the disposal materials used:Collect the spill using a clean shovel and place it in a clean, dry container with a loose lid; then move the container away from the spill area.

Part VII: Handling, Storage and Disposal

Operating Precautions:Operators must undergo specialized training and strictly adhere to operating procedures. It is recommended that operators wear self-suction filtering dust masks, chemical safety goggles, and chemical-resistant protective clothing. Keep away from sources of ignition and heat; smoking is strictly prohibited in the workplace. Prevent dust generation. Avoid contact with oxidizers and acids. Handle with care during transportation to prevent damage to packaging and containers. Equip with appropriate types and quantities of fire extinguishers and leak response equipment. Empty containers may contain residual hazardous substances.

Storage Precautions:Store in a well-ventilated warehouse. Keep sealed. Keep away from sources of ignition and heat. Store separately from oxidizers, acids, and other hazardous substances; avoid mixing. Provide adequate fire-fighting equipment in appropriate quantities. The storage area should be equipped with suitable materials to contain leaks.

Part VIII Contact Control/Personal Protection

Occupational exposure limits:China: No standards established.

United States (ACGIH): No standards have been established.

Biological contact limit:No standard established.

Monitoring methods:Methods for determining toxic substances in the air: No standards have been established. Methods for biological monitoring tests: No standards have been established.

Engineering controls:Provide safe shower and eye-wash facilities.

Personal Protective Equipment:

Respiratory protection:When air concentration exceeds safe limits, wear a self-suction filtering respirator. During emergency rescue or evacuation operations, use an air respirator.

Eye protection:Wear chemical safety goggles.

Skin and body protection:Wear chemical protective clothing.

Hand protection:Wear rubber gloves.

Part Nine Physical and Chemical Properties

Appearance and characteristics: Colorless crystals or white crystalline powder, odorless.	Melting point (°C): 132–135
pH value: No data available	
Bulb point (°C): No data available	Relative density (water = 1): 1.335 g/mL (25°C)
Relative vapor density (air = 1): No data	Saturation vapor pressure (kPa): No data
Combustion heat (kJ/mol): No data	Critical temperature (°C): No data
Critical pressure (MPa): No data	Octanol/water partition coefficient: No data
Flash point (°C): No data available	Self-ignition temperature (°C): No data
Lower explosive limit (%): No data	Explosion Limit (%): No data
Decomposition temperature (°C): No data	Viscosity (mPa·s): No data
Solubility: Soluble in water, methanol, and ethanol; slightly soluble in ether, chloroform, and benzene.	

Part 10 Stability and Reactiv-

ity Stability:Stable.

Adverse reactions:No data available.

Conditions for avoiding contact:No information available.

Contraindications:strong oxidizing agents, acids.

Hazardous decomposition products:No data available.

Part XI Toxicological Information

Acute toxicity:No data available.

Skin irritation or corrosion:	non-avaible 。
Eye irritation or corrosion:	non-avaible 。
Respiratory or skin allergy:	non-avaible 。
Mutability of germ cells:	non-avaible 。

Carcinogenicity:No data available.

Reproductive toxicity:No data available.

Specific target organ system toxicity – single exposure:No data available.

Specific target organ system toxicity – repeated exposure:No data available.

Inhalation hazards:No data available.

Part XII: Ecological Information

Ecotoxicity:No data available.

Durability and Degradability:

Biodegradability: No data available.

Non-biodegradability: No data available.

Potential bioaccumulation:No data available.

Mobility in soil:No data available.

Part 13: Waste Disposal

Waste chemicals:Hand over remaining and non-recyclable products to a licensed company for disposal.

Contaminated packaging:Disposal shall comply with national and local regulations.

Disposal precautions:Refer to relevant national and local regulations before disposal.

Part 14: Transportation Information

United Nations dangerous goods number (UN number):No information available

Name of Transport by the United Nations:Non-hazardous goods

UN hazard class:No information

Packaging Category:No information

Packaging Logo:No information

Marine pollutants:No

Transportation Precautions:Before transportation, verify that the packaging container is intact and properly sealed. During transit, ensure the container remains leak-proof, stable, and undamaged. Strictly prohibit mixing with oxidizers, acids, or food-grade chemicals. Transport vehicles must be equipped with appropriate firefighting equipment and leakage response devices in sufficient quantity. Protect the cargo from direct sunlight, rain, and high temperatures during transport. For road transport, follow designated routes as required.

Part 15: Regulatory Information

The following laws, regulations, rules, and standards contain corresponding provisions for the management of this chemical substance.

Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases:Classification and catalog of occupational diseases: Not listed.

Regulations on the Safety Management of Hazardous Chemicals:List of hazardous chemicals: Not included. List of explosive-prone hazardous chemicals: Not included. List of key hazardous chemicals under supervision: Not included. GB18218-2018 "Identification of Major Hazard Sources for Hazardous Chemicals" (Table 1): Not included.

Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used:List of highly toxic substances: Not included.

Regulations on the Management of Chemicals Susceptible to Drug Manufacturing:Classification and list of types of chemicals susceptible to drug manufacturing: Not included.

International Conventions:Stockholm Convention: Not included; Rotterdam Convention: Not included; Montreal Protocol: Not included.

Part 16: Other Information

Writing and revision information:This is the first version.

References:Safety Culture Network

Disclaimer:The information in this SDS applies only to the specified product. Unless otherwise stated, it does not apply to mixtures of this product with other substances. This SDS is intended solely for products that have undergone appropriate evaluation.

The users of this product who have received professional training must provide information regarding product safety usage. Users of this SDS must independently assess its suitability under specific operating conditions. The authors of this SDS shall not be liable for any injuries resulting from the use of this document under exceptional circumstances.