



Material Safety Data Sheet (MSDS)

UREA – Solid (Granular, Prilled, Technical, Feed, Medical Grades)

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

Product Name: Urea ($\text{CO}(\text{NH}_2)_2$)

Synonyms: Carbamide, Granular Urea, Prilled Urea, Technical Urea, Feed Grade Urea, Medical Grade Urea

CAS No.: 57-13-6

EC No.: 200-315-5

Recommended Use: Fertilizer, animal feed additive, resin and plastics manufacturing, pharmaceutical raw material (medical grade), general technical applications.

Restrictions on Use: Not intended for direct human consumption (except approved medical-grade applications).

Company Identification:

Basekim Kimyasal Ürünler LTD
Turan Güneş Blv. Ilkbahar Mah.
Sinpaş Altınoran Tower 2, Floor 2, Unit 146
Ankara, Turkey

Tel: +90 (312) 514 7055 / 514 7081

Emergency Contact (Logistics): 88552948

Health Emergency (24h): Basekim Emergency Information Center – International collect calls accepted

Disclaimer:

Basekim Kimyasal Ürünler LTD shall not be held legally responsible for damages, injuries, or losses arising from handling, storage, transport, or use of the product beyond its intended applications or outside of our control. The buyer/user assumes full responsibility for compliance with local regulations and the safe handling of the product.



Section 2: Hazards Identification

- **Classification (GHS/CLP):** Not classified as hazardous.
- **Signal Word:** None required.
- **Hazard Statements:**
 - May cause mild eye and skin irritation.
 - Decomposes above 132 °C, releasing ammonia and isocyanic acid vapors.
- **Precautionary Statements:**
 - Avoid inhalation of dust.
 - Avoid contact with eyes and prolonged skin contact.
 - Use with adequate ventilation.

Section 3: Composition/Information on Ingredients

Substance	CAS No.	EC No.	Purity
Urea	57-13-6	200-315-5	≥ 99% (depending on grade)

No hazardous impurities relevant for classification.

Section 4: First Aid Measures

- **Inhalation:** Move person to fresh air. If symptoms persist, seek medical attention.
- **Skin Contact:** Wash with soap and water. Remove contaminated clothing.
- **Eye Contact:** Rinse thoroughly with water for several minutes. Remove contact lenses if present. Seek medical advice if irritation persists.
- **Ingestion:** Rinse mouth with water. Do not induce vomiting. Seek medical attention if large amounts are swallowed.



Section 5: Firefighting Measures

- **Suitable Extinguishing Media:** Water spray, dry chemical, foam, CO₂.
- **Hazards from Fire:** Urea decomposes to ammonia, carbon dioxide, and isocyanic acid. Irritating fumes may be released.
- **Protective Equipment:** Self-contained breathing apparatus and full protective gear.

Section 6: Accidental Release Measures

- Avoid generating dust.
- Collect spilled material mechanically and place in suitable containers for reuse or disposal.
- Wash contaminated area with water.
- Prevent large quantities from entering waterways.

Section 7: Handling and Storage

- **Handling:** Avoid dust formation. Ensure proper ventilation. Use personal protective equipment when necessary.
- **Storage:** Store in a cool, dry, well-ventilated area. Protect from moisture. Keep away from strong oxidizers and acids.

Section 8: Exposure Controls/Personal Protection

- **Occupational Exposure Limits:** None established for urea.



- **Engineering Controls:** Local exhaust ventilation recommended when handling bulk quantities.
- **Personal Protective Equipment (PPE):**
 - Respiratory: Dust mask (EN 149, N95 or equivalent).
 - Hands: Protective gloves.
 - Eyes: Safety glasses/goggles.
 - Skin/Body: Normal work clothing.

Section 9: Physical and Chemical Properties

- Appearance: White crystalline solid (granules or prills)
- Odor: Odorless or slight ammonia-like
- Melting Point: 132 °C
- Boiling Point: Decomposes before boiling
- Solubility: Highly soluble in water (1080 g/L at 20 °C)
- Density: 1.32 g/cm³
- pH (10% solution): 7.2 – 7.5
- Flash Point: Not applicable
- Flammability: Non-flammable

Section 10: Stability and Reactivity

- **Stability:** Stable under normal storage and handling conditions.
- **Conditions to Avoid:** Excessive heat, moisture.
- **Incompatible Materials:** Strong oxidizers, nitric acid, hypochlorites.
- **Hazardous Decomposition Products:** Ammonia, CO₂, isocyanic acid.



Section 11: Toxicological Information

- **Acute Toxicity:** LD50 (oral, rat) = 14,300 mg/kg (low toxicity).
- **Skin/Eye Irritation:** Mild transient irritation possible.
- **Carcinogenicity/Mutagenicity:** Not classified.
- **Repeated Exposure:** High doses may cause kidney effects in animals.

Section 12: Ecological Information

- **Aquatic Toxicity:** Low toxicity to aquatic life.
- **Persistence/Degradability:** Readily biodegradable.
- **Bioaccumulative Potential:** Low.
- **Environmental Effects:** May contribute to eutrophication in waterways.

Section 13: Disposal Considerations

- Dispose of in accordance with local regulations.
- Product can often be used as fertilizer to avoid waste.
- Do not discharge large amounts into sewers or waterways.

Section 14: Transport Information

- **UN Number:** Not regulated.



- **ADR/RID (Road/Rail):** Not classified as dangerous goods.
- **IMDG (Sea):** Not classified as dangerous goods.
- **IATA (Air):** Not classified as dangerous goods.
- **Special Precautions:** Protect from moisture during transport.

Section 15: Regulatory Information

- Not classified as hazardous under GHS, EU REACH, or OSHA standards.
- Complies with fertilizer regulations in major markets.

Section 16: Other Information

This MSDS is intended to provide guidance on safe handling, storage, and use of the product. It is not a guarantee of product specifications.

Prepared by: Basekim Kimyasal Ürünler LTD – Safety & Compliance Department