

Safety Data Sheet

Section 1. Product and Company Identification

Product Name Urea

Product Number 327100

CAS-No. 57-13-6

Material Uses Laboratory chemicals, Manufacture of substances

Company OI Analytical, P.O. Box 9010, College Station, TX 77842, Phone: (979) 690-1711, Fax: (979) 690-0440

Emergency No. 1-800-424-9300 (Chemtrec). Use only in the event of chemical emergencies involving spills, leaks, fire, exposure, or accidents involving chemicals.

Section 2. Hazards Identification

Classification of the substance or mixture

Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

Section 3. Composition/Information on Ingredients

Substances

Synonyms	: Carbamide : Carbonyldiamide
Formula	: CH ₄ N ₂ O
Molecular weight	: 60.06 g/mol
CAS-No.	: 57-13-6
EC-No.	: 200-315-5
Registration number	: 01-2119463277-33-XXXX

Hazardous Components	Classification	Concentration
Urea		<=100 %

Section 4. First Aid Measures

Description of first aid measures

If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration.
In case of skin contact	Wash off with soap and plenty of water.
In case of eye contact	Flush eyes with water as a precaution.
If swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water.

MOST IMPORTANT SYMPTOMS/EFFECTS, BOTH ACUTE AND DELAYED

The most important known symptoms and effects are described in the labeling (see section 2 and/or in section 11).

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

No data available

Section 5. Fire-fighting Measures

Extenquishing Media

Suitable extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special hazards arising from the substance or mixture	Carbon oxides, Nitrogen oxides (NO _x)
Advise for firefighters	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	No data available

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapours, mist or gas. For personal protection see section 8.

Environmental precautions

No special environmental precautions required.

Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

Section 7. Handling and Storage

Precautions for safe handling

Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.
Storage class (TRGS 510): Non Combustible Solids

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated.

Section 8. Exposure Controls/Personal Protection

Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Urea	57-13-6	TWA	10.000000 mg/m3	USA. Workplace Environmental Exposure Levels (WEEL)

Exposure Controls

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Data Source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de Test Method: EN 374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of Environmental exposure

No special environmental precautions required.

Section 9. Physical and Chemical Properties

Appearance

Form Solid
Color White

Odor No data available

Odor Threshold No data available

pH 7.5 - 9.5 at 480 g/l at 25 °C (77 °F)

Melting point/freezing point Melting point/range: 132-135 °C (270 - 275 °F) - lit.

Initial boiling point and boiling range No data available

Flash point No data available

Evaporation rate No data available

Flammability (solid, gas) No data available

Upper/lower flammability or explosive limits No data available

Vapor pressure 0.009 hPa (0.007 mmHg) at 20 °C (68 °F)

Vapor density	No data available
Relative density	1.335 g/mL at 25 °C (77 °F)
Water solubility	480 g/l at 20 °C (68 °F) - completely soluble
Partition coefficient: n-octanol/water	log Pow: -2.59 - -1.59
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Other safety information	
Bulk density	700-800 kg/m ³ at 20 °C (68 °F)

Section 10. Stability and Reactivity

Reactivity	No data available
Chemical stability	Stable under recommended storage conditions
Possibility of hazardous reactions	No data available
Conditions to avoid	No data available
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	Other decomposition products - No data available In the event of fire: see section 5

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity Inhalation: Dermal:	LD50 Oral - Rat - 8,471 mg/kg No data available No data available
Skin corrosion/irritation Skin Result	Rabbit No skin irritation
Serious eye damage/eye irritation Eyes Result	Rabbit No eye irritation
Respiratory or skin sensitisation	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	
IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available

Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
Additional Information	RTECS: YR6250000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12. Ecological Information

Toxicity

Toxicity to fish	LC50 - Poecilia reticulata (guppy) - 17,500 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 3.910 mg/l - 48 h

Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Other adverse effects	No data available

Section 13. Disposal Considerations

Waste Treatment Methods

Product	Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging	Dispose of as unused product.

Section 14. Transport Information

DOT (US)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

Section 15. Regulatory Information

SARA 302 Components	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards	No SARA Hazards
State Regulations	
Massachusetts Right to Know Components	No components are subject to the Massachusetts Right to Know Act
Pennsylvania Right to Know Components	Urea CAS-No. 57-13-6 Revision Date
New Jersey Right to Know Components	Urea CAS-No. 57-13-6 Revision Date
California Prop. 65 Components	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16. Other Information

HMIS Rating

Health hazard:	0
Chronic Health Hazard	
Flammability	0
Physical Hazard	0

NFPA Rating

Health hazard:	0
Fire hazard:	0
Reactivity Hazard:	0

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