

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Chemical type : Substance
Substance name : Urea
EC no : 200-315-5
CAS No. : 57-13-6
REACH registration No. : 01-2119463277-33
IUPAC name : Urea
Formula : CH₄N₂O

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/preparation : Anti-freezing agents
Fertilizers
Food/feedstuff additives
Intermediate
pH-regulating agents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer:

Joint-stock company "Kuibyshev Azot"
6, Novozavodskaya, Toliatti, Samara Region
445007 - Russia
T +7 (8482) 561101, 561301 - F +7 (8482) 561301
E-mail: office@kuazot.ru
<http://www.kuazot.ru/>

Only representative:

ITS Testing Services (UK) Ltd
Caleb Brett House
734 London Road
RM20 3NL - West Thurrock, Grays
Essex, United Kingdom
T +44(0)161 228 0111 - F +44(0)161 933 4001
E-mail: ies14.reach@intertek.com

1.4. Emergency telephone number

Emergency number : +7 (8482) 561101

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Urea	(CAS No.) 57-13-6 (EC no) 200-315-5 (REACH-no) 01-2119463277-33	100	Not classified

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Urea	(CAS No.) 57-13-6 (EC no) 200-315-5 (REACH-no) 01-2119463277-33	100	Not classified

Full text of R-, H- and EUH-phrases: see section 16.

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Move to fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.
First-aid measures after skin contact	: Rinse immediately with plenty of water (for at least 15 minutes). Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. If skin irritation persists, seek medical attention.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Seek medical advice.
First-aid measures after ingestion	: Rinse mouth thoroughly with water. If the person is fully conscious, make him/her drink water. Never give an unconscious person anything to drink. If swallowed, do NOT induce vomiting. If exposure symptoms persist, seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:	: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: None known.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	: Use self-contained breathing apparatus when in close proximity to fire.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Wear suitable protective clothing and eye/face protection.
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6.1.1. For non-emergency personnel

Protective equipment	: Refer to section 8.
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6.1.2. For emergency responders

Protective equipment	: Refer to section 8.
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6.2. Environmental precautions

Prevent contamination of soil, drains and surface waters. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Sweep or shovel spills into appropriate container for disposal.
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6.4. Reference to other sections

Refer to sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Avoid contact with eyes. avoid breathing dust. Avoid repeated or prolonged skin contact. Wear suitable protective clothing.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Always wash hands and face immediately after handling this product, and once again before leaving the workplace. Avoid contact with skin and eyes. Remove all contaminated clothing and footwear. Wash contaminated clothing prior to re-use.

7.2. Conditions for safe storage, including any incompatibilities

No additional information available

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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupation exposure limits: No data available.

Biological exposure limits: no data available

DNEL/PNEC

DNEL/DMEL			Exposure routes	Exposure frequency	Critical component	Remark
Worker		Consumer				
Industry	Professional					
N/A	N/A	42 mg/kg bw/day	Oral	Short term (acute)	N/A	None
N/A	N/A	42 mg/kg bw/day		Long term (repeated)		
580 mg/kg bw/day	N/A	580 mg/kg bw/day	Dermal	Short term (acute)		
580 mg/kg bw/day	N/A	580 mg/kg bw/day		Long term (repeated)		
292 mg/m ³	N/A	125 mg/m ³	Inhalation	Short term (acute)		
292 mg/m ³	N/A	125 mg/m ³		Long term (repeated)		

PNEC aqua (freshwater): 0.047 mg/L

PNEC aqua (marine water): 0.047mg/L

PNEC aqua (intermittent releases): no data available

PNEC for sewage treatment plant: no data available

PNEC sediment: no data available

PNEC soil: no data available

PNEC oral (secondary poisoning): no data available

8.2. Exposure controls

Appropriate engineering controls	: Ensure adequate ventilation.
Hand protection	: protective gloves.
Eye protection	: tightly fitting safety goggles.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Wear suitable respiratory equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: crystalline.
Molecular mass	: 60.06 g/mol
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Melting point	: 134 °C
Solidification point	: Not applicable
Boiling point	: Decomposes before boiling
Flash point	: Not applicable
Relat. evapor. rate comp. to butylacetate	: No data available
Flammability (solid, gas)	: Non flammable.
Explosive limits	: No data available
Vapour pressure	: 0.002 Pa Approximate (@ 25°C)
Relative vapour density at 20 °C	: No data available
Relative density	: 1.33 g/cm ³ at 20 °C
Solubility	: Water: 624 g/l at 20 °C

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Log Pow	: 1.73 (at 20 °C)
Self ignition temperature	: No self ignition
Decomposition temperature	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosive properties	: Non explosive.
Oxidising properties	: Non oxidizing.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Urea (57-13-6)	
LD50 oral rat	14300 mg/kg
Skin corrosion/irritation	: Not irritating
Serious eye damage/irritation	: Not irritating
Respiratory or skin sensitisation	: Not sensitizing
Germ cell mutagenicity	: Negative
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Urea (57-13-6)	
LOAEL (developmental toxicity, oral, rat)	500 mg/kg bodyweight/day
NOAEL (oral, rat, 12 months)	2250 mg/kg bodyweight/day
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Urea (57-13-6)	
LC50 fish	6810 mg/l (96 hours)
EC50 Daphnia	> 10000 mg/l 24 hours
EC10/LC10 or NOEC for freshwater algae	47 mg/L 192 hour

12.2. Persistence and degradability

Urea (57-13-6)	
Persistence and degradability	Readily biodegradable.
Hydrolysis	Urea is stable in aqueous solution.

12.3. Bioaccumulative potential

Urea (57-13-6)	
Log Pow	1.73 (at 20 °C)

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Urea (57-13-6)	
Bioaccumulative Potential	not bioaccumulative.

12.4. Mobility in soil

Urea (57-13-6)	
Ecology - soil	Biodegradable.
	The main mode of urea degradation is enzymatic mineralization.
	Urea adsorption by the soil was found to increase with increasing concentration of added urea-N and adsorption coefficients ranged from 0.037 to 0.064.

12.5. Results of PBT and vPvB assessment

Urea (57-13-6)	
Results of PBT assessment	Urea is neither a PBT nor a vPvB substance

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Sewage disposal recommendations : Prevent entry to sewers and public waters.
- Waste disposal recommendations : Do not remove as household garbage. Recycle product or dispose properly. Comply with applicable local, national and international regulation.

SECTION 14: Transport information

Not a dangerous good in sense of transport regulations.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No additional information available

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

- Sources of Key data : CSR - Chemical Safety Report.
- Abbreviations and acronyms : ACGIH (American Conference of Government Industrial Hygienists). ASTM - American Society for Testing and Materials . CAS - Chemical Abstracts Service. CAS (Chemical Abstracts Service) number. CLP - Classification, Labelling and Packaging. CSR - Chemical Safety Report. DIN - Deutsches Institut für Normung eV (German Institute for Standardization). EC - European Community. EEC - European Economic Community. FRP: fiberglass-reinforced plastics. GESTIS: Gefahrstoffdaten banken (Database on hazardous substances). GHS - Globally Harmonised System. GPPS: general purpose polystyrenes. HCS - Hazard Communication Standard. HIPS: high impact polystyrenes. HMIS - Hazardous Materials Identification System. IARC (International Agency for Research on Cancer). MSDS - Material Safety Data Sheet. OSHA - Occupational Safety and Health Administration. Overland transport (ADR). PVA (Polyvinyl alcohol). PVC (Polyvinyl chloride). REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals. SDS - Safety Data Sheet . UP: Unsaturated polyester. VCI - volatile corrosion inhibitor. VE: epoxy vinyl ester.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.