

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product Identifier:

Trade Name: Urea
EC Number: 200-315-5
REACH Registration No.: 01-2119463277-33-XXXX
CAS Number: 57-13-6
HMRC Tariff No.: 310210100

Relevant identified uses of the substance or mixture and uses advised against:

Identified use(s): Industrial distribution. Industrial USE to formulate chemical product mixtures. Industrial Use for flue gas NOx and SOx reduction. Industrial USE as chemical intermediate. Industrial USE as reactive agent/processing aid and for general chemical applications (e.g. organic/inorganic synthesis, corrosion protection, latex production, extraction, plastics, water treatment/septicity control, pH/neutralising agent, ion exchange). Industrial USE as chemical/process nutrient (e.g. Pharmaceuticals, food, biofuel). Industrial USE for surface/article treatment (e.g. metal, leather/textiles, plastics, wood, electronics/semiconductors, insulation, hardening, etchant). Industrial USE to manufacture specialist chemical/other products (e.g. adhesives, biocides, catalysts, cleaning products, cosmetics, coatings/paints, construction chemicals, corrosion protection, insulation, inks, pharmaceuticals, polymer preparations) Industrial USE as part of specialist chemicals/other products (e.g. adhesives, biocides, catalysts, cleaning products, corrosion protection, cosmetics, coatings/paints, de-icing/antifreeze, insulation, inks, dyes, photochemical, polymer preparations). Professional formulation of mixtures. Professional USE as chemical/process nutrient (e.g. fertiliser, pharmaceuticals, food). Professional USE as reactive agent/processing aid and for general chemical applications (e.g. corrosion protection products, pH/neutralising agent, processing of manure as fertiliser, water treatment). Professional USE as a laboratory/research chemical. Professional USE for surface/article treatment (e.g. metal, textiles/leather, plastics, wood, etching concrete). Professional USE as part of specialist chemicals/other products (e.g. adhesives, biocides, cleaning products, corrosion protection, cosmetics, coatings/paints, de-icing/antifreeze, inks/dyes, insulation, photochemical, polymer preparations). Industrial USE in manufacture of paper products. Industrial USE as a laboratory/research chemical. Professional distribution.

Uses advised against: No information provided by supplier.

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Company name: Nexchem Ltd
Unit 3 Barshaw Park
Leycroft Road
Leicester
LE4 1ET
Tel: 0116 2311130
24/7 Emergency Tel: 0800 246 1274
Email: sales@nexchem.co.uk

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Regulation 1272/2008 (CLP): Not classified

EEC Directive 67/548/EEC: Not classified.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

Label elements:

Signal word: No signal word

Precautionary statement(s):

Supplemental label elements: Not applicable

EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles: Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings: Not applicable

Tactile warning of danger: Not applicable

Other hazards:

Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII: Not applicable

Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII: Not applicable

Other hazards which do not result in classification: Product forms slippery surface when combined with water.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances: Mono-constituent substance

Product/ingredient name: Urea

Reach registration number: 01-2119463277-33-xxxx

CAS Number: 57-13-6

EC Number: 200-315-5

%: >=90 - <100

Classification 67/548/EEC: Not classified

Regulation EC 1272/2008: Not classified

Type: A (constituent)

[cont...]

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4. FIRST AID MEASURES

Description of first aid measures:

Inhalation:	Avoid breathing dust. If inhaled, remove to fresh air.
Skin contact:	Avoid prolonged or repeated contact with skin. After handling, always wash hands thoroughly with soap and water. Get medical attention if irritation develops.
Eye contact:	In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if irritation occurs.
Ingestion:	If large quantities of this material are swallowed, call a physician immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Protection of first aiders:	No action shall be taken involving any personal risk or without suitable training.

Most important symptoms and effects, both acute and delayed:

Inhalation:	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion:	No known significant effects or critical hazards.
Skin contact:	No known significant effects or critical hazards.
Eye contact:	No known significant effects or critical hazards.

Indication of any immediate medical attention and special treatment needed:

Notes to physician:	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatment:	No specific treatment.

5. FIRE-FIGHTING MEASURES

Extinguishing Media:	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media:	None identified.

Special hazards arising from the substance or mixture:

Hazardous combustion products: No specific fire or explosion hazard.

Hazardous thermal decomposition products: Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides and ammonia.

Advice for fire-fighters:

Special precautions for fire fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

- For non-emergency personnel:** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
- For emergency responders:** If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions:** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up:

- Small spill:** Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Material free from contamination can be used for its original purpose.
- Large spill:** Immediately contact emergency personnel. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Material free from contamination can be used for its original purpose.

- Reference to other sections:** See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

7. HANDLING AND STORAGE

Precautions for safe handling:

- Protective measures:** Put on appropriate personal protective equipment (see Section 8). Product forms slippery surface when combined with water.
- Advice on general occupational hygiene:** Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities:

- Recommendations:** Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully.
- Specific end use(s):** Not available.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Control Parameters:**

Occupational exposure limits: No exposure limit value known.

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

DNELs/DMELs:

DNEL, Short term Dermal, 580 mg/kg bw/day, Workers, Systemic

DNEL, Short term inhalation, 292 mg/m³, Workers, Systemic

DNEL, Long term Dermal, 580 mg/kg bw/day, Workers, Systemic

DNEL, Long term Inhalation, 292 mg/m³, Workers, Systemic

PNECs:

PNEC, Fresh water, 0.047 mg/l, Assessment factors

PNEC, Salt water, 0.047 mg/l

Exposure controls:

Appropriate engineering controls: No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Respiratory equipment:

Use a properly fitted, air-purifying or air-fed respirator. Complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hand/body protection:

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye/face protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Hygiene Measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

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Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance:	Solid
Colour:	White
Odour:	Odourless
Water Solubility:	>100 g/l
Melting point (°C):	134°C
pH:	7.2 (Conc. (% w/w): 100 g/l)
Solubility (ies):	Easily soluble in the following materials: cold water
Flammability (solid, gas):	Non-flammable
Vapour pressure:	0.000016 hPa @20°C
Density:	1.33 g/cm ³
Flash point:	Not determined
Auto ignition temperature:	Not determined
Partition co-efficient (n-Octanol/water):	Not determined

10. STABILITY AND REACTIVITY

Reactivity:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability:	Stable under recommended storage and handling conditions (see section 7).
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	No specific data.
Incompatible materials:	Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen Trichloride. Acids, alkalis, nitrites and nitrates.
Hazardous decomposition products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity:	LD50 Oral, Rat, 14,300 mg/kg, OECD 401, IUCLID 5. No known significant effects or critical hazards
Irritation/corrosion:	No known significant effects or critical hazards
Sensitisation:	No known significant effects or critical hazards
Mutagenicity:	No known significant effects or critical hazards.
Carcinogenicity:	Negative-Oral-NOAEL, Rat, 2250 mg/kg, 7 days per week, IUCLID 5 No known significant effects or critical hazards.

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Reproductive toxicity:	Negative, Rat, Oral: 500 mg/kg, 7 days per week, IUCLID 5 No known significant effects or critical hazards.
Teratogenicity:	No known significant effects or critical hazards.
Inhalation:	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion:	No specific data.
Skin contact:	No specific data.
Eye contact:	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure Short term exposure:

No known significant effects or critical hazards

Potential chronic health effects: Chronic-NOAEL Oral, Rat, 2250 mg/kg, 12 months 7 days per week, IUCLID 5 No known significant effects or critical hazards

Toxicokinetic:

Absorption:	Rapidly absorbed.
Distribution:	Not metabolized within liver tissues before entering the systemic circulation.
Metabolism:	Metabolite is not known to be toxic.
Elimination:	The chemical and its metabolites are fully excreted and do not accumulate within the body.

12. ECOLOGICAL INFORMATION

Toxicity: Acute LC50 6, 810 mg/l, fresh water, fish-fish, 96h, IUCLID 5
Acute EC50, 10,000 mg/l, Fresh water, Aquatic invertebrates. Water flea, 24h, IUCLID 5
Acute NOEC 47 mg/l, Fresh water, Aquatic plants-Algae, 192h, IUCLID 5
No known significant effects or critical hazards

Persistence and degradability: 96% - 16d, activated sludge
No known significant effects or critical hazards

Bio accumulative potential:

LogPow: 1.73-2.11-1.73 low
No known significant effects or critical hazards

Mobility in soil:

Soil/water partition coefficient: Not available
Mobility: This product may move with surface or groundwater

Results of PBT and vPvB assessment: Not classified as PBT/vPvB by current EU criteria

Other adverse effects: No known significant effects or critical hazards.

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13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Methods of disposal:

The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Hazardous waste:

Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

European waste catalogue (EWC): 06 10 99 – wastes not otherwise specified.

Packaging:

Methods of Disposal:

The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions:

This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

15. REGULATORY INFORMATION

EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV - List of substances subject to authorization Substances of very high concern: Not applicable.

Other EU regulations: Europe inventory: All components are listed or exempted.

Seveso II Directive: This product is not controlled under the Seveso II Directive.

National regulations: To our knowledge no other country or state specific regulations are applicable.

Chemical safety assessment: A chemical safety assessment has been carried out.

Note: The regulatory information given above only indicates the principal regulations specifically Applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Source of key data used to compile the data sheet: Supplier information

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Abbreviations and acronyms:

ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
DMEL = Derived Minimal Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
PBT = Persistent, Bioaccumulative and Toxic
vPvB = Very Persistent and Very Bioaccumulative bw = Body weight

Legal disclaimer:

The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.