

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

Product identifier:

Identification as on the label/Trade name: **DYNAMO UREA**

Additional information: DYU SG/02

Relevant identification uses of the substance and uses advised against:

Identified uses: Fertilizer.

Uses advised against: Use only as directed.

Details of the supplier of the Safety Data Sheet:

NULANDIS, A Division of AECI Limited
14 Field Road, LILANTON

Emergency telephone numbers:

Griffon Poison information centre: 082 446 8946
Poisons Information Helpline: 0861 555 777
Nulandis: (011) 823 8000 (o/h) Spill Tech: 086 100 0366 (a/h)

SECTION 2. HAZARD IDENTIFICATION

Classification of the substances or mixture

The mixture is classified according to

SANS 10234:2008, Regulation EC 1272/2008 [EU-GHS/CLP]	
Hazard classes/Hazard categories	Hazard statement
Not required	Not required

For full text of H statements see section 16

The most important adverse effects

The most important adverse physiochemical effects: None.

The most important adverse human health effects: None.

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Label elements

Hazard pictograms:

Signal Word: None required.

Hazard Statements: None required.

Precautionary Statements: P270 Do not eat, drink or smoke when using this product.

Special labelling of certain mixtures: None

Other hazards: None.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Substance

Ingredients:

Substance name (IUPAC/EC)	CAS –No.	Concentration % by weight	Classification
	EC-No.		EC1272/2008
Urea	57-13-6	90-100%	Not classified.
	200-315-5		

For full text of H statements see section 16

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4. FIRST AID MEASURES

Description of first aid measures:

In case of inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if you feel unwell.

In case of skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation persists.

In case of eye contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation persists.

In case of ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if you feel unwell or are concerned.

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.

Ingestions: 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.

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Indication of any immediate medical attention and special treatment needed:

Treat symptomatically.

Note to Physician:

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 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.

Protection of first-aiders:

No action shall be taken involving any personal risk or without suitable training.

SECTION 5. FIRE -FIGHTING MEASURE**Extinguisher media:****Suitable extinguisher media:****SMALL FIRE:** Use an extinguisher suitable for surrounding fire, carbon dioxide, dry powder or alcohol resistant foam.**LARGE FIRE:** Use alcohol foam, water spray or fog.**Unsuitable extinguishing media:** Water jets and high- pressure water spray.**Special hazards arising from the mixture:**

No specific fire or explosive hazard.

Advice 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.

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Be sure to use an approved/certified respirator or equivalent.

SECTION 6. ACCIDENTAL RELEASE**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 specialized 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).

For small spills Contain spilled material if possible. Collect in suitable and properly labelled containers. Absorb with materials such as: sand, earth, vermiculite or diatomaceous earth. Dispose of via a licensed waste disposal contractor.

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For large spills 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. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Reference to other sections:

See section 7 for information on safe handling.

See section 8 for information on personal protection equipment.

See section 13 for information on disposal.

Additional information: None.**SECTION 7. HANDLING AND STORAGE****Precautions for safe handling:**

Avoid breathing dust, avoid contact with skin and eyes. 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.

Protective measures: Observe directions on label and instructions for use.**Advice on general occupational hygiene:** Do not eat drink or smoke when handling this product.**Conditions for safe storage, including incompatibilities:**

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 resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Specific end uses:

Use as directed. Use original container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters:****Occupational exposure limits (OEL):** None**Biological exposure indices (BEI):** None**Additional exposure limits under the conditions of use:** None**Exposure control:**

Appropriate engineering controls: Use local exhaust ventilation, or other engineering controls to maintain dust, if available maintain airborne levels below exposure limit requirements or guidelines.

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. Ensure that eyewash stations and safety showers are close to the workstation location.

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Eye/face protection: Use safety glasses. If there is a potential for exposure to dust which could cause eye discomfort, wear chemical goggles.

Hand protection: Use chemical resistant gloves. Examples of preferred glove barrier materials include Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, Polyvinyl alcohol, Polyvinyl chloride.

Body protection: Wear appropriate clothing for task or operation. Keep working clothes separately.

Respiratory protection: Dust mask may be required in high dust areas. Use a properly fitted, particulate filter 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.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance (form): Solid prills.

Colour: Black.

Odour: Odourless.

Odour threshold: Not determined.

pH: 9.5 (10% solution)

Melting point/range (°C): 132.7°C.

Boiling point/range (°C): Not determined.

Flash point (°C): No information available.

Evaporation rate: No information available.

Flammability (solid, gas): Not flammable.

Ignition temperature (°C): No information available.

Upper/lower flammability/explosive limits: No information available.

Vapour pressure (20°C): No information available.

Vapour density: No information available.

Relative density (20°C): Not determined.

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Specific gravity: 132 at 20°C.

Water solubility (g/l) at 20°C: Completely miscible.

n-Octanol/Water partition coefficient: No information available.

Auto-ignition temperature: No information available.

Decomposition temperature: No information available.

Viscosity, dynamic (mPa s): No information available.

Physical hazards:

Explosive properties: No information available.

Other information:

Fat solubility (solvent-oil to be specified): No information available.

Bulk density: No information available.

Dissociation constant in water (p Ka): No information available.

Oxidation-reduction potential: No information available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity:

The product is stable under normal conditions.

Chemical stability:

The product is stable.

Possibility of hazardous reactions:

Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid:

Avoid contamination by any source including metals, dust and organic materials.

Incompatible materials:

Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride. Acids, alkalis, nitrates and nitrites.

Hazardous decomposition products:

Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides ammonia Avoid breathing dusts, vapours or fumes from burning materials. In case of inhalation of decomposition products in a fire, symptoms may be delayed.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicokinetics, metabolism and distribution:

Non-human toxicological data: No Information available.

Method: No information available

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Dosage: No information available

Routes of administration: No information available

Results: No information available

Absorption: No information available

Distribution: No information available

Metabolism: No information available

Excretion: No information available

Information on toxicological effects:

Acute toxicity:

Urea

Acute toxicity oral LD₅₀ for rat 14 300 mg/kg.

Chronic toxicity:

Urea

NOAEL for rat dose 2 250 mg/kg 12 months 7 days per week.

Skin corrosion/irritation:

Urea

No known significant effects or critical hazards.

Serious eye damage/irritation:

Urea

No known significant effects or critical hazards.

Respiratory or skin sensitization:

Urea

No known significant effects or critical hazards.

Germ cell mutagenicity:

Urea

No known significant effects or critical hazards.

Carcinogenicity:

Urea

Negative oral NOAEL for rat dose 2 250 mg/kg.

Reproductive toxicity:

Urea

Negative for rat dose oral 500 mg/kg 7 days per week.

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STOT-single exposure:

Urea

No known significant effects or critical hazards.

Aspiration hazard:

Urea

No known significant effects or critical hazards.

Other information: No information available.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity:

Urea

Fish: Acute LC₅₀ (96 h) for fresh water fish 6 810 mg/L.

Daphnia: Acute EC₅₀ (24 h) for water flea 10 000 mg/ℓ

Algae: Chronic NOEL (192 h) for algae 47 mg/ℓ

Persistence and degradability:

Urea

302B Inherent Biodegradability: Zahn-Wellens/EMPA Test, 96% inherently biodegradable 16 days activated sludge.

Bioaccumulative potential:

Urea

Log Pow 1.73, BCF not applicable potential is low.

Mobility in soil

Urea

This product may move with surface or groundwater flows because its water solubility is: high

Results of PBT& vPvB assessment:

No information available.

Other adverse effects:

No information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Treat as hazardous waste and dispose of in accordance with municipal, provincial and national regulations.

Product/ packaging disposal:

Treat as hazardous waste and dispose of in accordance with municipal, provincial and national regulations.

SECTION 14. TRANSPORT INFORMATION

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number	Not required.	Not required.	Not required.

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UN Proper shipping name:	Not required.	Not required.	Not required.
Transport hazard class:	Not required.	Not required.	Not required.
Packaging group:	Not required.	Not required.	Not required.
Marine pollutant:	No	No	No
Special precautions for user:	Transport within user's premises: Ensure that persons transporting the product know what to do in the event of an accident or spillage.	Transport within user's premises: Ensure that persons transporting the product know what to do in the event of an accident or spillage.	Transport within user's premises: Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Transport in bulk according to MARPOL 73/78 Annex II and the IBC code	Not applicable	Not applicable	Not applicable

Inland waterways: None

Emergency response information: None.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation for the mixture:

Relevant information regarding authorization: Occupational Health and Safety Act 1993 Regulation for Hazardous Chemical Substances.

ACGIH: American Conference of Governmental Industrial Hygienists (ACGIH)

Relevant information regarding restrictions:

EU regulations: Regulation EC 1272/2008 [EU-GHS/CLP]

Other National regulations: National Road Traffic Act, 1996 (ACT NO. 93 of 1996). SANS 10228:2012- The identification and classification of dangerous goods for transport by road and rail modes. National Environmental Management: Waste Act 59 of 2008.

Chemical Safety Assessment carried out? No

SECTION 16. OTHER INFORMATION

Indication of changes:

Name change.

Relevant classification and H statements (number and full text):

None.

Training instructions:

Use as indicated on the label, special training may be required for application.

Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

Notice to readers:

Employers should use this information only as a supplement to other information gathered by them and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees.

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This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.