Rutec Pty Ltd

ABN 91 002 846 988

Material Safety Data Sheet

1/7/2021

PRODUCT NAME N26

1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name	Rutec Pty Ltd
Address	23 Hargrave St, Tamworth NSW 2340
Telephone	07 3385 6222
Fax	07 3385 6333
Emergency Contacts	0428 667 633 0418 667 633
Website	www.rutec.com
Poison Information Centre	13 11 26
Synonym(s)	Aqueous solution of urea
Use(s)	Fertilizer

2 HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO WORKSAFE AUSTRALIA

2.1 GHS CLASSIFICATION Serious eye damage/ Eye irritation: Category 2A

2.2 LABEL ELEMENTS

Signal word **WARNING**

Hazard statements

H319	Causes serious eye irritation

Prevention statements

P264	Wash thoroughly after handling
P280	Wear protective gloves/protective clothing/ eye protection/ face protection

Response statements

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	if eye irritation persists: Get medical advice/attention.

Storage statements

None allocated

Disposal statements

None allocated

2.3 Other hazards

No information provided

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

3 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS Number	EC Number	Content
Water	7732-18-5	231-791-2	50-60%
Urea	57-13-6	200-315-5	40-50%

4 FIRST AID MEASURES

Eye Hold eyelids apart and flush continuously with water. Continue for at least 15 minutes or until advised to stop by the Poisons Information Centre or a doctor.

Inhalation Inhalation may cause nausea, headache, pain and gastrointestinal irritation.

Skin Flush immediately and thoroughly with water. If irritation persists, seek medical attention.

Ingestion If conscious, immediately give large quantity of water but do not induce vomiting. Consult a doctor promptly. For advice contact the Poisons Information Centre on 13 11 26 (Australia wide) or a doctor.

First Aid facilities Eye wash facilities should be available

5 FIRE FIGHTING MEASURES

Extinguishing Fire & Explosion Use an extinguishing agent suitable for the surrounding fire.

Special Fire Fighting Procedures Wear protective clothing, respirator and goggles while fighting fire. Isolate combustible materials. Isolate area of fire.

Flammability Not flammable.

Hazchem Code None allocated

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of this SDS.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Exercise caution as the spill site may be slippery. Stop leak if possible to do so without risk to prevent further discharge.

Pump liquid from bunds into undamaged storage tanks and containers. Rinse concrete areas afterwards and collect rinse water for disposal. Do not allow rinse water to enter bores, sewers, stormwater drains and watercourses.

If the area is not bunded and the leak can not be stopped and/or liquid is flowing from site, construct a dam or earthen bund to prevent liquid product entering stormwater drains or watercourses. Pump up spilled liquid.

Use absorbent inert material, e.e. sand, soil or sawdust, to soak up residual liquid. Scrape or sweep into piles and cover with a water-proof tarpaulin or place in appropriate labelled containers awaiting disposal.

Plant growth in heavily contaminated soil may be adversely affected due to the over-application of nutrients. Regrowth may not occur for an extended period of time. run-off or the leaching fo nutrients from the contaminated area may contaminate surface and groundwater. In sensitive ecosystems it may be advisable to scrape up and remove contaminated topsoil.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use, read the product label. including sections on "Safety Directions" and "Care of Equipment". Keep out of reach of children. Use safe work practices and observe good personal hygiene. Avoid contact with eyes, skin and clothing. If mists are generated, ensure area is ventilated and mist inhalation is avoided. See Section 8 for details on PPR. Wash hanks before eating.

This product when stored in a confined, unventilated space/hold can give off ammonia or other odour and lead to the depletion of oxygen within this space and other confined spaces. It is therefore essential that ventilation is carried out prior to entry to all ship holds.

Intermediate Bulk Containers (IBCs) should be stored under cover, away from direct sunlight. Storing IBCs under cover in a building rather than in the open reduces the risk of salting out at low temperatures, i.e. during winter. It also helps keep the containers cooler during the heat of the day.the life of IBCs in extended when they are not exposed to direct sunlight. Keep containers closed to minimise evolution of ammonia from the fertiliser solution.

Do not allow pumps to run dry and overheat. Pumps should be flushed with water after use. If left standing, formed ammonium nitrate crystals can score shafts of pumps.

Bunding of liquid storage areas is not a legal requirement as this product is not a Dangerous Good or a Hazardous Substance. It does, however, have the potential to cause environmental harm if lost to waterways (surface or groundwater). See Section 12 on "Ecological Information". Bunding of large storage tanks and storage areas in close proximity to drains and watercourses is recommended.

Check regularly for leaks or spills.

7.2 Conditions for safe storage, including any incompatibilities

TANKS: The corrosiveness of all solutions that may be kept in the tank must be considered. Stainless steel, high-density polyethylene (HDPE) or fibreglass tanks are recommended. Aluminium tanks may be used. If mild steel tanks are used for long term storage, it is recommended that an epoxy or polyurethane coating be applied internally and to other surfaces that may come in contact with the fertiliser. Galvanised or concrete tanks are not suitable. corrugated iron tanks can be used only if a PVC liner is installed. Tanks must be suitably rated to account for the Specific Gravity of the products to b stored. Standard polyethylene water tanks are not recommended.

FITTINGS: Fittings and couplings used with mild steel tanks should be compatible with mild steel or galvanic corrosion may occur. The use of stainless threaded fittings and couplings if recommended. If aluminium storage is used, then all fittings, piping and pump should be aluminium. Stainless steel or HDPE fittings are the only other materials that can be used in conjunction with the aluminium. HDPE piping and screw type fittings are acceptable for mast tanks.

PUMPS: Carbon steel, cast iron, aluminium or stainless steels (300 series) are recommended materials for pumps. Centrifugal and most positive displacement pumps are suitable, as are self-priming plastic pumps. Viton seals are preferred for pumps.

HOSES: Polythene or PVC hosing is preferred because of flexibility and lack of corrosion. Hoses should be of the correct grade or rating to handle the product at the pump pressures. Copper, brass or zinc materials and their alloys are not to be used for any tanks and/or fittings, valve and piping. See Section 10 for comments on corrosivity to metals.

Store so as to prevent contamination by or of reducing agents, acids, metals, alkalis, nitrites or organics, and away from farm chemicals, e.g. insecticides, fungicides and herbicides and foodstuffs.

7.3 Specific end use(s)

No information provided.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

No exposure standards have been entered for this product.

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls

Avoid splash and inhalation of spray mists.

PPE

The selection of Personal Protective Equipment (PPE) should be based on a Risk Assessment of the task being performed and the level of exposure. Normal work clothing will suffice when handling and applying this product, unless there is a risk of splash during transfer operations, or inhalation of mists during application.

Eye / Face: Wear splash proof goggles during transfer operations if there is a risk of splash.

Hands: Wear impervious PVC or rubber gloves during transfer operations if there is a risk of splash or direct contact with hands.

Body: Where skin contact may occur, and for individuals with sensitive skin, wear ankle length and long sleeved clothing or overalls. Wear a PVC or rubber apron and rubber boots during transfer operations if there is a risk of splash/direct contact with the skin.

Respiratory: This product has low volatility and toxicity so respiratory protection is no normally required under

normal condition of use. where light mists are generated and exposure is low, wear a dust/mist mask. If regularly exposed to spray mists, wear a Type B (Inorganic Gases and Vapours) Respirator.

Wash splashed liquid from hands and exposed skin. Remove contaminated clothing and thoroughly wash the affected area.
Wash contaminated clothing and other protective equipment before storage or reuse. Ensure all PPE conforms to the relevant Australian Standards. Read the labels on PPE.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	clear liquid	**Solubility in water**	miscible
Odour	Very slight ammoniacal odour	**Specific gravity**	1.1 approx
pH	8 approx	**% volatiles**	Not applicable
Vapour pressure	Not known	**Flammability**	not flammable
Vapour density	Not known	**Flash Point**	not applicable
Melting point	Liquid at ambient temperatures	**Upper explosion limit**	not applicable
Boiling point	unknown	**Lower explosion limit**	not applicable
Evaporation rate	no data	**Autoignition temperature**	not applicable
Bulk density	not applicable	**Decomposition temperature**	no data

10 STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization is not expected to occur.

10.4 Conditions to avoid

Cold temperatures (as constituents will salt out at temperatures below freezing), high temperatures (as ammonia gas may evolve from the fertiliser solution) and fire conditions (which may cause the fertiliser to boil, evaporate and decompose).

Residual material that crystallises following the evaporation of water from N320 contains ammonium nitrate, which may explode by detonation, heat or shock. Ensure all equipment is thoroughly rinsed after use and before undertaking any hot repair work, e.g. welding or cutting.

Do not allow pumps to run dry.

10.5 Incompatible materials

No information provided.

10.6 Hazardous decomposition products

May evolve nitrogen oxides and ammonium when heated to decomposition.

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological products

Acute toxicity	Based on available data, the classification criteria are not met.
Skin	Contact may result in irritation, redness, rash and dermatitis.
Eye	Contact may result in irritation, lacrimation, pain and redness
Sensitisation	Not classified as causing skin or respiratory sensitisation.
Mutagenicity	Not classified as a mutagen.
Carcinogenicity	Not classified as a carcinogen.
Reproductive	Not classified as a reproductive toxin.
STOT - single exposure	Over exposure to mists/vapours may result in irritation of the nose and throat, coughing, nausea and headache. High level exposure may result in drowsiness, breathing difficulties and methaemoglobinemia (blood's oxygen-carrying capacity is reduced)
STOT - repeated exposure	Not classified as causing organ damage from repeated exposure.
Aspiration	Not classified as causing aspiration.

12 ECOLOGICAL INFORMATION

12.1 Toxicity

No information provided.

12.2 Persistence and degradability

This fertiliser contains Urea and Ammonium Nitrate. Urea is a naturally occurring compound. It is transformed in the soil, firstly to ammonium, and then to nitrate. Plant roots take up nitrogen in both these forms.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

Ammonium is sorbed onto and held tightly on the surface of soil colloids (clay and organic matter). Nitrate is more mobile, and is subject to leaching, more so under heavy rainfall conditions and in sandy soils.

12.5 Other adverse effects

Avoid contaminating waterways. Nitrogen fertilisers can stimulate weed and algal growth in static surface waters. Algae affects water quality and taste. Depending on the concentration and fish species, the presence of ammonium may be toxic to aquatic life. Nitrate is more persistent in water than the ammonium ion and is typically found in higher concentrations. Nitrate concentrations in ground water may be elevated through the loss of nitrate from the soil by leaching. High nitrate concentrations may render water unsuitable for human and livestock consumption.

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal

Beneficial reuse is the preferred disposal option. Do not empty waste or rinse water into drains or allow spills to flow into or contaminate watercourses.
If the fertiliser solution has been recovered from a bund and has not been contaminated, it can be used for its intended purpose, i.e. as a nitrogen fertiliser, either in fertigation programs or through a boom-spray.

If insolubles are present, the fertiliser solution may need to be filtered before application to prevent blockages of filters and nozzles.

If contaminated with other fertilisers, the solution may still be used for it nutrient value. Ensure the application rate is appropriate and fertliliser nutrients are not applied at too high a rate as this may set back plant growth or even kill plants.

Inject into irrigation water or spray onto bare soil, either during the fallow period or as a directed spray away from the foliage in established row crops. Seek professional advice before spraying on plant foliage as fertiliser solutions can burn plant leaves.

Sand soil that has been used to soak up residual or spilt liquid can also be spread for its nutrient value as a fertiliser.

If the waste (liquid or absorbent material) has been contaminated with other harmful materials, e.g. fuel, oil or chemicals, it must be disposed of in accordance with relevant local legislation. Contact the Waste management Authority for advice.

Legislation

Dispose of in accordance with relevant local legislation.

14 TRANSPORT INFORMATION

Shipping Name Non-dangerous goods

UN No.	None allocated	**Hazchem Code**	None allocated	**Packaging Group**	None allocated
DG Class	None allocated	**Subsidiary Risk(s)**	None allocated		

15 REGULATORY INFORMATION

Poison Schedule This product is not classified using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

Hazard codes	Xi Irritant
Risk phrases	R36 Irritating to eyes
Safety phrases	S25 Avoid contact with eyes.
	S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Inventory listing(s)	Australia: AICS (Australian Inventory of Chemical Substances)
	All components are listed on AICS, or are exempt.

16 OTHER INFORMATION

This Material Safety Data Sheet conforms with Safe Work Australia Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice February 2016

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