



SDS

DJ's 404

Issuing body:

DJ's Growers Services and Supplies P/L

44 Chalk Hill Rd, McLaren Vale, SA, 5171

200 Onkaparinga Valley Rd, Woodside, SA, 5244

Current: 11/5/2022

DJ's Grower Services and Supplies

Woodside & McLaren Vale

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1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

40% NITROGEN FERTILISER SOLUTION UREA
AMMONIUM NITRATE SOLUTION with HUMIC ACID

34.0.0

Synonyms

NITROGEN FERTILISER • UAN FERTILIZER • DJ's 404

1.2 Uses and uses advised against

NIL

1.3 Details of the sub-supplier of the product

UAN Supplier name INCITEC PIVOT LIMITED

Address Level 8, 28 Freshwater Place, Southbank, Victoria, 3006, AUSTRALIA

Email ipf.customer.service@incitecpivot.com.au

1.4 Emergency telephone numbers

Emergency 1800 033 111 (All Hours)

Telephone (03) 8695 4400; 1800 009 832

Fax (03) 8695 4419

Website <http://www.incitecpivot.com.au>;

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2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

2.2 GHS Label elements

Signal word WARNING

P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Prevention statements

H319 Causes serious eye irritation.

Hazard statements

NIL

Physical Hazards

Not classified as a Physical Hazard

Health Hazards

Serious Eye Damage / Eye Irritation: Category 2A

Environmental Hazards

Not classified as an Environmental Hazard

2.1 Classification of the substance or mixture

Pale blue liquid.

2.2 Other hazards

Disposal statements

None allocated.

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Storage statements

None allocated.

Response statements

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P305 + P351 + P338

P337 + P313

If eye irritation persists: Get medical advice/attention.

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3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

<u>Ingredient</u>	<u>CAS Number EC</u>	<u>Number Content</u>
AMMONIUM NITRATE	6484-52-2 229-347-8	35 to 45%
UREA	57-13-6 200-315-5	25 to 35%
HUMIC ACID	n/a	4%
WATER	7732-18-5 231-791-2	Remainder

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4. FIRST AID MEASURES

4.1 Description of first aid measures

Eyes

If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

Inhalation

If vapours inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

Skin

If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

Ingestion

Over exposure by ingestion may result in methaemoglobinemia, where the blood's oxygen-carrying capacity is reduced.

Treat as for nitrate overexposure (methaemoglobinemia).

Treatment:

1. Give 100% oxygen.
2. In cases of (a) ingestion: use gastric lavage, (b) contamination of skin (unburnt or burnt): continue washing to remove salts.
3. Observe blood pressure and treat hypotension if necessary.
4. When methaemoglobin concentrations exceed 40% or when symptoms are present, give methylene blue 1 to 2 mg/kg body weight in a 1% solution by slow intravenous injection.

If cyanosis has not resolved within one hour a second dose of 2 mg/kg body weight may be given. The total dose should not exceed 7 mg/kg body weight as unwanted effects such as dyspnoea, chest pain, vomiting, diarrhoea, mental confusion and cyanosis may occur.

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Without treatment methaemoglobin levels of 20-30% revert to normal within 3 days.

5. Bed rest is required for methaemoglobin levels in excess of 40%.
6. Continue to monitor and give oxygen for at least two hours after treatment with methylene blue.
7. Consider transfer to centre where haemoperfusion can be performed to remove the nitrates from the blood if the condition of the patient is unstable.
8. Following inhalation of oxides of nitrogen the patient should be observed in hospital for 24 hours for delayed onset of pulmonary oedema.

Further observation for 2-3 weeks may be required to detect the onset of the inflammatory changes of bronchiolitis fibrosa obliterans.

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5. FIRE FIGHTING MEASURES

Use an extinguishing agent suitable for the surrounding fire.

5.1 Extinguishing media

Non-flammable water-based liquid.

5.2 Special hazards arising from the substance or mixture

No special requirements in liquid state. If heated to high temperatures, evaporation of the water component can result in a solid/molten residue containing ammonium nitrate.

When sensitised or during decomposition, ammonium nitrate may become unstable and/or explosive, particularly if confined and under pressure. Urea has a melting point of 133°C, ammonium nitrate 170°C. If heated beyond the melting points to decomposition, toxic gases may evolve, including ammonia, nitrogen oxides, carbon monoxide and cyanuric acid. Under such circumstances evacuate the area and contact emergency services. Remain upwind and notify those downwind of hazard. Fire fighters should wear full protective equipment including Self Contained Breathing Apparatus (SCBA).

Use waterfog to cool intact containers and nearby storage areas.

5.3 Advice for firefighters

None allocated.

5.4 Hazchem code

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6. ACCIDENTAL RELEASE MEASURES

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

6.1 Personal precautions, protective equipment and emergency procedures

Prevent product from entering drains and waterways.

6.2 Environmental precautions

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, wells, sewers, stormwater drains and watercourses.

If the area is not bunded and the leak cannot 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.g. 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. Run-off or the leaching of nutrients from the contaminated area may contaminate surface and groundwater. In sensitive ecosystems it may be advisable to scrape up and remove contaminated topsoil.

6.3 Methods of cleaning up

See Sections 8 and 13 for exposure controls and disposal.

6.4 Reference to other sections

NIL

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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 PPE. Wash hands 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 is 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 near drains and watercourses is recommended.

Check regularly for leaks or spills.

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 meet the fertiliser. Galvanised or concrete tanks are not suitable.

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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 be 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-steel threaded fittings and couplings is 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 most 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, valves and piping. See Section 10 for comments on corrosivity to metals.

Store 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.

7.2 Conditions for safe storage, including any incompatibilities

No information provided.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

No exposure standards have been entered for this product.

Biological limits

Ingredient Determinant Sampling Time BEI

1.5% of hemoglobin

During or end of shift

AMMONIUM NITRATE Methemoglobin in blood

Reference: ACGIH Biological Exposure Indices

PPE

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 the 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 not normally required under normal conditions 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 the PPE.

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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.

Avoid splash and inhalation of spray mists.

8.2 Exposure controls

NIL

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	PALE BLUE LIQUID
Odour	SLIGHT AMMONIACAL ODOUR
Flammability	NON-FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	120°C
Melting point	Liquid at ambient temperatures
Evaporation rate	NOT AVAILABLE
pH	6 to 7
Vapour density	NOT AVAILABLE
Relative density	1.32
Solubility (water)	SOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion lmt	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temp	NOT AVAILABLE
Decomposition temp	NOT AVAILABLE
Viscosity	4.8 cSt @ 20°C
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE

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10. STABILITY AND REACTIVITY

10.1 Reactivity

Ammonium nitrate solution may react violently with nitrites, chlorates, chlorides and permanganates.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

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 the product 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.

May evolve toxic gases if heated to decomposition.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products

Polymerization is not expected to occur.

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11. TOXICOLOGICAL INFORMATION

Acute toxicity is estimated based on available data for the ingredients:

Ingredient UAN

<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
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2217 mg/kg (rat)	> 5000 mg/kg (rat)	> 5000 mg/kg (rat)
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11.1 Information on toxicological effects

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.

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).

Aspiration Not classified as causing aspiration.

Reproductive Not classified as a reproductive toxin.

Carcinogenicity Not classified as a carcinogen.

Mutagenicity Not classified as a mutagen.

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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 absorbed 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.

Avoid contaminating waterways. Nitrogen fertilisers can stimulate weed and algal growth in static surface waters. Algae affect 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.

12.5 Other adverse effects

NIL

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13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal Legislation Dispose of in accordance with relevant local legislation.

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 its nutrient value. Ensure the application rate is appropriate and fertiliser 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.

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14. TRANSPORT INFORMATION

14.1 UN Number

None allocated

14.2 Proper Shipping Name

No information provided.

14.3 Transport

LAND TRANSPORT (ADG) None allocated.

SEA TRANSPORT (IMDG / IMO) None allocated

AIR TRANSPORT (IATA / ICAO) None allocated

14.4 Packing Group

None allocated.

14.5 Environmental hazards

Hazchem code None allocated.

14.6 Special precautions for user

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

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15. REGULATORY INFORMATION

A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

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

Poison schedule

AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)

All components are listed on AIIC, or are exempt.

Inventory listings

Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7).

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16. OTHER INFORMATION

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

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