

Section 1 - Identification of Chemical Product and Company

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Trade Name: Nuturf Nuflo Foliar K

Product Use: Soluble Fertiliser

Creation Date: March 2008

Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is not classified as hazardous to health according to the criteria of ASCC Australia.

Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code.

Risk Phrases: R36/37/38 Irritating eyes, respiratory system and skin

Safety Phrases: S23/24/25 Do not breathe dust, avoid contact with skin and eyes

SUSDP Classification: N/A

ADG Classification: None allocated. Not a Dangerous Good.

UN Number: None allocated

Emergency Overview

Physical Description & colour: A mixture of pale coloured granules, powders & crystals

Odour: Mild odour

Major Health Hazards: No significant risk factors have been found for this product.

Potential Health Effects

Inhalation: Inhalation of airborne dust may cause irritation to nose and throat.

Skin Contact: May be irritating to skin. Frequent or prolonged contact may cause Dermatitis. No effect should occur if promptly washed off.

Eye Contact: May be irritating to eyes

Ingestion: Contains nitrates. Swallowing large quantities may cause nausea, headaches, irregular heart beat, cramps and breathing difficulties. Cyanosis may occur.

Carcinogen Status:

ASCC: No significant ingredient is classified as carcinogenic by ASCC at stated concentration.

NTP: No significant ingredient is classified as carcinogenic by NTP at stated concentration

IARC: No significant ingredient is classified as carcinogenic by IARC at stated concentration

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc.%	TWA (mg/m3)	STEL (mg/m3)
Inorganic fertiliser *		Approx	not set	not set
Includes: Ammonium Sulfate	7783-20-2	30	not set	not set
Urea	57-13-6	0.5	not set	not set
Potassium Nitrate	7757-79-1	50	not set	not set
Potassium Sulfate	7778-80-5	15	not set	not set

*This includes the listed ingredients plus trace elements to provide macro and micro elemental requirements for strong healthy growth in plants.

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

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Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

Inhalation: If vapours or mists have been inhaled, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists for more than about 30 minutes, seek medical advice

Skin Contact: If product gets on skin, thoroughly wash contacted areas. No further measures should normally be required unless irritation is noticed. If irritation persists, seek medical attention.

Eye Contact: Immediately irrigate with copious amounts of lukewarm, gently flowing water for 15 – 20 minutes or until the product is removed or irritation has ceased, while holding the eyelid(s) open. Obtain medical advice if irritation becomes painful or lasts more than a few minutes.

Ingestion: Give a glass of water if affected person able to drink. Do not induce vomiting unless instructed to do so by medical advice.

Notes to Doctor: For Nitrates

Clinical Findings: The smooth muscle relaxant effect may lead to headache, dizziness and marked hypertension. Cyanosis is clinically detectable when approximately 15% of the haemoglobin has been converted to methaemoglobin (i.e. ferric iron). Symptoms such as headache, dizziness, weakness and dyspnea occur when methaemoglobin concentrations are 30% to 40%; at levels of about 60%, stupor, convulsions, coma and respiratory paralysis occur and the blood is a chocolate brown colour. At higher levels death may result. Spectrophotometric analysis can determine the presence and concentration of methaemoglobin in blood.

Treatment:

1. Give 100% oxygen.
2. In cases of a) swallowing: 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 2mg/kg body weight in a 1% solution by slow intravenous injection. If cyanosis has not resolved within one hour a second dose of 2mg per kg body weight may be given. The total dose should not exceed 7mg/kg body weight as unwanted effects such as dyspnea, chest pain, vomiting, diarrhea mental confusion and cyanosis may occur. 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 nitrates from blood if condition of patient unstable.
8. Following inhalation of oxides of nitrogen the patient should be observed for 24 hours for delayed onset of pulmonary oedema.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: Not combustible, but contains strong oxidising agent - potassium nitrate @ approx 50%. Potassium nitrate will support combustion of other materials. Fight fire from a protected position and use water spray to reduce product temperature. Decomposition may give rise to toxic and noxious fumes including nitrogen oxide. Wear self-contained breathing apparatus (SCBA)

Extinguishing Media: Not Combustible. Use extinguishing media suited to burning materials.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade.

Flash point: Does not burn.

Upper Flammability Limit: Does not burn.

Lower Flammability Limit: Does not burn.

Auto ignition temperature: Not applicable - does not burn.

Flammability Class: Does not burn.

Fire Decomposition: Will decompose and emit toxic fumes on heating. SCBA should be used in a fire situation

Section 6 - Accidental Release Measures

Accidental release: Minor spills do not normally need any special cleanup measures. Avoid dust or formation. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as minimum, protective glasses and, preferably, goggles. If there is a significant chance that dusts or vapours are likely to build up in the cleanup area, we recommend that you use a respirator. In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Stop leak if safe to do so, and contain spill. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. This material may be suitable for approved landfill. Dispose of only in accord with all regulations. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this MSDS and the label, instructions on the label prevail.

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Section 7 - Handling and Storage

No special storage and transport requirements. This product has no UN classification.

Handling: Check Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Storage: Store in a cool, dry place away from children and animals or foodstuffs. Containers should be kept closed in order to minimise contamination. Keep from extreme heat, sources of ignition and open flames, and make sure that the product does not come into contact with substances listed under "Materials to avoid" in Section 10.

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

Exposure Limits	TWA (mg/m ³)	STEL (mg/m ³)	ADI	NOEL
	not set	not set	not set	not set

A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by Worksafe Australia for any of the major ingredients in this product. There is a blanket limit of 10mg/m³ for dusts or mists when limits have not otherwise been established. The nature of this product makes it unlikely that this level will be approached in normal use.

ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: Avoid high dust concentrations and provide local exhaust ventilation where necessary.

Eye Protection: Eye protection such as protective glasses or goggles is recommended when this product is being used.

Skin Protection: Wear PVC gloves to prevent skin contact. Wear overall and long sleeves to prevent contact

Respirator: Where high concentrations of airborne dust are present, a dust respirator conforming to AS1715 should be worn.

Provision of eye wash facilities and safety shower recommended.

Wash hands before eating, drinking, smoking or going to toilet, launder protective clothing before re-use.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	A mixture of pale coloured granules, powders and crystals
Odour:	Mild odour
Boiling Point:	N/A
Melting Point:	No data – solid at room temperature
Volatiles:	N/A
Bulk Density	No data
Water Solubility:	Completely soluble
pH:	No data.
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	No data.
Flash Point	N/A
Auto ignition temp:	N/A - does not burn.

Section 10 - Stability and Reactivity

Reactivity: This product is stable under normal temperatures and pressures, when stored and handled in accordance with this MSDS

Conditions to Avoid: Store away from heat or fire, sources of ignition, combustible materials

Incompatibilities: Strong acids

Polymerisation: This product is unlikely to spontaneously polymerise

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Fire Decomposition: Will decompose and emit toxic fumes on heating. SCBA should be used in a fire situation

Section 11 - Toxicological Information

Eye Effects: Irritating
Dermal LD₅₀: No data
Inhalation LC₅₀: No data
Potential Carcinogen (IARC or OSHA): No

Skin Effects: May be irritating
Oral LD₅₀: No data
Positive Teratogen or Mutagen: No

Section 12 - Ecological Information

Environmental Data: No data
Ecotoxicological Information: No data

Section 13 - Disposal Considerations

Disposal: Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this MSDS and the label, instructions on the label prevail. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.

Section 14 - Transport Information

ADG Code: This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

Section 15 - Regulatory Information

AICS: All of the significant ingredients in this formulation are to be found in the public AICS Database.

Section 16 - Other Information

This MSDS contains only safety-related information. For other data see product literature.

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail
AICS	Australian Inventory of Chemical Substances
ASCC	Australian Safety & Compensation Council
CAS number	Chemical Abstracts Service Registry Number
Hazchem Number	Emergency action code of numbers and letters that provide information to emergency services especially fire-fighters
IARC	International Agency for Research on Cancer
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
R-Phrase	Risk Phrase
SUSDP	Standard for the Uniform Scheduling of Drugs & Poisons
UN Number	United Nations Number

THIS MSDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS MSDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product. This MSDS is prepared in accord with the NOHSC document "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [NOHSC:2011(2003)]

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