

## Section 1 - Identification of Chemical Product and Company

Envirogreen Pty Ltd  
PO Box 6390  
Silverwater NSW 1811

Phone: (02) 9395 1200(Business hours)  
Fax: (02) 9395 1241

**Trade Name:** Garden Essentials Urea  
**Product Use:** Nitrogenous garden fertiliser  
**Creation Date:** December 2002  
**Revision Date:** July 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:** Not Hazardous according to criteria of Worksafe Australia

**Safety Phrases:** Not Hazardous according to criteria of Worksafe Australia.

**SUSDP Classification:** N/A

**ADG Classification:** None allocated. Not a Dangerous Good.

**UN Number:** None allocated

### Emergency Overview

**Physical Description & colour:** White granules or prills.

**Odour:** Usually odourless but may have mild ammonia odour.

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

### Potential Health Effects

Considered to be practically non harmful by all exposure routes. Nevertheless as with any industrial chemical, ingestion, inhalation of dusts or vapours and prolonged or repeated skin contact should be avoided by good standards of industrial hygiene. Supersensitive individuals with skin or eye problems, kidney or asthmatic conditions should have physician's approval before exposure to urea dust. No information found to indicate that urea is a chronic health hazard.

**Ingestion:** Data suggests that this product should present no significant problems to typical persons if used as intended.

**Eye Contact:** This product may irritate eyes, however it is unlikely to cause any more than mild transient discomfort. It is also unlikely to cause any significant lasting effects. However, avoid contact with eyes

**Skin:** This product may irritate skin; however it is unlikely to cause more than minor discomfort or effects such as itchiness or slight skin reddening.

**Inhalation:** Data suggests that this product should present no significant problems to typical persons if used as intended

#### 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)
Urea	57-13-6	98.5	not set	not set
Biuret	108-19-0	1.5	not set	not set

*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 dusts 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, 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 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:** Rinse out mouth with plenty of water. Give a glass of water if affected person able to drink. Do not induce vomiting.

**Notes to Doctor:** Treat symptomatically. Note the nature of this product.

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## Section 5 - Fire Fighting Measures

**Fire and Explosion Hazards:** There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

**Extinguishing Media:** Not Combustible. Use extinguishing media suited to burning materials, If available, water is recommended.

**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:** Carbon dioxide and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and under some circumstances oxides of nitrogen. Water, ammonia. Fire decomposition products from this product may form toxic mixtures in confined spaces.

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## Section 6 - Accidental Release Measures

**Accidental release:** Minor spills do not normally need any special cleanup measures. In the event of a major spill, prevent spillage from entering drains or watercourses. 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. 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. Dispose of only in accord with all regulations. This material may be suitable for approved landfill.

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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 away from extreme heat and open flames, and make sure that the product does not come into contact with substances listed under "Materials to avoid" in Section 10.

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## Section 8 - Exposure Controls and Personal Protection

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

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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 <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	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/m<sup>3</sup> 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 concentration and provide local exhaust ventilation if necessary.

**Eye Protection:** Protective eyewear is not normally necessary when using this product. However, it is always prudent to use protective eyewear.

**Skin Protection:** Impermeable protective gloves should be worn when using this product to prevent irritation.

**Respirator:** It is usually safe to not use a dust mask or respirator protection on account of this product. However, in high dust concentrations use a particulate respirator.

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:

<b>Physical Description &amp; colour:</b>	White granules or prills
<b>Odour:</b>	Usually odourless but may have mild ammonia odour.
<b>Melting/Softening Point:</b>	133°C
<b>Volatiles:</b>	N/A
<b>Boiling point &amp; Vapour Pressure:</b>	Decomposes before boiling at 100kPa
<b>Vapour Density:</b>	No data.
<b>Specific Gravity:</b>	1.34
<b>Water Solubility:</b>	Soluble
<b>Volatility:</b>	No data.
<b>Odour Threshold:</b>	No data.
<b>Flash Point</b>	N/A
<b>Auto ignition temp:</b>	N/A - does not burn.
<b>Corrosiveness:</b>	Not corrosive

## 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:** Heat, flames, ignition sources and incompatibles

**Polymerisation:** This product is unlikely to spontaneously polymerise

**Fire Decomposition:** Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and under some circumstances, oxides of nitrogen. Ammonia, water.

## Section 11 - Toxicological Information

**Urea:** Rat LD50 = 15 g/kg Mouse LD50 = 11.5 g/kg

Urea dust at 22 mg/m<sup>3</sup> caused mild irritation (species not specified)

In a repeated dose toxicity study, urea at 10%, 20%, and 40% in ointment was applied to the back skin of rats for 4 weeks. No dose-dependent toxicity was observed.

In a single oral dose study in mice, 2,000 mg/kg administered on day 10 of pregnancy was not teratogenic.

**Positive Teratogen or Mutagen:** No

**Biuret:** Oral rat LD50 > 5 g/kg Dermal rat LD50 > 2 g/kg

## Section 12 - Ecological Information

Urea can be toxic to domestic animals and has caused poisonings when it was applied unevenly on pastures as a fertilizer. Large amounts of urea can damage plant seedlings and inhibit germination. At high concentrations, urea can be toxic to aquatic life. As a readily available source of nitrogen, urea can also foster excessive growth of algae or microorganisms in water systems. Notify local health and wildlife officials and operators of nearby water intakes upon contamination.

**Ecotoxicity Information:** The cell multiplication toxicity threshold values for bacteria, green algae, and protozoa are >10,000, >10,000, and 29 mg/L, respectively.

### Environmental Fate:

When released to soil, this material will hydrolyze into ammonium in a matter of days to several weeks. When released into the soil, this material may leach into groundwater. When released into water, this material may biodegrade to a moderate extent. When released into water, this material is not expected to evaporate significantly. This material has an experimentally-determined bioconcentration factor (BCF) of less than 100. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life of less than 1 day.

## 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:

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