



Infosafe No™	1CH7B	Issue Date : November 2014	RE-ISSUED by CHEMSUPP
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Product Name : **UREA**

Not classified as hazardous

**1. Identification**

<b>GHS Product Identifier</b>	UREA		
<b>Company Name</b>	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)		
<b>Address</b>	38 - 50 Bedford Street GILLMAN SA 5013 Australia		
<b>Telephone/Fax Number</b>	Tel: (08) 8440-2000 Fax: (08) 8440-2001		
<b>Recommended use of the chemical and restrictions on use</b>	Manufacture of synthetic resins, plastics, glues, solvents and pharmaceuticals, cosmetics, dentrifices, paper industry, fertilizer, animal feeds, sulfamic acid, stabilizer in explosives, biochemistry, for reversible denaturation of proteins, chemical intermediate, medicine (diuretic), separation of hydrocarbons (as urea adduct), flameproofing agents, viscosity modifier for starch or casein-based paper coatings, preparation of biuret and laboratory reagent.		
<b>Other Names</b>	<u>Name</u>	<u>Product Code</u>	
	Carbamide, Carbamimidic, Carbonyl diamide, Isourea, Carbonyl diamine		
	UREA LR	UL001	
	UREA BP	UP001	
	UREA AR	UA001	
<b>Other Information</b>	EMERGENCY CONTACT NUMBER: +61 08 8440 2000 Business hours: 8:30am to 5:00pm, Monday to Friday.		

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

**2. Hazard Identification**

<b>GHS classification of the substance/mixture</b>	Not classified as hazardous according to the Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004) 3rd Edition, Safe Work Australia.
<b>Other Information</b>	Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG). Naturally occurring substance. No toxic effects are to be expected when the product is handled appropriately.

**3. Composition/information on ingredients**

<b>Chemical Characterization</b>	Solid				
<b>Ingredients</b>	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u>	<u>Risk Phrase</u>
	Urea	57-13-6	100 %		
<b>Other Information</b>	Solid urea typically contains biuret (0.3-2.0% by weight).				

**4. First-aid measures**

<b>Inhalation</b>	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
<b>Ingestion</b>	Rinse mouth thoroughly with water immediately. Give water to drink. DO NOT induce vomiting.
<b>Skin</b>	Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. If irritation occurs seek medical advice.
<b>Eye contact</b>	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek medical advice if effects persist.
<b>First Aid Facilities</b>	Maintain eyewash fountain and safety shower in work area.
<b>Advice to Doctor</b>	Treat symptomatically.
<b>Other Information</b>	For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.



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**5. Fire-fighting measures**

<b>Hazards from Combustion Products</b>	May librate toxic fumes in fire (oxides of carbon and nitrogen).
<b>Specific Methods</b>	Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media. Small fire: Use dry chemical, CO <sub>2</sub> , water spray or foam. Large fire: Use water spray, fog or foam. If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out.
<b>Specific hazards arising from the chemical</b>	Material does not burn.
<b>Precautions in connection with Fire</b>	Use suitable protective equipment for surrounding fire.

**6. Accidental release measures**

<b>Personal Precautions</b>	Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.
<b>Personal Protection</b>	Wear protective clothing specified for normal operations (see Section 8)
<b>Clean-up Methods - Small Spillages</b>	Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.
<b>Clean-up Methods - Large Spillages</b>	Seek expert advice on handling and disposal.
<b>Environmental Precautions</b>	Avoid release to the environment.

**7. Handling and storage**

<b>Precautions for Safe Handling</b>	Avoid generation or accumulation of dusts. Avoid prolonged or repeated contact with skin, eyes and clothing. Wash hands and face thoroughly after working with material.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in a cool dry place out of direct sunlight. Avoid contact with incompatible materials that support combustion such as strong oxidising agents. Keep container tightly closed and dry, away from direct sunlight and other sources of heat or ignition.

**8. Exposure controls/personal protection**

<b>Other Exposure Information</b>	A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by Safe Work Australia for this product. There is a blanket limit of 10 mg/m <sup>3</sup> for dusts or mists when limits have not otherwise been established.
<b>Appropriate engineering controls</b>	In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
<b>Respiratory Protection</b>	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
<b>Eye Protection</b>	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
<b>Hand Protection</b>	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. Recommendation: rubber or plastic gloves.
<b>Personal Protective Equipment</b>	Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken.
<b>Footwear</b>	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
<b>Body Protection</b>	Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection



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**Hygiene Measures** against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals. Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

**9. Physical and chemical properties**

<b>Form</b>	Solid
<b>Appearance</b>	White crystals, powder or prills.
<b>Odour</b>	Odourless. Slight ammonia odour may develop especially in presence of moisture.
<b>Melting Point</b>	132 - 135 °C
<b>Boiling Point</b>	Decomposes before boiling.
<b>Solubility in Water</b>	Soluble, 480 g/l at 20°C.
<b>Solubility in Organic Solvents</b>	Very soluble in methanol and ethanol. Soluble in acetic acid, pyrimidine, concentrated hydrochloric acid and glycerol. Almost insoluble in chloroform and ether.
<b>Specific Gravity</b>	1.34
<b>pH</b>	~ 7.5 - 9.5 (480 g/L, H <sub>2</sub> O, 25 °C)
<b>Vapour Pressure</b>	< 0.1 hPa (20 °C)
<b>Partition Coefficient: n-octanol/water</b>	log P(o/w): -1.59
<b>Flammability</b>	Non combustible material.
<b>Molecular Weight</b>	60.06
<b>Other Information</b>	Taste: Saline taste

**10. Stability and reactivity**

<b>Chemical Stability</b>	Stable under normal use conditons. Hygroscopic
<b>Conditions to Avoid</b>	Incompatibles. When humidity is over 75%, urea absorbs moisture from the air. When dissolved in water, urea slowly decomposes to ammonia and carbon dioxide.
<b>Incompatible Materials</b>	Strong oxidising agents (permanganate, dichromate, nitrate, chlorine), bases, ABS, calcium/sodium hypochlorite, PVC, polyethylene, chromyl chloride, sodium nitrate, gallium perchlorate, phosphorus pentachloride, nitrosyl perchlorate, titanium tetrachloride, bases.
<b>Hazardous Decomposition Products</b>	Ammonia, cyanuric acid, hydrogen cyanide and oxides of nitrogen and carbon.
<b>Possibility of hazardous reactions</b>	Contact with strong oxidising agents may cause fire or explosion. Will cause deterioration of unplasticized PVC with long-term use.
<b>Hazardous Polymerization</b>	Will not occur.

**11. Toxicological Information**

<b>Acute Toxicity - Oral</b>	LD50 (rat): 8471 mg/kg.
<b>Acute Toxicity - Dermal</b>	LD50 (rat): 8200 mg/kg.
<b>Ingestion</b>	May be harmful if swallowed. May cause irritation to the gastrointestinal tract. Symptoms may include nuasea, sore throat, vomiting, abdominal pain, headache and confusion. Absorption into the metabolism, bloodstream and urinary system may occur.
<b>Inhalation</b>	May be harmful if inhaled. High levels of dust or mist may cause irritation of the nose and throat with sore throat, sneezing, coughing and shortness of breath. May cause emphysema. May be absorbed into the bloodstream, metabolism and urinary system with symptoms similar to ingestion.
<b>Skin</b>	May be harmful if absorbed through skin. May cause skin irritation. Symptoms may include redness, itching, pain, rash due to mild irritation.
<b>Eye</b>	Eye contact may cause irritation, redness and pain. A 10% solution of urea in water used by people as eye drops several times a day for a year caused no eye irritation or discomfort.
<b>Carcinogenicity</b>	No evidence of carcinogenic properties.
<b>Chronic Effects</b>	Repeated or prolonged skin contact may cause dermatitis. Prolonged or repeated exposure may lead to disturbances in the metabolism, bloodstream, urinary system and respiratory system.



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**Mutagenicity** No evidence of mutagenic properties.**12. Ecological information****Ecological Information** No ecological problems are to be expected when the product is handled and used with due care and attention.**Persistence and degradability** Biodegradation: 96 %/16 d Zahn-Wellens test. Easily eliminable.**Environmental Fate** Behaviour in environmental compartments:  
Distribution: log P(o/w) -1.59**Bioaccumulative Potential** No bioaccumulation is to be expected (log P(o/w) < 1).**Acute Toxicity - Fish** LC50 (L. idus): > 6810 mg/96h.**Acute Toxicity - Daphnia** EC50 (Daphnia magna): > 3910 mg/l/48 h.**Acute Toxicity - Algae** IC5 (Sc. quadricauda): > 10000 mg/l/7 d.**Acute Toxicity - Bacteria** EC5 (Ps. putida): > 10000 mg/l/16 h.**13. Disposal considerations****Disposal Considerations** Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.**14. Transport information****Transport Information** Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.**15. Regulatory information****Regulatory Information** Listed in the Australian Inventory of Chemical Substances (AICS).**Poisons Schedule** Not Scheduled**16. Other Information****Literature References** 'Standard for the Uniform Scheduling of Medicines and Poisons No. 6', Commonwealth of Australia, February 2015.  
Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.  
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.  
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011.  
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.  
Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.  
Safe Work Australia, 'Hazardous Substances Information System, 2005'.  
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.  
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]'.**Contact****Person/Point**Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**

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**Empirical Formula & Structural Formula** NH<sub>2</sub>CONH<sub>2</sub>

...End Of MSDS...



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# Safety Data Sheet

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