Infosafe No™	1CH7B	Issue Date : November 2019	RE-ISSUED by CHEMSUPP

Product Name : **UREA AR**

Not classified as hazardous

1. Identification

GHS Product Identifier	UREA AR
Product Code	UA001
Company Name	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia
Telephone/Fax Number	Tel: (08) 8440-2000 Fax: (08) 8440-2001
Emergency phone number	CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)
Recommended use of the chemical and restrictions on use	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.

Other Names

Name	Product Code
Carbamide, Carbamimidic, Carbonyl diamide, Isourea, Carbonyl diamine	
UREA	

Other Information

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

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

3. Composition/information on ingredients

Chemical Characterization Solid

Ingredients

Name	CAS	Proportion	Hazard Symbol	Risk Phrase
Urea	57-13-6	100 %		

Other Information Solid urea typically contains biuret (0.3-2.0% by weight).

4. First-aid measures

Inhalation	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.
Ingestion	Rinse mouth thoroughly with water immediately. Give water to drink. DO NOT induce vomiting.
Skin	Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. If irritation occurs seek medical advice.
Eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek medical advice if effects persist.
First Aid Facilities	Maintain eyewash fountain and safety shower in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion Products	May librate toxic fumes in fire (oxides of carbon and nitrogen).
Specific Methods	Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media. Small fire: Use dry chemical, CO2, 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.
Specific hazards arising from the chemical	Material does not burn.
Precautions in connection with Fire	Use suitable protective equipment for surrounding fire.

6. Accidental release measures

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

7. Handling and storage

Precautions for Safe Handling	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.
Conditions for safe storage, including any incompatabilities	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

Other Exposure Information	No exposure standards have been established for this product by Safe Work Australia, however, the TWA exposure standard for dusts/mists not otherwise specified is 10 mg/m3. All atmospheric contamination should be kept to as low a level as is workable.
Appropriate engineering controls	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. These methods should be used in preference to personal protective equipment.
Respiratory Protection	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.
Eye Protection	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.
Hand Protection	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New

	Zealand or other approved standards.
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
Body Protection	Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	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

Form	Solid
Appearance	White crystals, powder or prills.
Odour	Odourless. Slight ammonia odour may develop especially in presence of moisture.
Melting Point	132 - 135 °C
Boiling Point	Decomposes before boiling.
Solubility in Water	Soluble, 480 g/l at 20°C.
Solubility in Organic Solvents	Very soluble in methanol and ethanol. Soluble in acetic acid, pyrimidine, concentrated hydrochloric acid and glycerol. Almost insoluble in chloroform and ether.
Specific Gravity	1.34
pH	~ 7.5 - 9.5 (480 g/L, H2O, 25 °C)
Vapour Pressure	< 0.1 hPa (20 °C)
Partition Coefficient: n-octanol/water	log P(o/w): -1.59
Flammability	Non combustible material.
Molecular Weight	60.06
Other Information	Taste: Saline taste

10. Stability and reactivity

Chemical Stability	Stable under normal use conditons. Hygroscopic
Conditions to Avoid	Incompatibles. When humidity is over 75%, urea absorbs moisture from the air. When dissolved in water, urea slowly decomposes to ammonia and carbon dioxide.
Incompatible Materials	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.
Hazardous Decomposition Products	Ammonia, cyanuric acid, hydrogen cyanide and oxides of nitrogen and carbon.
Possibility of hazardous reactions	Contact with strong oxidising agents may cause fire or explosion. Will cause deterioration of unplasticized PVC with long-term use.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat): 8471 mg/kg.
Acute Toxicity - Dermal	LD50 (rat): 8200 mg/kg.
Ingestion	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.
Inhalation	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.
Skin	May cause skin irritation. Symptoms may include redness, itching, pain, rash due to mild irritation.
Eye	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.

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Carcinogenicity	No evidence of carcinogenic properties.
Chronic Effects	Repeated or prolonged skin contact may cause dermatitis. Prolonged or repeated exposure may lead to distrubances in the metabolism , bloodstream, urinary system and respiratory system.
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).
Environmental Protection	Do not allow product to enter drains, waterways or sewers.

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). Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	Not Scheduled

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia. 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 fot 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 Chemical 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) 3rd Edition]'.
Contact Person/Point	Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT: All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Chem-Supply accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.
Empirical Formula & Structural Formula	NH_2CONH_2

...End Of MSDS...

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