



Safety Data Sheet

UREA

Whitfert Fertilisers, 54 Beach Street, Kwinana WA 6167

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Identification of the Material & Supplier

Product Name: Urea
Other Names: Carbamide, Carbonyldiamine, Carbonyl diamide, Cabamimidic acid.
Recommended Use: Fertilizer, stock feed additive, adhesives manufacture

Hazards Identification

Hazards Classification: Urea is not classified as hazardous according to Safe Work Australia criteria
Risk Phrase: Urea is not classified as a Dangerous Good according to the ADG Code

Composition/Information on Ingredients

Chemical Identity: Urea
Proportion of Ingredients: 100%
Nitrogen as N: 46%
CAS Number: 57-13-6

First Aid Measures

Eye Contact: Immediately flush with fresh water for at least 15 minutes. Hold eyes open while flushing with water. Seek medical attention if irritation persists.
Skin Contact: Immediately remove contaminated clothing and shoes. Flush skin with fresh water for at least 15 minutes. Use soap if available or follow by flushing with soap and water. Do not reuse contaminated clothing without laundering. Seek medical attention if irritation persists.
Inhalation: Remove victim to fresh air. If breathing is difficult, give oxygen. If not breathing, administer artificial respiration. Seek medical attention immediately.
Ingestion: If victim is conscious and alert, give 2 to 4 cups of water. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs. Seek medical attention immediately.

Fire Fighting Measures

Flammability: Urea is non-flammable and does not support combustion.
Suitable Extinguishing Media: Not applicable.
Hazards from Combustion Products: Oxides of nitrogen may be released if heated to the point of decomposition.
Hazchem Code: None allocated.

Accidental Release Measures

Emergency Procedures	Isolate the area and deny entry to nonessential personnel. Emergency responders and/or clean up personnel should wear appropriate protective clothing and equipment.
Methods and Materials for Containment & Cleanup	Prevent from entering drains or waterways. Collect material promptly. Minimise dust generation during clean-up operation.

Handling & Storage

Precautions for Safe Handling	Avoid contact with alkalis, hypochlorites, oxidizing agents, ammonium nitrate, nitrites, permanganates, metallic powders and strong acids.
Conditions for Safe Storage	Store in a cool, dry, well ventilated location. Keep away from incompatible substances. Prevent product from getting wet as it will cause caking and handling problems.

Exposure Controls/Personal Protection

National Exposure Controls	No specific official limit. Recommended (ACGIH) value for inhalable particulates is 10mg/m ³ (TLV/TWA).
Engineering Controls	Use in well ventilated areas. Avoid dusty areas.
Personal Protective Equipment	Wear gloves, long sleeve shirt and long trousers to prevent skin contact. In dusty areas use a P2 respirator and wear chemical safety glasses to prevent eye contact.

Physical & Chemical Properties

Appearance	White granules
Odour	Slight ammonia
pH of 10% Solution	7-8
Vapour Pressure	N/A. Does not exert significant vapour pressure
Boiling Point	135°C
Freezing Point	133°C
Solubility	Soluble in water (119g/mL at 25°C), alcohol and acetone.
Specific Gravity/Bulk Density	1.33 / 0.7t/m ³

Stability & Reactivity

Stability	Stable under normal temperatures and pressures
Reactivity	Reactive with alkalis, hypochlorites, oxidizing agents, permanganates, metallic powders and strong acids. Mildly corrosive to aluminum, zinc, copper, nickel, cobalt, iron and mild steel.
Incompatible Materials	May explode when mixed with nitric acid, hypochlorites and sodium nitrite. Violent decomposition when heated with gallium perchlorate and titanium tetrachloride. Ignites on contact with chromyl chloride, nitrosyl perchlorate, strong oxidizers, phosphorous pentachloride.
Decomposition Products	Carbon monoxide, carbon dioxide, oxides of nitrogen, irritating and toxic fumes and gases. Ammonia may be released when mixed with strong alkalis.

Toxicological Information

Health Effects

Low toxicity. There is no known effect from chronic exposure to Urea. Inhalation of dust may cause irritation to the nose and upper respiratory tract. Prolonged skin contact may cause some irritation, including redness and itching. Eye contact may cause irritation, redness and pain. Ingestion of large amounts may give rise to gastro-intestinal irritation with symptoms such as nausea, vomiting and diarrhea.

Toxicity Data

LDLo (intravenous): 4800mg/kg (rabbit)
 LDLo (intraperitoneal): 6608mg/kg (mouse)
 LD50 (intraperitoneal): >5000mg/kg (rat)
 LDLo (subcutaneous): 3000mg/kg (rabbit)
 LD50 (ingestion): 8471mg/kg (rat)
 LD50 (intravenous): 4600mg/kg (mouse)
 LD50 (subcutaneous): 8200mg/kg (rat)

Ecological Information

Ecotoxicity

Toxicity for bacteria: EC50: 23914mg/L/5 M (Phytobacterium phophoreum)
 No other information available

Mobility

May leach into groundwater if released to soil. Will not evaporate readily.

Persistence & Degradability

Environmental half life for air release estimated at less than one day. Expected to biodegrade readily in water.

Bioaccumulative Potential

Not expected to bioaccumulate significantly.

Disposal Considerations

Disposal Methods & Containers

Dispose of on a farm, or authorized waste facility in accordance with statutory requirements.

Transport Information

UN Number

None allocated

UN Proper Shipping Name

None allocated

Class & Subsidiary Risk

None allocated

Packing Group

None allocated

Hazchem Code

None allocated

Regulatory Information

Australian Regulatory Information

A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).
 All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

Other Information

Key/Legend

NOHSC	National Occupational Health and Safety Commission
SUSDP	Standard for the Uniform Scheduling of Drugs and Poisons
ACGIH	American Conference of Government Industrial Hygienists
ES-TWA	Exposure Standard – Time weighted average
ES-STEL	Exposure Standard – Short term exposure level
ES-Peak	Exposure Standard – Peak level
LDLo	The lowest dose in an animal study in which lethality occurred.
LD50	Lethal dose 50. The single dose of a substance that causes death of 50% of an animal population from exposure other than inhalation
t/m ³	Tonnes per cubic metre
mg/m ³	Milligrams per cubic metre
mg/kg	Milligrams per kilogram
pH	Hydrogen ion concentration on a scale of 0-14

Disclaimer

The information contained in this SDS is offered in good faith as accurate but does not purport to be all-inclusive. Health and safety precautions in this SDS may not be adequate for all individuals and/or situations. It is the user's responsibility to determine the suitability of any material for a specific purpose, adopt such precautions as may be necessary and comply with all applicable laws and regulations. Whitfert Fertilisers reserves the right to make changes to SDS data without notice.