Incitec Pivot Limited

SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name **AGRICULTURAL UREA**

Synonyms 11505 - STOCKFEED UREA ● 12335 - PRILLED UREA ● 20055 - LIQUIFERT LO-BI ● 20065 - GRANULAR UREA ● 20065 - PRODUCT CODE ● 24164 - LIQUIFERT N ● AMIDE OF CARBONIC ACID ● CARBAMIDE ● CARBAMIMIDIC ACID ● CARBONYL DIAMIDE ● CARBONYL DIAMINE ● GRANULATED UREA ● GROW FORCE GRANULAR UREA ● GROW FORCE STOCKFEED UREA ● GROW FORCE UREA ● INCITEC PIVOT FERTILISERS UREA ● INCITEC PIVOT UREA ● ISOUREA ● UREA

1.2 Uses and uses advised against

Uses LIVESTOCK SUPPLEMENT ● NITROGEN FERTILISER ● NITROGEN FERTILIZER ● NON PROTEIN NITROGEN SUPPLEMENT ● NPN SUPPLEMENT

1.3 Details of the supplier of the product

Supplier name **INCITEC PIVOT LIMITED**

Address Level 8, 28 Freshwater Place, Southbank, Victoria, 3006, AUSTRALIA

Telephone (03) 8695 4400; 1800 009 832

Fax (03) 8695 4419

Email ipf.customer.service@incitecpivot.com.au

Website http://www.incitecpivot.com.au; www.incitecpivotfertilisers.com.au

1.4 Emergency telephone numbers

Emergency 1800 009 832

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

2.2 GHS Label elements

No signal word, pictograms, hazard or precautionary statements have been allocated.

2.3 Other hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
UREA	57-13-6	200-315-5	100%

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

Inhalation If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

Skin If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

Ingestion For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

First aid facilities Eye wash facilities and normal washroom facilities should be available.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture

Non flammable. May evolve toxic gases (carbon/ nitrogen oxides, ammonia, hydrocarbons) when heated to decomposition.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

None allocated.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Ventilate area where possible.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Recover spilt fertiliser as soon as possible.

If in a warehouse and the product has not been contaminated or degraded, return it to the original stockpile. Otherwise, store in a separate bay or containers.

If in the open, and the product cannot be immediately recovered, take steps to protect the product from the elements and loss to waterways. Cover the spilt product with a water-proof tarpaulin, weighed down to prevent it being blown off by wind.

For disposal options, see Section 13.

In agricultural fields, spread any residual fertiliser out over as wide an area as possible. If left too thick, plant growth may be affected. Plants may die, and germination and emergence stifled for some time.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use, read the product label, including sections on "Safety Directions" and "Care of Equipment". Use safe work practices. Avoid eye of skin contact and dust inhalation. Observe good personal hygiene, including washing hands before eating. When lifting flexible intermediate bulk containers, use properly designed and approved equipment that meets Australian Standards AS3668 and AS2359. Refer to the Incitec Pivot pamphlet "Guidance for the Safe Handling of Fertiliser Bulk Bags".

7.2 Conditions for safe storage, including any incompatibilities

When stored in a confined, unventilated space/hold this product can give off ammonia or other odours. As oxygen may be depleted, it is essential that ventilation is carried out prior to entry to ship holds. Fertilisers should be stored in a cool, dry, covered and well-ventilated area. Do not allow to get wet. Store away from acids; oxidising agents, e.g. hypochlorite; farm chemicals, e.g. insecticides, fungicides and herbicides; and foodstuffs. Bulk fertilisers should be stored in bays or piles physically apart from other products. Concrete floors are recommended. Fertiliser may set in storage, posing a risk of engulfment when being removed from the stockpile. Conduct Risk Assessments, and ensure appropriate equipment, procedures and training are in place. It is generally recommended that fertilisers not be placed in silos, and if they are, only for short periods of time. Refer to the Incitec Pivot "Silo Guidance Notes" for more detail. Ensure stockpiles of bulk bags are stable. Place the bags as close as reasonably practical to each other without causing undue damage. If stacking more than two high, stack in a pyramidal style. Ensure the third and subsequent layers are placed so as to straddle and bind the bags below them. When walking near, or between rows of stacked bags, maintain a distance equal to the height of the stack from the product. Bagged fertilisers should be stored under cover and out of direct sunlight (which degrades woven polypropylene packs). If stored in the open, do so for short periods only, and cover the bags with a tarpaulin. Avoid high stacking as this promotes caking. The Pallet Capacity Rating (design weight) must not be exceeded on the bottom tier.

7.3 Specific end uses

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

No exposure standards have been entered for this product.

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls Avoid inhalation.

PPE

The selection of Personal Protective Equipment (PPE) should be based on a Risk Assessment of the amount of dust likely to be generated, including the quantity of product being handled, the presence and amount of fines and dust; the task being performed, the work environment in which it is being undertaken, and the level of exposure. Normal work clothing may suffice during transfer operations in the field, e.g. when filling fertiliser boxes, and in bulk storage facilities where contact with the product is limited under well ventilated conditions and occupational exposure limits are not exceeded.

Eye / Face	Where eye contact may occur, wear safety glasses with side shields.
Hands	Cotton gloves, which can be washed or disposed of if heavily soiled, will suffice under most circumstances. Use impervious PVC or rubber gloves in high risk situations.
Body	Where skin contact may occur and for individuals with sensitive skin, wear ankle length and long sleeved clothing or overalls.
Respiratory	Wear a dust mask where exposure to dust is light. Where the dust nuisance is high and ventilation is inadequate, use a properly fitted particulate filter respirator, either full face-piece or half mask plus goggles, that meets Australian Standards AS/NZS 1715 and AS/NZS 1716 "Selection, use and maintenance of respiratory protective devices".

Wash dust from hands and exposed skin. In risk situations, locate an eyewash station nearby. Wash contaminated clothing and other protective equipment before storage or reuse. Ensure all PPE conforms to the relevant Australian Standards. Read the labels on the PPE.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	WHITE GRANULES OR PRILLS
Odour	ODOURLESS
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	NOT AVAILABLE
Melting point	133°C

9.1 Information on basic physical and chemical properties

Evaporation rate	NOT AVAILABLE
pH	9.1 (10% Solution)
Vapour density	NOT AVAILABLE
Relative density	1.33
Solubility (water)	1050 g/L @ 20°C
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	> 133°C
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

9.2 Other information

Bulk density	700 to 800 kg/m³

10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization will not occur.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

No information provided.

10.6 Hazardous decomposition products

May evolve toxic gases (carbon/ nitrogen oxides, ammonia, hydrocarbons) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity This product is expected to be of low toxicity. Based on available data, the classification criteria are not met. FARM USE: Urea can be toxic to livestock, pets and wildlife. As little as 0.25 g/kg live weight can kill cattle not previously adapted to it. Avoid accidental ingestion and contamination of drinking water. Clean up spills promptly. Should livestock poisoning occur, vinegar (acetic acid) needs to be administered at quite high dose rates (as a guide, 2 to 4 litres for cattle), repeating the treatment if necessary. The vinegar makes the ruminal contents more acidic and delays the uptake of ammonia by the blood. Death from urea poisoning is rapid (generally within 2 hours of ingestion of the urea) and often by the time the symptoms appear (severe abdominal pain, shivering, excessive salivation, rapid breathing, unstable gait, bellowing and bloat), it is too late. To have any chance of being effective, treatment must be quick.

Information available for the ingredients:

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
UREA	> 5000 mg/kg (rat)	> 5000 mg/kg (rat)	No data but expected to be low toxicity

Skin Contact may result in irritation, redness, pain and rash.

Eye Contact may result in irritation, lacrimation, pain and redness.

Sensitisation Not classified as causing skin or respiratory sensitisation.

Mutagenicity Not classified as a mutagen.

Carcinogenicity Not classified as a carcinogen.

Reproductive	Not classified as a reproductive toxin.
STOT - single exposure	Over exposure may result in irritation of the nose and throat, with coughing.
STOT - repeated exposure	Not classified as causing organ damage from repeated exposure.
Aspiration	Not classified as causing aspiration.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Urea has low acute ecotoxicity to aquatic organisms.

12.2 Persistence and degradability

Urea is considered to be readily biodegradable.

12.3 Bioaccumulative potential

Bioaccumulation unlikely due to very low Log Kow.

12.4 Mobility in soil

Urea is transformed in the soil, firstly to ammonium, and then to nitrate. Both ammonium and nitrate are taken up by plant roots. Ammonium is absorbed onto and held tightly on the surface of soil colloids (clay and organic matter). Nitrate is more mobile, and is subject to leaching. This is more likely to occur on sandy soils and in high rainfall areas.

12.5 Other adverse effects

Avoid spills and contamination of waterways. Nitrogen fertilisers contain or form ammonium and nitrate. Nitrate is susceptible to leaching and may contaminate groundwater. High nitrate concentrations may render water unsuitable for human and livestock consumption. Depending on the concentration and species, ammonium may be toxic to fish. Elevated nitrogen concentrations in static surface waters can stimulate weed and algal growth. Algae affect water quality and taste.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal

Ideally, the fertiliser should be used for its intended purpose. Beneficial reuse is the preferred disposal option.

For fertiliser that is physically degraded but not contaminated in any way, this may necessitate using different application equipment and methods to apply it.

If the fertiliser is contaminated with other fertilisers, soil, or other non-harmful substances, and it can be satisfactorily applied, use it for its nutrient value in pasture, crops or on a recreational area, e.g. lawns and parks.

If contaminated with other materials, e.g. fuel, oil or chemicals, the fertiliser waste must be disposed of in accordance with relevant local legislation. Contact the Waste Management Authority for advice.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	None allocated.	None allocated.	None allocated.
14.2 Proper Shipping Name	None allocated.	None allocated.	None allocated.
14.3 Transport hazard class	None allocated.	None allocated.	None allocated.
14.4 Packing Group	None allocated.	None allocated.	None allocated.

14.5 Environmental hazards

No information provided.

14.6 Special precautions for user

Hazchem code None allocated.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Poison schedule A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7).

Inventory listings **AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)**
All components are listed on AIIC, or are exempt.

16. OTHER INFORMATION

Additional information

EXPOSURE STANDARDS - TIME WEIGHTED AVERAGES: Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: Strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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