1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier
Product name: GREEN UREA NV

Synonyms:
- 13700 - GREEN UREA 7
- 13705 - GREEN UREA 14
- 33888 - COTTON NOVO
- 96235 - GREEN UREA NV
- AMIDE OF CARBONIC ACID
- CARBAMIDE
- CARBAMIMIDIC ACID
- CARBONYL DIAMIDE
- CARBONYL DIAMINE
- GRANULAR UREA
- GRANULATED UREA
- ISOUREA
- UREA

1.2 Uses and uses advised against
Uses: NITROGEN FERTILISER ● NITROGEN FERTILIZER

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
Fax: (03) 8695 4419
Website: http://www.incitecpivot.com.au

1.4 Emergency telephone numbers
Emergency: 1800 033 111 (All Hours)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
NOT CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

2.2 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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EC Number</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>UREA</td>
<td>57-13-6</td>
<td>200-315-5</td>
<td>99.8%</td>
</tr>
<tr>
<td>TRIETHANOLAMINE</td>
<td>102-71-6</td>
<td>203-049-8</td>
<td>&lt;0.12%</td>
</tr>
<tr>
<td>TETRAMETHYLENE SULPHONE</td>
<td>126-33-0</td>
<td>204-783-1</td>
<td>&lt;0.09%</td>
</tr>
<tr>
<td>BUTYL PHOSPHOROTHIOIC TRIAMIDE</td>
<td>94317-64-3</td>
<td>619-010-7</td>
<td>&lt;0.05%</td>
</tr>
</tbody>
</table>

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
None allocated.

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
Fertilisers absorb moisture. If the spill has occurred in an open area and cannot be immediately retrieved, cover it with a water-proof tarpaulin, weighed down to prevent it being blown off by wind. If necessary, construct an earthen bund around the site to prevent stormwater moving towards the spill, or contaminated stormwater draining from the site. Recover spilt fertiliser as soon as possible. Avoid generating and inhaling dust. Fertiliser that has not been degraded or contaminated can be used as intended. That which has should be placed in a separate bulk bay or containers (bags) for disposal. Sweep up residual fertiliser from sealed surfaces. In earthen areas, scrape up remaining fertiliser and soil from the affected area. The extent of the recovery will depend on an assessment of the area, its use and proximity to waterways and environmentally sensitive ecosystems. In agricultural fields, spread 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. NOTE. Urea may be used in the preparation of solutions, e.g. livestock supplements and nutrient solutions for use in foliar sprays and fertigation programs. Bunding the mixing and liquid storage areas can prevent loss to watercourses. In the event of a spill, liquid that is recovered can be used as intended. Filtration may be necessary to avoid blocking nozzles. Residual liquid can be absorbed with sand or similar material, collected and placed in sealable containers for disposal, e.g. spreading as a fertiliser. Exercise caution as the spill site may be slippery.

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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Reference</th>
<th>TWA ppm</th>
<th>TWA mg/m³</th>
<th>STEL ppm</th>
<th>STEL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triethanolamine</td>
<td>SWA (AUS)</td>
<td>--</td>
<td>5</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

<table>
<thead>
<tr>
<th>Engineering controls</th>
<th>Avoid inhalation. Maintain dust levels below the recommended exposure standard.</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>GREEN GRANULES OR PRILLS</td>
</tr>
<tr>
<td>Odour</td>
<td>ODOURLESS</td>
</tr>
<tr>
<td>Flammability</td>
<td>NON FLAMMABLE</td>
</tr>
</tbody>
</table>
9.1 Information on basic physical and chemical properties

- Flash point: NOT RELEVANT
- Boiling point: NOT AVAILABLE
- Melting point: 133°C
- Evaporation rate: NOT AVAILABLE
- pH: 9.1 (10 % Solution)
- Vapour density: NOT AVAILABLE
- Specific gravity: 1.33
- Solubility (water): 1050 g/L @ 20°C
- Vapour pressure: NOT AVAILABLE
- Upper explosion limit: NOT RELEVANT
- Lower explosion limit: NOT AVAILABLE
- 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: 700 to 800 kg/m³

9.2 Other information

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
Incompatible with oxidising agents (e.g. hypochlorites). Compatibility with Other Fertilisers: Urea is compatible with most fertilisers in dry blends and in solution. Do not mix dry with Ammonium Nitrate or Superphosphate fertilisers. Urea is compatible with Ammonium Nitrate in aqueous solutions.

10.6 Hazardous decomposition products
May evolve toxic gases (ammonia, carbon/ nitrogen oxides, 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:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Oral Toxicity (LD50)</th>
<th>Dermal Toxicity (LD50)</th>
<th>Inhalation Toxicity (LC50)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UREA</td>
<td>8471 mg/kg (rat)</td>
<td>8200 mg/kg (rat)</td>
<td>--</td>
</tr>
<tr>
<td>TRIETHANOLAMINE</td>
<td>2200 mg/kg (rabbit)</td>
<td>&gt; 20 mL/kg (rabbit)</td>
<td>--</td>
</tr>
<tr>
<td>TETRAMETHYLENE SULPHONE</td>
<td>1.54 mL/kg (rat)</td>
<td>3.18 mL/kg (rabbit)</td>
<td>--</td>
</tr>
</tbody>
</table>
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
No information provided.

12.2 Persistence and degradability
No information provided.

12.3 Bioaccumulative potential
No information provided.

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
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
Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard codes
None allocated.

Risk phrases
None allocated.

Safety phrases
None allocated.

Inventory listings
AUSTRALIA: AICS (Australian Inventory of Chemical Substances)
All components are listed on AICS, 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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