1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Material Name	**Inerxa AdBlue**
Synonyms	Diesel Exhaust Fluid (DEF), AUS32, AdBlue
Recommended Uses	Additive to be used for injection into diesel exhaust systems.
Manufacturer	**RURAL LIQUID FERTILISERS PTY LTD**
	1/61 Dowd Street, Welshpool, WA, 6106, AUSTRALIA
Telephone	(08) 9334 8700; 1800 753 000
Fax	(08) 9334 8711
E-mail	info@rlf.com.au
Website	http://www.ruralliquidfertilisers.com

1.4 Emergency telephone number	Poisons Information Centre: 13 11 26
Company telephone number	

2. HAZARDS IDENTIFICATION

NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

Not classified as hazardous according to the criteria of NOHSC, and not classified as Dangerous Goods according to the Australian Dangerous Goods Code.

Symbols(s)	No Hazard symbol required
R-phrase(s)	Not classified.
S-phrase(s)	Not classified.
Health Hazards	Not expected to be a health hazard when used under normal conditions. May pose an inhalation hazard in confined areas due to its ability to produce ammonia vapours.
Signs and Symptoms	Not expected to give rise to an acute hazard under normal conditions for use.
Environmental Hazards	Not classified as dangerous for the environment.
SUSDP Schedule	Not scheduled.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Preparation Description Concentrated aqueous solution containing urea.

Chemical Entity	CAS Number	Proportion
Urea	57-13-6	30 - 40%
Other ingredients determined not to be hazardous	n/a	to 100%

4. FIRST AID MEASURES

General Information	Not expected to be a health hazard when used under normal conditions.
Inhalation	No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
Skin Contact	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
Eye Contact	Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion	In general, no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Advice to Physician	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Specific Hazards	When heated, releases ammonia and when heated to decomposition it emits toxic fumes of nitrogen oxides, ammonia and cyanuric acid.
Suitable Extinguishing Media	Foam, water spray of fog. Dry checmical powder, cabon dioxide, sand or earth may be used for small fires only.
Unsuitable Extinguishing Media	Don not use water in a jet.
Protective Equipment for Firefighters	Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. See Section 13 for information on disposal. Observe the relevant local and international regulations.

Protective measures	Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth or other appropriate barriers.
Clean Up Methods	Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.
Additional Advice	Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

General Precautions
Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Vehicle fueling and vehicle workshop areas - Avoid inhalations and vapours and contact with skin, when filling or emptying a vehicle.

Handling
Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment shoud be used.

Storage
Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable conatiners.

Recommended Materials
For containers or container linings, use mild steel or high density polyethylene.

Unsuitable Materials
PVC.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits

Material	Source	Type	ppm	mg/m³	Notation
Ammonia	ACGIH	TWA	25 ppm		
	ACGIH	STEL	35 ppm		
	AU OEL	TWA	25 ppm	17 mg/m³	
	AU OEL	STEL	35 ppm	24 mg/m³	

Exposure Controls
The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include : Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

Personal Protective Equipment
Personal Protective Equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
AS/NZS 1337 : Eye protectors for industrial applications.
AS/NZS 2161 : Occupational protective gloves - Selection, use and maintenance.
AS/NZS 1715 : Selection, use and maintenance of respiratory protective devices.
AS/NZS 1716 : Respiratory protective devices.

Respiratory Protection
No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point>65°C (149°F)].

Hand Protection	Select gloves tested to a relevant standard (e.g. Europe EN374, US F739). Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
Eye Protection	Wear safety glasses or full face shield if splashes are likely to occur.
Protective Clothing	Skin protection not ordinarily required beyond standard issue work clothes.
Monitoring Methods	Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Environmental Exposure Controls	Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environment legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless. Liquid.
Odour	Odourless
pH	8.0 – 10.0
Initial Boiling Point and Boiling range	> 280°C / 536°F estimated value(s)
Freezing / Melting Point	Data not available
Flash point	Data not available
Upper / Lower Flamability or Explosion Limits	Data not available
Auto-Ignition Temperature	Data not available
Vapour Pressure	Data not available
Specific Gravity	Data not available
Density	1.090 kg/L
Water Solubility	Soluble
Solubility in other solvents	Data not available
N - octanol/water partition coefficient (log Pow)	Data not available
Vapour Density: (air=1)	Data not available
Evaporation rate (nBuAc=1)	Data not available

10. STABILITY AND REACTIVITY

Stability	Stable. Decomposes above 135°C.
Conditions to Avoid	Extremes of temperature and direct sunlight.
Materials to Avoid	Strong oxidising agents.
Hazardous Decomposition Products	Hazardous decomposition products are not expected to form during normal storage. At high temperatures, will decompose to ammonia and carbon dioxide. If burnt, will emit nitrogen oxides, ammonia and cyanuric acid.

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	Expected to be of low toxicity: LD50 > 5000 mg/kg, Rat
Acute Dermal Toxicity	Expected to be of low toxicity: LD50 > 5000 mg/kg, Rabbit
Acute Inhalation Toxicity	Not considered to be an inhalation hazard under normal conditions of use.
Skin Irritation	Not expected to be a hazard.
Eye Irritation	Not expected to be a hazard.
Respiratory Irritation	Inhalation of vapours or mists may cause irritation.
Sensitisation	Not expected to be a skin sensitiser.
Repeated Dose Toxicity	Not expected to be a hazard.
Mutagenicity	Not considered a mutagenic hazard.
Carcinogenicity	Components are not known to be associated with carcinogenic effects.
Reproductive and Developmental Toxicity	Not expected to be a hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Acute Toxicity	Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract).
Mobility	Large volumes may penetrate soil and could contaminate groundwater.
Persistence/degradability	Readily biodegradable.
Bioaccumulation	Not expected to bioaccumulate significantly.
Other Adverse Effects	Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential. Will exert oxygen demand when significant quantities enter watercourses and may cause damage to aquatic life.

13. DISPOSAL CONSIDERATIONS

Material Disposal	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.
Container Disposal	Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor sould be established beforehand.
Local Legislation	Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

ADG	This material is not classified as dangerous according to the Australian Dangerous Goods Code.
IMDG	This material is not classified as dangerous under IMDG regulations.
IATA (Country variations may apply)	This material is either not classified as dangerous under IATA regulations or needs to follow country specific requirements.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

SUSDP Schedule	Not scheduled.
Chemical Inventory Status	AICS: All components are listed or exempt.
Other Information	National Code of Practice for the Preparation of Material Safety Data Sheets [NOHSC:2011] List of Designated Hazardous Substances [NOHSC : 10005]. Approved Criteria for Classifying Hazardous Subtances [NOHSC : 1008]. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC : 1003]. Australian Dangerous Goods Code. Standard Uniform Scheduling of Drugs and Poisons.

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 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: 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 should 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
GHS	Globally Harmonized System
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

Disclaimer

This document has been prepared by Rural Liquid Fertilisers (RLF), 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.

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End of SDS