

# Safety Data Sheet

## AdBlue® / AUS32

Safety Data Sheet according to WHS and the ADG requirements

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### 1. IDENTIFICATION

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#### Product Identifier

**Product Name** AdBlue®  
**Synonyms** AUS 32 Aqueous Urea Solution, DEF (diesel exhaust fluid)  
**Other Means of Identification** Not available

#### **Recommended Use & Restrictions of Use**

Used for NOx reduction in exhaust gases from vehicles with diesel engines. Urea & water additive to be used for injection into diesel SCR exhaust systems. Use as directed by engine manufacturer.

#### Supplier's Details

**Company** AUSblue Pty Ltd  
**Address** PO Box 5386 Brassall QLD 4306 Australia  
**Telephone** 1300 AUSBLUE  
**Email** [info@ausblue.com.au](mailto:info@ausblue.com.au)  
**Website** [www.ausblue.com.au](http://www.ausblue.com.au)

#### Emergency Telephone Number

**Association** Australian Poisons Information Centre  
**Telephone Number** 13 11 26  
**Emergency Services** 000

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### 2. HAZARDS IDENTIFICATION

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**Non-Hazardous Chemical. Non-Dangerous Goods.**

**According to the WHS Regulations and the ADG Code**

#### Classification of the Substance/Mixture

Not Applicable

#### Label Elements

**GHS Label Elements** Not Applicable  
**Hazard Statement/s** Not Applicable

#### **Precautionary Statement**

Keep out of reach of children. Avoid contact with skin and eyes and avoid breathing dust/vapour or spray mist. Wear overalls, impervious gloves and chemical goggles. Use only in well ventilated areas. Store away from other chemicals. Keep containers closed when not in use.

Harmful if swallowed. Give plenty of water to drink and seek medical advice. If in eye, flush gently with running water for 15 minutes. If inhaled, remove from exposure area. If irritation persists, seek medical attention. If skin or hair contact occurs, remove contaminated clothing and flush affected areas with running water. If irritation persists, seek medical attention.

Refer to Waste Management Authority. Dispose of material through a licensed waste contractor.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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<b><u>Substances</u></b>	Mixture of demineralised water & urea.	
<b><u>Mixtures</u></b>		
<b>CAS No.</b>	<b>% (weight)</b>	<b>Name</b>
57-13-6	30-40	Urea
7732-18-5	>60	Demineralized water

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### 4. FIRST AID MEASURES

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<b>General Information</b>	Not expected to be a health hazard when used under normal conditions
<b>Eye Contact</b>	<ul style="list-style-type: none"> <li>• Flush eye with copious quantities of water.</li> <li>• If persistent irritation occurs, obtain medical attention.</li> </ul>
<b>Skin Contact</b>	<ul style="list-style-type: none"> <li>• Remove contaminated clothing.</li> <li>• Flush exposed area with water and follow by washing with soap if available.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>• No treatment necessary under normal conditions of use.</li> <li>• If symptoms persist, obtain medical advice.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>• No treatment necessary unless large quantities are swallowed.</li> <li>• If symptoms persist, obtain medical advice.</li> </ul>

#### **Indication of immediate medical attention/special treatment needed**

- Treat symptomatically

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### 5. FIRE FIGHTING MEASURES

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<b>Extinguishing Media</b>	<p>The product contains a substantial proportion of water, therefore there are no restriction on the type of extinguisher that may be used. Choice of extinguisher media should take into account surrounding areas.</p> <p>Though the material is non-combustive, evaporation of water from the mixture, cause by the heat of nearby fire, may produce floating layers of combustible substances. In such an event consider;</p> <ul style="list-style-type: none"> <li>• Foam</li> <li>• Dry chemical powder</li> <li>• Carbon dioxide</li> </ul>
<b>Special hazards arising from the chemical</b>	<ul style="list-style-type: none"> <li>• When heated, releases ammonia.</li> <li>• When heated to decomposition, releases toxic fumes of nitrogen oxides, ammonia, cyanuric acid.</li> </ul>

#### **Advice for Fire Fighters**

- Clear fire area of non-emergency personal.
- Alert fire brigade: define location, nature of hazard.
- Wear personal safety equipment: breathing apparatus, gloves.
- Use firefighting procedures suitable for the surrounding environment.
- **Do not** approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected locations.
- **If safe to do so**, remove containers from path of fire.

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## 6. ACCIDENTAL RELEASES MEASURES

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### Personal precautions, protective equipment and emergency procedures

See 8. Exposure Controls/Personal Protection

### Environmental precautions

See 12. Ecological information

### Methods & materials for containment & cleaning up

#### Containment

- Use appropriate containment to avoid environmental contamination.
- Use absorbent material such as sand, earth, vermiculite.

#### Major spill

- Alert fire brigade: define location, nature of hazard.

#### Clean up

- Use absorbent material such as sand, earth, vermiculite.
- Prevent entry to sewers, water courses, basements or confined areas.

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## 7. HANDLING & STORAGE

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### Precautions for safe handling

- Use in well ventilated area.
- Properly dispose of contaminated rags or cleaning materials.
- Use personal safety equipment, including safety footwear when drums are being handled.
- Store away from incompatible materials.

### Conditions for safe storage, including any incompatibilities Suitable containers

- Check all containers are clearly labelled and free from leaks
- Polyethylene (PE)
- Polypropylene (PP)

### Incompatible storage

Avoid..

- Storage/mixing with oxidizing agents.
- Carbon steels, zinc coated carbon steels, mild iron.
- Non-ferrous metals & alloys: copper, copper alloys, zinc, lead.
- Solders containing lead, silver zinc, copper.
- Aluminium, aluminium alloys.
- Magnesium, magnesium alloys.
- Plastics or metals coated with nickel.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Control Parameters

The following materials had no OEL's,

- AdBlue®, AUS 32, DEF.

### Ingredient Data

See separate SDS for UREA

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

### Exposure Controls

#### Appropriate engineering controls

- remove a hazard or place a barrier between the worker & the hazard. The basic types of engineering controls are,
- process controls: change the way a job activity or process is done to reduce the risk.
- enclosure and/or isolation of emission source: keep a selected hazard physically away from the worker and ventilation that appropriately removes or adds air to the work environment.

### Personal protection



#### Eye and face protection

- Safety glasses with side shield

#### Skin protection

See Hands/feet protection below

#### Hands/feet protection

- Protective gloves e.g. PVC safety gloves
- Safety footwear or safety gum boots e.g. rubber boots

#### Body protection

- Overalls
- PVC apron

#### Other protection

Barrier cream, skin cleansing cream, eye wash unit.

#### Thermal protection

Not available.

#### Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:000 & 149:001, ASNI Z88 or national equivalent)

## 9. PHYSICAL and CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	Clear colourless slightly alkaline liquid with odour of ammonia. Mixes with water.	<b>Density</b>	1.09 g/cm <sup>3</sup>
		<b>Relative density (water=1)</b>	1.09@20C
		<b>Solubility in water</b>	> 100 g/l
<b>Physical State</b>	liquid	<b>Partition Coefficient</b>	Not determined
<b>Odour</b>	Slight ammonia	<b>Auto ignition temp.</b>	Not determined
<b>Odour threshold</b>	Not determined	<b>Decomposition temp.</b>	100
<b>pH as supplied</b>	Not determined	<b>Viscosity (cSt)</b>	Not determined
<b>Melting point / freezing point (°C)</b>	-11.5	<b>Molecular weight (g/mol)</b>	Not determined
<b>Initial boiling point &amp; boiling range (°C)</b>	100	<b>Taste</b>	Not determined
<b>Flash point</b>	Not applicable	<b>Explosive properties</b>	Not Available
<b>Evaporation rate</b>	Not determined	<b>Vapor Density (Air=1)</b>	Non-determined

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## 9. PHYSICAL and CHEMICAL PROPERTIES (continued)

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<b>Flammability</b>	Non-Flammable	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit</b>	Not Available	<b>Surface Tension</b>	Not Available
<b>Lower Explosive Limit</b>	Not Available	<b>Volatile Component (% vol)</b>	Not Available
<b>Vapour Pressure (kPa)</b>	6.4 @ 40C	<b>Gas Group</b>	Not Available
<b>Solubility in Water</b>	Miscible	<b>pH as a Solution (1%)</b>	9.8-10 (10%)
<b>Vapour Density (Air = 1)</b>	Not Available	<b>VOC (g/L)</b>	Not Available

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## 10. STABILITY AND REACTIVITY

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<b>Reactivity</b>	See 7. Handling and Storage
<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>• Product is considered stable.</li> <li>• Hazardous polymerization will not occur.</li> </ul>
<b>Possibility of hazardous reactions</b>	See 7. Handling and Storage
<b>Conditions to avoid</b>	See 7. Handling and Storage
<b>Incompatible materials</b>	See 7. Handling and Storage
<b>Hazardous decomposition materials</b>	See 7. Handling and Storage

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## 11. TOXICOLOGICAL INFORMATION

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### Information of toxicological effects

<b>Inhalation</b>	There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
<b>Ingestion</b>	Urea may cause irritation to the digestive tract, nausea, vomiting, diarrhea, salt depletion, headache, confusion.
<b>Skin contact</b>	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
<b>Eye contact</b>	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
<b>Chronic</b>	Substance accumulation in the human body may occur and may cause some concern following repeated or long-term occupational exposure.

### **AdBlue® / AUS 32 Aqueous Urea Solution**

#### **TOXICITY**

No adverse health effect are expected if the product is handled in accordance with this Safety Data Sheet.

#### **IRRITATION**

**Eye:** Mild irritation  
**Skin contact:** Mild irritation  
**Inhalation:** May cause respiratory irritation  
**Ingestion:** May cause nausea, vomiting, diarrhea and abdominal pain.

## Toxicity

Ingredient	Toxicity	Irritation
AdBlue®	Not available	Not available
Urea	Oral (rat) LD50: 8471 mg/kg [2]	Skin (human): 22mg/3 d (I)- mild
Water	Oral (rat) LD50: >90000 mg/kg [2]	Not available

<sup>1</sup> Value obtained from Europe ECHA Registered Substances – Acute toxicity 2. \* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS – Register of Toxic Effect of Chemical Substances.

## 12 ECOLOGICAL INFORMATION

### Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
urea	LC50	96	Fish	5mg/L	4
urea	EC50	48	Crustacea	3910mg/L	4
urea	EC50	96	Algae or other aquatic plants	42184.758mg/L	3
urea	BCF	24	Algae or other aquatic plants	0.05mg/L	4
urea	EC50	384	Crustacea	894.861mg/L	3
urea	NOEC	96	Crustacea	1000mg/L	4

### Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

Legislation addressing waste disposal requirement may differ by country, state or territory. Each user must refer to laws operating in their area.

This product may be recycled if unused, or if it has not be contaminated so as the make it unsuitable for its intended use.

### **Product & packaging disposal**

- Do not allow wash water from cleaning or process equipment to enter storm-water drains.
- It may be necessary to collect all wash water for treatment before disposal.
- Disposal to sewer may be subject to local laws & regulations and these should be considered first.
- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Dispose of by: burial in a specifically licensed landfill (chemical and/or pharmaceutical waste), or incineration in licensed apparatus (after admixture with suitable combustible material).
- decontaminate empty containers.

## 14. TRANSPORT INFORMATION

### Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG):	<b>NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS</b>
Air transport (ICAO-IATA / DGR):	<b>NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS</b>
Sea transport (IMDG-Code / GGVSee):	<b>NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS</b>

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## 15. REGULATORY INFORMATION

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

**Non-Hazardous Chemical. Non-Dangerous Goods.**

**According to the WHS Regulations and the ADG Code**

**UREA(57-13-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Inventory of Chemical Substances (AICS)

**WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Inventory of Chemical Substances (AICS)

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## 16. OTHER INFORMATION

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This safety data sheet has been prepared by AUSblue Pty Ltd.

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since AUSblue Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their AUSblue representative or AUSblue Pty Ltd at the contact details on page 1.

AUSblue Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.