

# SAFETY DATA SHEET

## SECTION 1. PRODUCT IDENTIFICATION AND SUPPLY COMPANY DETAILS


<b>Product name:</b>	AdBlue®
<b>Synonyms:</b>	AUS 32 (Aqueous urea solution); DEF (Diesel exhaust fluid); urea solution 32.5%
<b>Recommended use:</b>	Additive for injection into diesel SCR exhaust systems (NO reduction in exhaust gases).
<b>Supplier:</b>	EcoBlue International Pty Ltd
<b>ABN:</b>	88 983 129 129
<b>Street Address:</b>	15 Ernest Clark Road, Canning Vale, WA 6155
<b>Website:</b>	<a href="https://www.ecoblue.com">https://www.ecoblue.com</a>
<b>Email:</b>	<a href="mailto:deliveries@ecoblueinternational.com.au">deliveries@ecoblueinternational.com.au</a>
<b>Telephone:</b>	1300 272 444
<b>Emergency Telephone:</b>	Australia - Poisons Information Centre 13 11 26

## SECTION 2. HAZARD IDENTIFICATION

### Classification of mixture

	HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.
<b>Poisons Schedule</b>	Not Applicable
<b>Classification<sup>[1]</sup></b>	Serious Eye Damage/Eye Irritation Category 2A, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Skin Corrosion/Irritation Category 2
<b>Legend</b>	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 -Annex VI

### Label Elements

<b>Hazard pictogram</b>	
<b>Signal word</b>	Warning
<b>Hazard statement(s)</b>	
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H315	Causes skin irritation.

#### Precautionary Statement(s) – Prevention

P271	Use only outdoors or in a well-ventilated area.
P261	Avoid breathing mist/vapours/spray.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P264	Wash all exposed external body areas thoroughly after handling.

#### Precautionary Statement(s) – Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

#### Precautionary Statement(s) – Storage

P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

#### Precautionary Statement(s) – Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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### SECTION 3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO.	%[WEIGHT]
Water	7732-18-5	67.5%
Urea	57-13-6	32.5%

### SECTION 4. FIRST AID MEASURES

Australia Poisons Information Centre **13 11 26** | Australia Emergency Services: **000**

#### Description of first aid measures

<b>Eye contact</b>	If this product comes into contact with eyes:
	<ul style="list-style-type: none"> <li>Wash out immediately with fresh running water.</li> </ul>

	<ul style="list-style-type: none"> <li>• Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>• Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>• Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>• Immediately remove all contaminated clothing, including footwear.</li> <li>• Flush skin and hair with running water (and soap if available).</li> <li>• Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>• If fumes or combustion products are inhaled remove from contaminated area.</li> <li>• Lay patient down. Keep warm and rested.</li> <li>• Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>• Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>• Transport to hospital, or doctor</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>• <b>If swallowed do NOT induce vomiting.</b></li> <li>• If vomiting occurs, lean patient forward or place on left side (headdown position, if possible) to maintain open airway and prevent aspiration.</li> <li>• Observe the patient carefully.</li> <li>• Never give liquid to a person showing signs of being sleepy or with reduced awareness, i.e. becoming unconscious.</li> <li>• Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>• Seek medical advice</li> </ul>

## SECTION 5. FIRE FIGHTING MEASURES

### Suitable Extinguishing media:

There is no restriction on the type of extinguisher which may be used.

Choice of extinguishing media should take into account surrounding areas. Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.

In such an event consider:

- Foam
- Dry Chemical Powder
- Carbon Dioxide

Specific hazards arising from the substance or mixture.

<b>Fire incompatibility</b>	Avoid contamination with strong oxidising agents as ignition may result
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Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.

#### Advice for firefighters

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>Prevent, by any means available, spillage from entering drains or water courses.</li> <li>Use firefighting procedures suitable for surrounding area.</li> <li>DO NOT approach containers suspected to be hot.</li> <li>Cool fire exposed containers with water spray from a protected location.</li> <li>If safe to do so, remove containers from path of fire.</li> <li>Equipment should be thoroughly decontaminated after use.</li> </ul>
<b>Fire/Explosion</b>	<ul style="list-style-type: none"> <li>Noncombustible.</li> <li>Not considered to be a significant fire risk.</li> <li>Expansion or decomposition on heating may lead to violent rupture of containers.</li> <li>Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).</li> <li>May emit acrid smoke.</li> </ul> <p>Decomposition may produce toxic fumes of: carbon dioxide (CO<sub>2</sub>) nitrogen oxides (NO<sub>x</sub>) other pyrolysis products typical of burning organic material. May emit corrosive fumes.</p>
<b>HAZCHEM</b>	Not Applicable

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.

#### Personal precautions, protective equipment and emergency procedures

See section 8.

#### Environmental precautions

See section 12

#### Methods and material for containment and cleaning up

<b>Minor Spills</b>	<p>Slippery when spilt.</p> <ul style="list-style-type: none"> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> </ul>
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	<ul style="list-style-type: none"> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb spill with sand, earth, inert material or vermiculite.</li> <li>Wipe up.</li> <li>Place in a suitable, labelled container for waste disposal.</li> </ul>
<p><b>Major Spills</b></p>	<p>Slippery when spilt. Minor hazard.</p> <ul style="list-style-type: none"> <li>Clear area of personnel.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Control personal contact with the substance, by using protective equipment as required.</li> <li>Prevent spillage from entering drains or water ways.</li> <li>Contain spill with sand, earth or vermiculite.</li> <li>Collect recoverable product into labelled containers for recycling.</li> <li>Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.</li> <li>Wash area and prevent runoff into drains or waterways.</li> <li>If contamination of drains or waterways occurs, advise emergency services.</li> </ul>

## SECTION 7. HANDLING AND STORAGE

### Precautions for safe handling

<p><b>Safe handling</b></p>	<ul style="list-style-type: none"> <li>Limit all unnecessary personal contact.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li><b>When handling DO NOT eat, drink or smoke.</b></li> <li>Always wash hands with soap and water after handling. • Keep containers securely sealed when not in use</li> <li>Avoid physical damage to containers.</li> <li>Use good occupational work practice.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>DO NOT allow material to contact humans, exposed food or food utensils.</li> <li>DO NOT allow clothing wet with material to stay in contact with skin.</li> <li>DO NOT enter confined spaces until atmosphere has been checked.</li> </ul>
<p><b>Storage requirements</b></p>	<p>Store between 10 and 30°C</p> <ul style="list-style-type: none"> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>Store in a cool, dry, well-ventilated area.</li> <li>Store away from incompatible materials and foodstuff containers.</li> <li>Protect containers against physical damage and check regularly for leaks.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS</li> </ul>

**Conditions for safe storage, including any incompatibilities.**

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>• Polyethylene or polypropylene container.</li> <li>• Packing as recommended by manufacturer.</li> <li>• Check all containers are clearly labelled and free from leaks.</li> </ul>
<b>Storage incompatibility</b>	<ul style="list-style-type: none"> <li>• Avoid reaction with oxidising agents</li> <li>• Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.</li> </ul> <p>Dry urea ignites or explodes on reaction with ammonium nitrate, chromyl chloride, nitrosyl perchlorate, phosphorus pentachloride</p>

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Control parameters**

**Emergency Limits**

Ingredient	TEEL - 1	TEEL - 2	TEEL-3
urea	30mg/m3	280 mg/m3	1,700 mg/m3

**Occupation Exposure Banding**

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
urea	E	≤ 0.01 mg/m3

**Material Data**

<b>Appropriate engineering controls</b>	Provide adequate ventilation in warehouse or closed storage areas. Ventilation can remove or dilute an air contaminant and general exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection.
<b>Personal protection</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>• Safety glasses with side shields; or as required.</li> <li>• Chemical goggles.</li> <li>• Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]</li> </ul>
<b>Skin protection</b>	See hand protection below

<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>Wear protective gloves, e.g. Neoprene, Butyl or Viton</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"> <li>Overalls</li> <li>Eyewash unit</li> </ul>

### Recommended material(s)

#### Respiratory protection

Type -P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Colourless clear liquid when free from crystals
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<b>Physical state</b>	Liquid	<b>Relative density (water = 1)</b>	1.09@20 °C
<b>Odour</b>	Odourless	<b>Partition coefficient n-octanol / water</b>	Not available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not available
<b>pH</b>	Not Available	<b>Decomposition temperature (°C)</b>	100
<b>Melting point / freezing point (°C)</b>	-11.5	<b>Viscosity (cSt)</b>	Not available
<b>Boiling Point (°C)</b>	100	<b>Molecular weight (g/mol)</b>	Not available
<b>Flash Point</b>	Not available	<b>Taste</b>	Not available
<b>Evaporation rate</b>	Not available	<b>Explosive properties</b>	Not available
<b>Flammability</b>	Not Available	<b>Oxidising properties</b>	Not available
<b>Upper Explosive Limit (%)</b>	Not Available	<b>Surface Tension (dyn/cm or mN/m)</b>	Not available
<b>Lower Explosive Limit (%)</b>	Not Available	<b>Volatile Component (%vol)</b>	Not available
<b>Vapour pressure (kPa)</b>	6.4 @ 40 °C	<b>Gas group</b>	Not available
<b>Solubility in water (g/L)</b>	Miscible	<b>pH as a solution (1%)</b>	9.8 – 10.0 (10%)
<b>Vapour density (Air = 1)</b>	Not Available	<b>VOC (g/L)</b>	Not available

## SECTION 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	See section 7
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<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects

<b>Inhaled</b>	Not normally a hazard due to non-volatile nature of product Inhalation of vapours or mists may cause respiratory irritation.
<b>Ingestion</b>	Ingestion may result in nausea, abdominal irritation, pain and diarrhoea
<b>Skin contact</b>	<p>Irritation and skin reactions are possible with sensitive skin The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis.</p>
<b>Eye</b>	The liquid may produce eye discomfort causing transient smarting, blinking
<b>Chronic</b>	<p>The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models).</p> <p>Principal routes of exposure are by accidental skin, eye contact and inhalation of vapours.</p> <p>As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in workplace atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.</p> <p>Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.</p>

<b>AdBlue®</b>	<b>Toxicity</b>	<b>Irritation</b>
	Not Available	Not Available
<b>urea</b>	<b>Toxicity</b>	<b>Irritation</b>
	Dermal (rat) LD50: 8200 mg/kg <sup>[2]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>
	Oral (rat) LD50: 8471 mg/kg <sup>[2]</sup>	Skin (human): 22 mg/3 d (I) – mild
		Skin: no adverse effect observed (not irritating) <sup>[1]</sup>



<b>water</b>	<b>Toxicity</b>	<b>Irritation</b>
	Oral (Rat) LD50; >90000 mg/kg <sup>[2]</sup>	Not Available
<b>Legend</b>	1. 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	

<b>Acute toxicity</b>	✗	<b>Carcinogenicity</b>	✗
<b>Skin irritation/Corrosion</b>	✓	<b>Reproductivity</b>	✗
<b>Serious Eye Damage/Irritation</b>	✓	<b>STOT – Single Exposure</b>	✓
<b>Respiratory or Skin sensitization</b>	✗	<b>STOT – Repeated Exposure</b>	✗
<b>Mutagenicity</b>	✗	<b>Aspiration Hazard</b>	✗

**Legend:** ✗ Data either not Data available to make classification  
 ✓ Data available or does not fill the criteria for classification.

## SECTION 12. ECOLOGICAL INFORMATION

**DO NOT** discharge into sewer or waterways.

Toxicity

AdBlue	End Point	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available

Urea	End Point	Test Duration (hr)	Species	Value	Source
	NOEC (EC <sub>x</sub> )	5040h	Fish	≥1.71 mg/L	2
	LC50	96h	Fish	4.65 – 8.48 mg/l	4
	EC50	48h	Crustacea	3910 mg/l	4

Water	End Point	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available

**Legend:** Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity  
 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

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Urea	Low	Low
Water	Low	Low

**Bio accumulative potential**

Ingredient	Bioaccumulation
Urea	Low (BCF = 10)

#### Mobility in soil

Ingredient	Mobility
Urea	Low (KOC = 4.191)

## SECTION 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

Product/Packaging disposal	
	<ul style="list-style-type: none"> <li>Recycle wherever possible or consult manufacturer for recycling options.</li> <li>Consult State Land Waste Management Authority for disposal.</li> <li>Bury residue in an authorised landfill.</li> <li>Recycle containers if possible or dispose of in an authorised landfill.</li> </ul>

## SECTION 14. TRANSPORT INFORMATION

#### Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

**Land transport (ADG):** NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

**Air transport (ICAO-IATA / DGR):** NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

**Sea transport (IMDG-Code / GGVSee):** NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

**Transport in bulk according to Annex II of MARPOL and the IBC code:** Not Applicable

#### Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
urea	Not Available
water	Not Available

#### Transport in bulk in accordance with the ICG Code

Product name	Ship Type
urea	Not Available
water	Not Available

## SECTION 15. REGULATORY INFORMATION

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

**Urea is found on the following regulatory lists**

Australian Inventory of Industrial Chemicals (AIIC)

**Water is found on the following regulatory lists**

Australian Inventory of Industrial Chemicals (AIIC)

**National Inventory Status**

National Inventory	Status
Australia – AIICS / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (urea; water)
China - IECSC	Yes
Europe – EINEC/ELINC/NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan – TSCA	Yes
Mexico -INSQ	Yes
Vietnam – NCI	Yes
Russia – FBEPH	Yes

**Legend**

*Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.*

**SECTION 16. OTHER INFORMATION**

Revision Date	21/08/2023
Initial Date	22/11/2022

**SDS Version Summary**

Version	Date of Update	Sections Updated
3.0	22/11/2022	All Sections
4.0	21/08/2023	All Sections

**Reason(s) for Issue:**

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 EcoBlue International 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 EcoBlue representative or EcoBlue International Pty Ltd at the contact details on page 1.

EcoBlue International 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.

Please read all labels carefully before using product.

This SDS is prepared in accordance with the Safe Work Australia Code of Practice *Preparation of safety data sheets for hazardous chemicals. Code of Practice.* July 2020. [www.swa.gov.au](http://www.swa.gov.au).

## Acronyms

TEEL:	Temporary Emergency Exposure Limit
NOAE:	No Observed Adverse Effect Level
BCF:	BioConcentration Factors
AIIC:	Australian Inventory of Industrial Chemicals
NOHSC:	National Occupational Health and Safety Commission
STOT:	Specific Target Organ Toxicity
DSL:	Domestic Substances List
NDSL:	Non-Domestic Substances List
IECSC:	Inventory of Existing Chemical Substance in China
EINECS:	European Inventory of Existing Commercial chemical Substances
ELINCS:	European List of Notified Chemical Substances
NLP:	No-Longer Polymers
ENCS:	Existing and New Chemical Substances Inventory
KECI:	Korea Existing Chemicals Inventory
NZIoC:	New Zealand Inventory of Chemicals
PICCS:	Philippine Inventory of Chemicals and Chemical Substances
TSCA:	Toxic Substances Control Act
TCSI:	Taiwan Chemical Substance Inventory
INSQ:	Inventario Nacional de Sustancias Químicas
NCI:	National Chemical Inventory
FBEPH:	Russian Register of Potentially Hazardous Chemical and Biological Substances