MATERIAL SAFETY DATA SHEET

AdBlue®

AUS 32 · Aqueous Urea Solution 32.5%

NOx-Reducing Agent AUS 32 · Automotive Grade Urea (AGU) · Diesel Exhaust Fluid (DEF)

Very pure NOx-reduction agent for Diesel engines equipped with SCR catalysts. Produced from a fully integrated and dedicated production plant.

COMPOSITION	HAZARD	TRANSPORT
Urea 32.5 % · Water 67.5 %	**No special hazards**	**Not a dangerous good**

01 SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION

Product	**AdBlue/AUS32/DEF**
Use	Chemical
Company	PureBlue Automotive Solutions
Telephone	+91 761 956 5022
E-mail address	ahad@pureblue.co.in

02 HAZARD IDENTIFICATION

No special hazards have to be mentioned.

03 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Ingredient	Content (W/W)
Urea	32.5 %
Water	67.5 %

04 FIRST-AID MEASURES

General advice	Remove contaminated clothing.
If inhaled	Keep patient calm, remove to fresh air.
On skin contact	Wash thoroughly with soap and water.
On contact with eyes	Wash affected eyes for at least 15 minutes under running water with eyelids held open.
On ingestion	Rinse mouth and then drink plenty of water.

05 FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water, carbon dioxide, dry powder, sand
Specific hazards	Harmful vapours
Substances released in case of fire	The substances/groups of substances mentioned can be released in case of fire: ammonia
Special protective equipment	Wear a self-contained breathing apparatus.
Further information	Contaminated extinguishing water must be disposed of in accordance with official regulations.

06 ACCIDENTAL RELEASE MEASURES

Methods for cleaning up or taking up

For small amounts	Rinse away with water. Dispose of absorbed material in accordance with Regulations.
For large amounts	Rinse away with water. Dispose of absorbed material in accordance with Regulations.

07 HANDLING AND STORAGE

Handling

Handling	No special measures necessary provided product is used correctly.
Protection against fire and explosion	No special precautions necessary.

Storage

Suitable container materials	High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4301 (V2), Stainless steel 1.4401
Unsuitable container materials	Paper, iron, tin (tinplate), copper, aluminum, glass, brass, zinc coated, zinc
Storage temperature	-5 °C to 30 °C
Protect from temperatures below	-11 °C The packed product is not damaged by low temperatures or by frost.
Protect from temperatures above	35 °C It is not necessary to protect the packed product against exceeding the temperature indicated.

08 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Personal protective equipment

Respiratory protection	Wear respiratory protection if ventilation is inadequate. Gas filter for gases/vapours of inorganic compounds (e.g. EN 14387 Type B)

Hand protection	**Chemical resistant protective gloves (EN 374)** • Natural rubber / natural latex (NR) – 0.5 mm coating thickness • Chloroprene rubber (CR) – 0.5 mm coating thickness • Nitrile rubber (NBR) – 0.4 mm coating thickness • Butyl rubber (butyl) – 0.7 mm coating thickness • Fluoroelastomer (FKM) – 0.7 mm coating thickness • Polyvinylchloride (PVC) – 0.7 mm coating thickness
Eye protection	Tightly fitting safety goggles (splash goggles) (e.g. EN 166)
Body protection	Rubber boots with protection equipment
General safety and hygiene measures	Handle in accordance with good industrial hygiene and safety practice.

09 PHYSICAL AND CHEMICAL PROPERTIES

Form	Liquid
Colour	Colourless
Odour	Faint specific odour, ammonia-like
pH value	9 – 10 (DIN ISO 976)
Solidification temperature	-11 °C
Flash / Boiling point	approx. 100 °C (1,013 bar)
Flammability	Does not ignite
Ignition temperature	Not applicable
Self-heating ability	It is not a substance capable of spontaneous heating.
Explosion hazard	Not explosive
Fire promoting properties	Not fire propagating
Vapour pressure	23 mbar (20 °C)
Density	1,085 – 1,095 kg/m³ (20 °C) (ISO 2811-3)
Solubility in water	Soluble (15 °C)
Miscibility with water	(15 °C) completely (e.g. >= 90 %)

10 STABILITY AND REACTIVITY

Substances to avoid	Nitrites, nitrates, strong oxidizing agents
Corrosion to metals	Corrosive effect on non-ferrous metals
Hazardous reactions	The product is chemically stable.
Hazardous decomposition products	Ammonia

11 TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 rat (oral)	14,300 mg/kg

Irritation

Assessment of irritating effects	Not irritating to the skin. Not irritating to the eyes.
Primary skin irritation (rabbit)	Non-irritant
Primary irritation of the mucous membrane (rabbit)	Non-irritant

Other relevant toxicity information

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

12 ECOLOGICAL INFORMATION

Ecotoxicity

Organism / test	Result
Toxicity to fish	LC50 > 6,810 mg/l
Aquatic invertebrates	LC50 (48 h) > 10,000 mg/l
Aquatic plants	EC10 (8 d) > 10,000 mg/l
Microorganisms / effect on activated sludge	EC10 (16 h) > 10,000 mg/l

Persistence and degradability

Elimination information	96 % DOC reduction (16 d). Biodegradable.

Bioaccumulation potential

Because of the n-octanol/water distribution coefficient (log Pow), accumulation in organisms is not to be expected.

Additional information

Other eco-toxicological advice: The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

13 DISPOSAL CONSIDERATIONS

Product	Test for use in agriculture.
Contaminated packaging	Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14 TRANSPORT INFORMATION

Mode	Regulation	Classification
Land transport	ADR	Not classified as a dangerous good under transport regulations
Land transport	RID	Not classified as a dangerous good under transport regulations

Mode	Regulation	Classification
Inland waterway transport	ADNR	Not classified as a dangerous good under transport regulations
Sea transport	IMDG	Not classified as a dangerous good under transport regulations
Air transport	IATA/ICAO	Not classified as a dangerous good under transport regulations

15 REGULATORY INFORMATION

Regulations in India

The product does not require a hazard-warning label in India.

CONTACT
PureBlue Automotive Solutions Pvt Ltd
Bengaluru, India
+91 9900033049 · operations@pureblue.co.in

NOTE

THE DATA CONTAINED IN THIS SAFETY DATA SHEET ARE BASED ON OUR CURRENT KNOWLEDGE AND EXPERIENCE AND DESCRIBE THE PRODUCT ONLY WITH REGARD TO SAFETY REQUIREMENTS. THE DATA DO NOT DESCRIBE THE PRODUCT'S PROPERTIES (PRODUCT SPECIFICATION). NEITHER SHOULD ANY AGREED PROPERTY NOR THE SUITABILITY OF THE PRODUCT FOR ANY SPECIFIC PURPOSE BE DEDUCED FROM THE DATA CONTAINED IN THE SAFETY DATA SHEET. THE RECIPIENT OF THE PRODUCT IS RESPONSIBLE FOR ENSURING THAT ANY PROPRIETARY RIGHTS AND EXISTING LAWS AND LEGISLATION ARE OBSERVED.

Company name and seal

Signature