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Urea Technologies Automotive and Industrial

HOME	QUOTE	ADBLUE®	INDUSTRIAL	CONTACT
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Material Safety Data Sheet



Incorporating technical specification

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Product name AdBlue®.
Company

ChemPlus+
Treveen House
Meltonby
York
YO42 1PN

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2. COMPOSITION / INFORMATION ON INGREDIENTS

Composition	Urea
Concentration	32.5%
CAS No.	57-13-6
EINECS No.	200-315-5
Further Information	Aqueous solution of Urea

3. HAZARDS IDENTIFICATION

Main hazards: No Significant Hazard

4. FIRST AID MEASURES

Skin contact: May cause irritation to skin. Wash off immediately with plenty of soap and water.

Remove contaminated clothing. Seek medical attention if irritation or symptoms persist.

Eye contact: May cause irritation to eyes. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.

Inhalation: May cause irritation to mucous membranes. Move the exposed person to fresh air.

Ingestion: May cause irritation to mucous membranes. DO NOT INDUCE VOMITING. Seek

medical attention if irritation or symptoms persist.

5. FIRE FIGHTING MEASURES

Extinguishing media: Use extinguishing media appropriate to the surrounding fire conditions.

Fire hazards: Burning produces irritating, toxic and obnoxious fumes.
Protective equipment: Wear suitable respiratory equipment when necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Ensure adequate ventilation of the working area.

Environmental precautions: Do not allow product to enter drains. Prevent further spillage if safe.

Clean up methods: Absorb with inert, absorbent material. Sweep up. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes and skin. Ensure adequate ventilation of the working area.

Adopt best Manual Handling considerations when handling, carrying and dispensing. In order to avoid crystallisation or hydrolysis or AdBlue® resp. It is recommended to store the product under normal conditions at temperatures between -5 to 30°C. This product is not flammable.

Storage: Keep in a cool, dry, well-ventilated area. Keep containers tightly closed. Store in correctly labelled containers. Avoid subsoil penetration.

Suitable packaging: Tanks and related facilities which may get in contact with AdBlue®, shall be made of high alloyed austenitic Cr-Ni Steel and Mo-Cr-Ni steel according to DIN EN 10 088-1 to 3 (e.g. 1.4541 and 1.4571).

UNSUITABLE: Materials such as copper, copper-containing alloys and unalloyed and galvanised steels are not suitable. Under these conditions, AdBlue® has a shelf life of at least one year.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures: Ensure adequate ventilation of the working area.

Hand protection: Chemical resistant gloves (PVC)

Eye protection: In case of splashing, wear: Approved safety goggles.

Protective equipment: Wear protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Description:	Liquid.
Colour:	Colourless.
Odour:	Slight, ammonia
pH:	10
Boiling point:	103°C
Relative density:	1.087-1.093 g/cm ³ @ 20 Deg. C.
Water solubility:	miscible in water.
Viscosity:	1.4 mPas @ 25 Deg. C.

As Sold specification to ISO 22241

Specification:		
Urea	31.8 – 33.2	% by weight
Alkalinity as NH ₃	max. 0.2	% by weight
Biuret	max. 0.3	% by weight
Insolubles	max. 20	mg/kg
Aldehyde	max. 5	mg/kg
Phosphate (PO ₄)*	max. 0.5	mg/kg
Aluminium*	max. 0.5	mg/kg
Calcium*	max. 0.5	mg/kg
Iron*	max. 0.5	mg/kg
Copper*	max. 0.2	mg/kg
Zinc*	max. 0.2	mg/kg
Chromium*	max. 0.2	mg/kg
Nickel*	max. 0.2	mg/kg
Magnesium*	max. 0.5	mg/kg
Sodium*	max. 0.5	mg/kg
Potassium*	max. 0.5	mg/kg
Density at 20°C	1087.0 - 1093.0	kg/m ³
Refractive index at 20°C	1.3814 - 1.3843	
Identity	identical to reference	

The analytical methods are defined in ISO 22241-2.

* Contents should be analytically checked for non-dedicated containers/filling equipment prior to use using the methods specified in ISO 22241-2.

Storage:

To maintain the product quality it is recommended that AdBlue® is stored below 25°C and out of direct sunlight

Shelf Life (in accordance with ISO 22241-3)

Constant ambient storage temperature (°C) (months)	Minimum shelf life
≤10	36
≤25	18
≤30	12
≤35	6
≥35	Significant

decomposition test before use

Freezing:

AdBlue® will begin to freeze at -11.5°C; this does not affect the product quality or strength. The liquid phase of a partially frozen solution will still be at the required concentration and may continue to be used. The remaining frozen portion may be used after allowing to thaw

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

Materials to avoid: Strong oxidising agents. Nitrites.

Hazardous decomposition products: Ammonia

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	LD50/Oral/Rat = 14300 mg/kg
Skin Irritation	LD50/Oral/Mouse = 11500 mg/kg
Eye Irritation	May cause eye irritation
Genotoxicity In Vitro animals	Urea has not caused sensitisation on laboratory animals

No adverse health effects are known or expected under normal use

12. ECOLOGICAL INFORMATION

Eco toxicity

AdBlue®	Daphnia LC50/24h = 1000 mg/l
Fish LC50/96h = >6810 mg/l	

Degradability: Do not allow uncontrolled discharge of the product into the environment. Biodegradable.

13. DISPOSAL CONSIDERATIONS

General information: Dispose of in compliance with all local and national regulations.

14. TRANSPORT INFORMATION

Further information: The product is not classified as dangerous for carriage

15. REGULATORY INFORMATION

Risk phrases: NSH - No Significant Hazard.

16. OTHER INFORMATION

Further information: The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.

ChemPlus+ are not responsible for any damage or injury resulting from abnormal use. Or from any failure to follow appropriate practices or from hazards inherent in the nature of the product.