



SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

AdBlue

1. Identification of the substance/ preparation and company/ undertaking

Product name : AdBlue

Use of the substance/ preparation : Additive for reduction of NOx emission from diesel engine exhausts.

Supplier : GreenChem Holding BV
Keijzerstraat 17
NL-4811HL Breda
Tel. +31 (0)76 – 581 27 27
Fax. +31 (0)76 – 581 25 71

Emergency telephone number : 112

Local representation : +44 (0)129 – 646 85 31

GreenChem Solutions LTD.
Kingfisher Exchange
Walton Street
Aylesbury
Bucks – HP21 7AY

2. Hazards identification

The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Not classified
No known significant effects or critical hazards.

See section 11 for more detailed information on health effects and symptoms.

3. Composition/ information on ingredients

Substance/ preparation : Preparation

Chemical characteristics : Aqueous urea (32.5%) solution

There are no ingredients or additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.



4. First aid measures

- Inhalation : Move exposed person to fresh air. Obtain medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Never give anything by mouth to an unconscious person. Obtain medical attention if symptoms occur.
- Skin contact : Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Obtain medical attention if symptoms occur.
- Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- General : Move the victim to a safe area as soon as possible. If unconscious, place in recovery position and seek medical advice. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Allow the victim to rest in a well-ventilated area.
- Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See section 11 for more detailed information on health effects and symptoms.



5. Fire-fighting measures

Extinguishing media

- Suitable : Use an extinguishing agent (like water spray(fog), foam, dry chemical or CO₂) suitable for the fire.
- Not suitable : None known.
- Special exposure hazards : In a fire or if heated, a pressure increase will occur and the container may burst.
- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous combustion products : Decomposition products may include the following materials:
Carbon Oxides
Nitrogen Oxides
Ammonia
- Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions : Provide adequate ventilation. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Absorb with dry earth, sand or other non-combustible material.
Contaminated absorbent material may pose the same hazard as the spilt product.



Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Absorb with liquid-binding material (sand, diatomite, universal binders etc.) or use a spill kit.

7. Handling and storage

Handling : Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Ensure eyewash facilities are located close to the working environment.

Storage : Keep container tightly closed and sealed until ready for use. Use appropriate containment to avoid environmental contamination. Keep container in a cool, well-ventilated area. Keep away from heat and direct sunlight.

Packaging materials recommended : Use original container.

8. Exposure controls/ personal protection

Exposure limit values

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
urea	No exposure limit value known

Occupational exposure controls : Provide adequate ventilation.

Respiratory protection : Wear appropriate respirator when ventilation is inadequate. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapor filter (Type A), ammonia filter (Type K).

Hand protection : Use chemical resistant, impervious gloves BS EN374:2003 Class 1 latex.



Eye protection	:	Use safety eyewear designed to protect against splash of liquids.
Skin protection	:	Avoid contact with skin. Wear suitable protective clothing (EN471). Wash hands, forearms and face thoroughly after handling chemical products, before eating/smoking and using the lavatory and at the end of every working period.
Environmental exposure controls	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation

9. Physical and chemical properties

Appearance

Physical state	:	Liquid
Color	:	Colorless
Odor	:	Possibly slightly ammonia

Safety data

pH-value	:	10 (Aqueous solution 10%)
Viscosity, dynamic	:	±1,4 mPas at 25°C
Density	:	1,09 g/ cm ³ (20°C/ 68°F)
Melting point	:	-11,5°C (11,3°F)
Boiling point	:	103°C (217,4°F) 100°C : decomposition temperature
Water solubility	:	Easily miscible

10. Stability and reactivity



Stability	:	The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur (see section 7).
Hazardous decomposition products	:	Ammonia (gas) Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Potential acute health effects

Adverse health effects are considered unlikely, when the product is used according to directions.

Inhalation	:	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
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Potential chronic health effects

No known significant effects or critical hazards

Over-exposure signs/ symptoms

No specific data.

12. Ecological information

Environmental effects	:	The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendment.
Aquatic ecotoxicity	:	Toxicity to fish (<i>Leuciscus idus</i>). Dose > 6810 mg/ litre relating to urea. Exposure time 96 hours.
Aquatic ecotoxicity	:	EC50 water fleas (<i>Daphnia magna</i>) Dose > 10,000 mg/ litre relating to urea. Exposure time 24 hours.
Biodegradability	:	Readily biogradable Do not allow uncontrolled discharge of the product into the environment.



13. Disposal considerations

- Methods of disposal : Disposal of this product, solutions and any by- products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non recyclable products via a licensed waste disposal contractor.
- Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU directive 91/689/EEC.

14. Transport information

Product is not classified, i.e. is not regarded as a dangerous material according to the Orange Book of UNO and international codes of transport, e.g. RID (railway), ADR (road transport) and IMDG (sea transport).

15. Regulatory information

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

- Risk phrases : This product is not classified according to EU legislation.
- Product use : Industrial applications.
- Europe inventory : All components are listed or exempted.

16. Other information

History

- Date of issue : 20-01-2014
- Date of previous issue : 30-01-2013
- Version : 8.1



Notice to reader

The data corresponds to our current knowledge and describes our product with regard to safety requirements. Therefore the data is not meant to warranty certain properties of the product. It is the responsibility of the receiver of our product to comply with current legislation and regulations. Final determination of the suitability of any material is the sole responsibility of the user. All materials may represent unknown hazards and should be used with caution.

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