

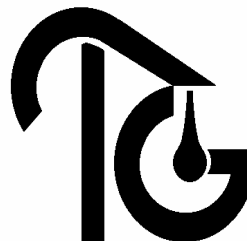
TENNANTS DISTRIBUTION LIMITED

NORTHERN DIVISION
HAZELBOTTOM ROAD
CHEETHAM
MANCHESTER
M8 0GR

TEL 44(0)161 205 4454

FAX 44(0)161 203 4298

E-mail sales.manchester@tennantsdistribution.com



SOUTHERN DIVISION
BOTANY WAY
PURFLEET
ESSEX

RM19 1SN

TEL 44 (0)1708 860075

FAX 44 (0)1708 860074

PRODUCT DATA SHEET

(This booklet incorporates the Specification and M.S.D.S.)

PRODUCT	GREENOX® (AdBlue®)		
CAS NO.	57-13-6		
TARIFF NO.			
U.N NO.			
EINECS NO.	200-315-5		
IMCO CLASS			
HAZARDS			
SPECIFICATION REFERENCE	ADBL/2	DATE AUG 06	
REFERENCE NO.	ADBL/3	DATE OCT 06	
PREVIOUS EDITION.	ADBL/2	DATE AUG 06	

PRODUCT SPECIFICATION

Product Name Greenox® (AdBlue®)
 Alternative Name
 Product Grade

SALES SPECIFICATION

Characteristics	Unit	Min	Max	Typical Value
Urea Content	Weight %	31.8	33.2	32.5
Density	g/cm ³	1.087	1.093	1.0895
Refractive Index at 20°C		1.3814	1.3843	1.3829
Alkalinity as NH ³	%	-	0.2	
Biuret	%	-	0.3	
Aldehydes	mg/kg	-	5	
Insolubles	mg/kg	-	20	
Phosphate (PO ₄)	mg/kg	-	0.5	
Calcium	mg/kg	-	0.5	
Iron	mg/kg	-	0.5	
Copper	mg/kg	-	0.2	
Zinc	mg/kg	-	0.2	
Chromium	mg/kg	-	0.2	
Nickel	mg/kg	-	0.2	
Aluminium	mg/kg	-	0.5	
Magnesium	mg/kg	-	0.5	
Sodium	mg/kg	-	0.5	
Potassium	mg/kg	-	0.5	

Greenox® conforms to DIN 70070

Storage

To maintain the product quality it is recommended that AdBlue® is stored below 30oC and out of direct sunlight

Shelf Life

12 months providing the above conditions are observed

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

NOTES

Exclusion of Liability

Information contained in this publication is accurate to the best of the knowledge and belief of Tennants.

Any information or advice obtained from Tennants otherwise than by means of this publication and whether relating to Tennants materials or other materials, is also given in good faith. However, it remains at all times the responsibility of the customer to ensure that Tennants materials are suitable for the particular purpose intended.

Tennants accepts no liability whatsoever (except as otherwise provided by law) arising out of the use of information supplied, the application, adaptation or processing of the products described herein, the use of other materials in lieu of Tennants materials or the use of Tennants materials in conjunction with such other materials.

Health and Safety

A Material Safety Data Sheet has been issued describing the health, safety and environmental properties of this product, identifying the potential hazards and giving advice on the handling precautions and emergency procedures. This must be consulted fully before handling, storage and use.

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product:	Greenox® (AdBlue®)	
COMPANY:	TENNANTS DISTRIBUTION LIMITED	
	Hazelbottom Road	Botany Way
	Cheetham	Purfleet
	Manchester	Essex
	M8 0GR	RM19 1SN
	Tel No. 44(0)161 205 4454	Tel No. 44(0)1708 860075
	Fax No. 44(0)161 203 4298	Tel No. 44(0)1708 860074
	Emergency Tel No.	01865 407333

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 specific hazards related to the product
--------------	--

4. FIRST AID MEASURES

First Aid – Eyes	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician
First Aid – Skin	Wash off with plenty of water. Take off all contaminated clothing
First Aid – Ingestion	Rinse mouth with water. Drink plenty of water. Do not induce vomiting. Call a physician
First Aid – Inhalation	Move to fresh air

5. FIRE FIGHTING MEASURES

Extinguishing Media	The product itself does not burn. Standard procedures for chemical fires
Special Hazards In A Fire	Heating can release hazardous gases (NO _x , HCN, NH ₃)
Protective Equipment for Fire Fighting	Wear self contained breathing apparatus and splash protection suit

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with skin and eyes. Slipping hazard
Environmental Precautions	Prevent product from entering drains and surface and ground water
Measures For Clean Up	Take up mechanically and collect in suitable container for disposal. Dispose of in compliance with local and national regulations. After cleaning, flush away traces with water

7. HANDLING AND STORAGE

Safe Handling Advice	Avoid contact with skin and eyes
Storage	Keep containers tightly closed in a dry and cool place. Keep away from strong oxidising agents (permanganates, chromates, nitrates, nitrites, chlorine and hypochlorites)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits	No specific exposure limit determined for the substance
Occupational Exposure Controls	Avoid contact with skin and eyes. Wash hands before breaks and immediately after handling the product
Hand Protection	PVC, latex or other plastic material/rubber gloves. Do not wear leather gloves
Eye Protection	Goggles
Skin And Body Protection	Do not wear leather shoes

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid, clear, colourless – yellowish; possibly slightly ammoniacal odour
pH	10 (10% solution)
Boiling Point/Range	103°C
Flash Point	Not applicable
Explosive Properties	
Lower Explosion Limit	Not applicable
Upper Explosion Limit	Not applicable
Vapour Pressure	No data available
Relative Density	1.09 g/ml (20°C)

Solubility	
Water Solubility	Fully soluble
Fat Solubility (Solvent – Oil to be specified)	No data available
Partition Co-Efficient (n-octanol/water)	Urea: Log Pow = -2.59 (20-25°C)
Viscosity	ca. 1.4 mPa.s (25°C)
Further Information	Crystallisation temperature = -11°C
10. STABILITY AND REACTIVITY	
Hazardous Decomposition Products	Strong oxidising agents, (permanganates, chromates, nitrates, nitrites, chlorine, hypochlorites) Heating can release hazardous gases (NO _x , HCN, NH ₃)
11. TOXICOLOGICAL INFORMATION	
Acute Oral Toxicity	LD50/Oral/Rat = 14300 mg/kg
Skin Irritation	LD50/Oral/Mouse = 11500 mg/kg
Eye Irritation	May cause skin irritation
Genotoxicity In Vitro	Urea has not caused sensitisation on laboratory animals No adverse health effects are known or expected under normal use
12. ECOLOGICAL INFORMATION	
Aquatic Toxicity	LC50/96h/Barilius barna >9100 mg/l LC50/24h/daphnia >10000 mg/l
Mobility	Water soluble. Adsorption to soil is low
Biological Degradability	Biodegradable
Bio Accumulative Potential	Accumulation is unlikely, log Pow (urea) = -2.59
13. DISPOSAL CONSIDERATIONS	
Product Disposal	In accordance with local and national regulations
14. TRANSPORT INFORMATION	
Not regulated	
15. REGULATORY INFORMATION	
Not classified	
16. OTHER INFORMATION	
<p>®Greenox is a registered trademark of Kemira Growhow ® Adblue is a registered trademark of the Verband der automobilindustrie e.V (VDA)</p> <p>Further information has been added to page 2. The remainder of the document is unchanged</p> <p>Revision Date: 27/10/06</p>	