

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### AdBlue® nach ISO 22241-1

Print date: 28.02.2017

Product code: 76040080-1

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

AdBlue® nach ISO 22241-1

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### Use of the substance/mixture

Emission control.

Waste gas treatment (NOx Reduction).

### 1.3. Details of the supplier of the safety data sheet

#### Supplier

Company name: OK a.m.b.a.  
Street: Åhave Parkvej 11  
Place: DK-8260 Viby J  
Telephone: +45 70 10 20 33  
www.ok.dk

### 1.4. Emergency telephone number:

Gifflinjen + 45 82 12 12 12

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Directive 67/548/EEC or 1999/45/EC

This mixture is not classified as hazardous in accordance with Directive 1999/45/EC.

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

### 2.2. Label elements

#### Additional advice on labelling

Identification is not obligatory.

### 2.3. Other hazards

No risks worthy of mention. Please observe the information on the safety data sheet at all times.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

32,5 % Urea in aqueous solution.

Ingredient (name): Urea

CAS-Nr.: 57-13-6; EG-Nr.: 200-315-5

REACH Registrierungsnummer: 01-2119463277-33

## SECTION 4: First aid measures

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#### **4.1. Description of first aid measures**

##### **General information**

First aider: Pay attention to self-protection! Move victim out of danger zone.  
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

##### **After inhalation**

Move victim to fresh air. Put victim at rest and keep warm.  
In all cases of doubt, or when symptoms persist, seek medical advice.

##### **After contact with skin**

Wash with plenty of water. Remove contaminated, saturated clothing immediately. In all cases of doubt, or when symptoms persist, seek medical advice.

##### **After contact with eyes**

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Remove contact lenses, if present and easy to do. Continue rinsing.

##### **After ingestion**

Do NOT induce vomiting. Get medical advice/attention.  
Rinse mouth immediately and drink plenty of water. (1 Glass.)  
No administration in cases of unconsciousness or cramps.

#### **4.2. Most important symptoms and effects, both acute and delayed**

In all cases of doubt, or when symptoms persist, seek medical advice.

#### **4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

### **SECTION 5: Firefighting measures**

#### **5.1. Extinguishing media**

##### **Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

#### **5.2. Special hazards arising from the substance or mixture**

In case of fire may be liberated: Ammonia (NH<sub>3</sub>), Nitrogen oxides (NO<sub>x</sub>), Carbon dioxide (CO<sub>2</sub>), Carbon monoxide

#### **5.3. Advice for firefighters**

In case of fire and/or explosion do not breathe fumes.  
In case of fire: Wear self-contained breathing apparatus.

##### **Additional information**

Contaminated fire-fighting water must be collected separately.  
Do not allow to enter into surface water or drains.

### **SECTION 6: Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin and eyes. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

#### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains.  
Do not allow to enter into soil/subsoil.

#### **6.3. Methods and material for containment and cleaning up**

Take up mechanically, placing in appropriate containers for disposal.  
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).  
Treat the recovered material as prescribed in the section on waste disposal.

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#### 6.4. Reference to other sections

Personal protection equipment: refer to chapter 8.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Advice on safe handling

Avoid contact with skin and eyes.  
Change contaminated clothing.

##### Advice on protection against fire and explosion

No special fire protection measures are necessary.

#### 7.2. Conditions for safe storage, including any incompatibilities

##### Requirements for storage rooms and vessels

Only use containers specifically approved for the substance/product.  
Unsuitable materials for Container: Copper, Zinc, alloy, cupric.  
Keep container tightly closed and in a well-ventilated place.  
Always close containers tightly after the removal of product.  
Recommended storage temperature: 10 - 25 °C.

##### Advice on storage compatibility

Keep away from food, drink and animal feedingstuffs.

##### Further information on storage conditions

Protect against: Heat, Frost. Protect against direct sunlight.

#### 7.3. Specific end use(s)

Emission control.  
Waste gas treatment (NOx Reduction).

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
57-13-6	Urea		
Worker DNEL, acute	dermal	systemic	580 mg/kg bw/day

##### PNEC values

CAS No	Substance	
Environmental compartment	Value	
57-13-6	Urea	
Freshwater	0,047 mg/l	

##### Additional advice on limit values

Air limit values: Does not contain substances above concentration limits fixing an occupational exposure limit.

#### 8.2. Exposure controls

##### Appropriate engineering controls

No information available.

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#### Protective and hygiene measures

- Do not eat, drink, smoke or sneeze at the workplace.
- Avoid contact with skin, eyes and clothes.
- Take off immediately all contaminated clothing. Wash contaminated clothing prior to re-use.
- Wash hands before breaks and after work.
- After cleaning apply high-fat content skin care cream.
- Do not put any product-impregnated cleaning rags into your trouser pockets.

#### Eye/face protection

Filling and transfer: Suitable eye protection: Tightly sealed safety glasses. (DIN EN 166)

#### Hand protection

- Tested protective gloves are to be worn: German Industry Norms (DIN) / European Norms (EN): DIN EN 420, DIN EN 374.
- Suitable material: NBR (Nitrile rubber), PVC (Polyvinyl chloride).
- Required properties: liquid-tight.
- penetration time (maximum wearing period): > 240 min.
- Thickness of glove material: 0,4 mm
- Before using check leak tightness / impermeability.

#### Skin protection

Handling larger quantities: Wear suitable protective clothing.

#### Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless
Odour:	like: Ammonia (schwach)

	Test method
pH-Value (at 20 °C):	9 - 10 (at g/l: 100) DIN 51369

#### Changes in the physical state

Melting point:	approx. -11 °C
Initial boiling point and boiling range:	(1,013 mbar) >100 °C
Flash point:	not applicable

#### Explosive properties

not explosive.

Vapour pressure: (at 20 °C)	approx. 23 hPa
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Density (at 20 °C):	approx. 1,09 g/cm <sup>3</sup> DIN 51757
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Water solubility: (at 20 °C)	completely miscible
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Solvent content:	Water: approx. 67,5 %
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### 9.2. Other information

none

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No information available.

### 10.2. Chemical stability

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storage stability: Do not store at temperatures over: 30 °C

#### **10.3. Possibility of hazardous reactions**

Violent reaction with: Nitrite, Oxidizing agents, strong.

#### **10.4. Conditions to avoid**

Do not store at temperatures over: 30 °C

#### **10.5. Incompatible materials**

Oxidizing agents, strong.  
Alkalis (alkalis).

#### **10.6. Hazardous decomposition products**

Ammonia.

## SECTION 11: Toxicological information

### **11.1. Information on toxicological effects**

#### **Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

#### **Acute toxicity**

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Method	Dose	Species	Source
57-13-6	Urea				
	oral	LD50	14300 mg/kg	Rat	OECD 401

#### **Irritation and corrosivity**

Irritant effect on the skin: Not an irritant.

Irritant effect on the eye: slightly irritant but not relevant for classification.

#### **Sensitising effects**

Respiratory or skin sensitisation: no danger of sensitization. No known symptoms to date.

#### **Severe effects after repeated or prolonged exposure**

Based on available data, the classification criteria are not met.

#### **Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### **12.1. Toxicity**

Based on available data, the classification criteria are not met.

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h]   [d]	Species	Source
57-13-6	Urea					
	Acute fish toxicity	LC50	> 6810 mg/l	96 h	Leuciscus idus (golden orfe)	

### **12.2. Persistence and degradability**

Easily biodegradable (concerning to the criteria of the OECD)

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CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
57-13-6	Urea				
		OECD 302B/ ISO 9888/ EEC 92/69/V, C.9	96 %	16	

**12.3. Bioaccumulative potential**

No indication of bioaccumulation potential.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
57-13-6	Urea	- 1,56

**12.4. Mobility in soil**

Solubility in water (g/l): completely miscible.

**12.5. Results of PBT and vPvB assessment**

PBT: not applicable.

vPvB: not applicable.

**12.6. Other adverse effects**

No information available.

**Further information**

Do not allow to enter into surface water or drains.

Do not allow to enter into soil/subsoil.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

Do not allow to enter into surface water or drains. Dispose of waste according to "Kreislaufwirtschafts- und Abfallgesetz (KrW-/AbfG)". Dispose of waste according to applicable legislation.

Consult the local waste disposal expert about waste disposal.

**Contaminated packaging**

Contaminated packages must be completely emptied and can be re-used following proper cleaning.

Packing which cannot be properly cleaned must be disposed of.

**SECTION 14: Transport information****Land transport (ADR/RID)****14.1. UN number:** not relevant**14.2. UN proper shipping name:** not relevant**14.3. Transport hazard class(es):** not relevant**14.4. Packing group:** not relevant**Other applicable information (land transport)**

No dangerous good in sense of these transport regulations.

**Inland waterways transport (ADN)****Other applicable information (inland waterways transport)**

No information available.

**Marine transport (IMDG)****Other applicable information (marine transport)**

No dangerous good in sense of these transport regulations.

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#### Air transport (ICAO-TI/IATA-DGR)

##### Other applicable information (air transport)

No dangerous good in sense of these transport regulations.

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

#### 14.6. Special precautions for user

Handling (Transport information): No special precautionary measures are necessary. See protective measures under point 7 and 8.

#### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No information available.

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

##### EU regulatory information

##### Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

ISO 22241-1: Diesel engines - NOx reduction agent AUS 32

##### National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

##### Additional information

The receiver of our product is singularly responsible for adhering to existing laws and regulations. Observe in addition any national regulations!

#### 15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

### SECTION 16: Other information

#### Changes

This data sheet contains changes from the previous version in section(s): 3,4,5,6,7,8,12,14.

#### Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

#### Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*