

Safety data sheet

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Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.

Date / Revised: 29.07.2015

Version: 7.0

Product: **AdBlue**

(ID no. 30183433/SDS_GEN_GB/EN)

Date of print 07.01.2016

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

1.1. Product identifier

AdBlue

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

Relevant identified uses: Chemical

Recommended use: Chemical

Not recommended use: Technical information in support will be provided at the request of competent authorities.

1.3. Details of the supplier of the safety data sheet

Company:

Kistenmacher Auto + Technik

Lindenstrasse 2-10

21244 Buchholz

Germany

Telephone: +49 4181 990540

E-mail address: kat@kat-germany.de

1.4. Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

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No need for classification according to GHS criteria for this product.

2.2. Label elements

According to Regulation (EC) No 1272/2008 [CLP]

The product does not require a hazard warning label in accordance with GHS criteria.

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

No specific dangers known, if the regulations/notes for storage and handling are considered.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

Urea (Content (W/W): 32.5 %), Water (Content (W/W): 67.5 %)

Hazardous ingredients (GHS)

according to Regulation (EC) No. 1272/2008

ammonia...%

Content (W/W): ≥ 0.1 % - ≤ 0.2 %

CAS Number: 1336-21-6

EC-Number: 215-647-6

REACH registration number: 01-2119488876-14

INDEX-Number: 007-001-01-2

Skin Corr./Irrit. 1B

Eye Dam./Irrit. 1

STOT SE 3 (irr. to respiratory syst.)

Aquatic Acute 1

Aquatic Chronic 2

H335, H314, H411, H400

Specific concentration limit:

STOT SE 3, irr. to respiratory syst.: ≥ 5 %

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

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.

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

Symptoms: No significant symptoms are expected due to the non-classification of the product.

Hazards: No hazards anticipated.

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

Treatment: Treat symptomatically.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:

water spray, carbon dioxide, dry powder, Dry sand

5.2. Special hazards arising from the substance or mixture

harmful vapours, carbon oxides

The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for fire-fighters

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

Contaminated extinguishing water must be disposed of in accordance with official regulations.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

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Information regarding personal protective measures see, section 8. Handle in accordance with good industrial hygiene and safety practice. Avoid inhalation.

6.2. Environmental precautions

No special precautions necessary.

6.3. Methods and material for containment and cleaning 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.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage**7.1. Precautions for safe handling**

No special measures necessary provided product is used correctly.

Protection against fire and explosion:

No special precautions necessary.

7.2. Conditions for safe storage, including any incompatibilities

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4541, Stainless steel 1.4571

Unsuitable materials for containers: Paper/Fibreboard, iron, tinned carbon steel (Tinplate), Copper, aluminum, glass, brass, Galvanized carbon steel (Zinc), zinc

Storage stability:

Storage temperature: $\leq 25\text{ }^{\circ}\text{C}$

Storage duration: 18 Months

Protect from temperatures below: $-11\text{ }^{\circ}\text{C}$

The packed product is not damaged by low temperatures or by frost.

Protect from temperatures above: $35\text{ }^{\circ}\text{C}$

It is not necessary to protect the packed product against exceeding the temperature indicated.

7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection**8.1. Control parameters**

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Components with occupational exposure limits

1336-21-6: ammonia...%

TWA value 14 mg/m³ ; 20 ppm (OEL (EU))

indicative

STEL value 36 mg/m³ ; 50 ppm (OEL (EU))

indicative

TWA value 18 mg/m³ ; 25 ppm (WEL/EH 40 (UK))STEL value 25 mg/m³ ; 35 ppm (WEL/EH 40 (UK))PNEC

freshwater: 0.047 mg/l

DNEL

worker:

Long- and short-term exposure - systemic effects, dermal: 580 mg/kg

worker:

Long- and short-term exposure - systemic effects, Inhalation: 292 mg/m³

consumer:

Long- and short-term exposure - systemic effects, dermal: 580 mg/kg

consumer:

Long- and short-term exposure - systemic effects, Inhalation: 125 mg/m³

consumer:

Long- and short-term exposure - systemic effects, oral: 42 mg/kg

8.2. Exposure controlsPersonal 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)

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Body protection:
rubber boots with protection equipment

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form:	liquid	
Colour:	colourless	
Odour:	faint specific odour, ammonia-like	
pH value:	9 - 10 (20 °C)	(DIN ISO 976)
solidification temperature:	-11 °C	
Boiling point:	approx. 100 °C (1,013 bar)	
Flash point:	No flash point - Measurement made up to the boiling point.	
Flammability:	not flammable	
Lower explosion limit:	For solids not relevant for classification and labelling.	
Upper explosion limit:	For solids not relevant for classification and labelling.	
Ignition temperature:	not applicable	
Vapour pressure:	23 mbar (20 °C)	
Density:	1.087 - 1.093 g/cm ³ (20 °C)	(ISO 2811-3)
Solubility in water:	soluble (15 °C)	
Partitioning coefficient n-octanol/water (log K _{ow}):	-1.73 The values mentioned are those of the active ingredient.	
Viscosity, dynamic:	2.5 mPa.s (20 °C, 313 1/s)	
Explosion hazard:	not explosive	
Fire promoting properties:	not fire-propagating	

9.2. Other information

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Self heating ability:	It is not a substance capable of spontaneous heating.
Miscibility with water:	(15 °C) completely (e.g. >=90%)
pKA:	0.1 (21 °C)
Hygroscopy:	Non-hygroscopic
Surface tension:	
	Based on chemical structure, surface activity is not to be expected.
Solids content:	approx. 32.5 %
Molar mass:	60.06 g/mol

SECTION 10: Stability and Reactivity

10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:	Corrosive effect on: non-ferrous metals magnesium aluminum	
Reactions with water/air:	Flammable gases:	no
	Toxic gases:	no
	Corrosive gases:	no
	Smoke or fog:	no
	Peroxides:	no
Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.

10.2. Chemical stability

The product is chemically stable.

Peroxides: Substance contains no organic peroxides.

10.3. Possibility of hazardous reactions

The product is chemically stable.

10.4. Conditions to avoid

35 °C

Avoid heat.

10.5. Incompatible materials

Substances to avoid:

nitrites, nitrates, strong oxidizing agents

10.6. Hazardous decomposition products

Hazardous decomposition products:
ammonia, anhydrous

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

In animal studies the substance is virtually nontoxic after a single skin contact. In animal studies the substance is virtually nontoxic after a single ingestion. The product has not been tested. The statement has been derived from the properties of the individual components.

Experimental/calculated data:

LD50 rat (oral): 14,300 mg/kg

(by inhalation): Study not necessary due to exposure considerations.

(dermal): Study scientifically not justified.

Irritation

Assessment of irritating effects:

Not irritating to the skin. Not irritating to the eyes.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant

Serious eye damage/irritation rabbit: non-irritant

Serious eye damage/irritation rabbit: non-irritant

Respiratory/Skin sensitization

Assessment of sensitization:

Study scientifically not justified.

Germ cell mutagenicity

Assessment of mutagenicity:

The substance was not mutagenic in bacteria.

Experimental/calculated data:

Ames-test

Bacteria: negative

Carcinogenicity

Assessment of carcinogenicity:

In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity:

Study scientifically not justified.

Developmental toxicity

Assessment of teratogenicity:

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

Repeated oral uptake of the substance did not cause substance-related effects. Repeated dermal uptake of the substance did not cause substance-related effects.

Aspiration hazard

not applicable

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.

SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms.

The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:

LC50 > 6,810 mg/l, *Leuciscus idus* (DIN 38412 Part 15)

Aquatic invertebrates:

LC50 (48 h) > 10,000 mg/l, *Daphnia magna*

Literature data.

Aquatic plants:

EC10 (8 d) > 10,000 mg/l, *Scenedesmus quadricauda*
Literature data.

Microorganisms/Effect on activated sludge:
EC10 (16 h) > 10,000 mg/l, *Pseudomonas putida*
Literature data.

Chronic toxicity to fish:
Study does not need to be conducted.

Chronic toxicity to aquatic invertebrates:
Study not necessary due to exposure considerations.

Soil living organisms:
other soil dwelling worm
Literature data.

Other terrestrial non-mammals:
Study scientifically not justified.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H₂O):
Readily biodegradable (according to OECD criteria). The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

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

Assessment of stability in water:
According to structural properties, hydrolysis is not expected/probable.

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:
Significant accumulation in organisms is not to be expected.

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

12.4. Mobility in soil

Assessment transport between environmental compartments:
Adsorption in soil: Adsorption to solid soil phase is not expected.

12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT

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(Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self classification

12.6. Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

12.7. Additional information

Other ecotoxicological advice:

The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Test for use in agriculture.

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

Contaminated packaging:

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

SECTION 14: Transport Information

Land transport

ADR

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

RID

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable

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Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

Inland waterway transport

ADN

Not classified as a dangerous good under transport regulations
UN number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known
Transport in inland waterway vessel: Not evaluated

Sea transport

IMDG

Not classified as a dangerous good under transport regulations
UN number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations
UN number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

14.1. UN number

See corresponding entries for "UN number" for the respective regulations in the tables above.

14.2. UN proper shipping name

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

14.3. Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

SECTION 15: Regulatory Information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).

SECTION 16: Other InformationAssessment of the hazard classes according to UN GHS criteria (most recent version)

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

Skin Corr./Irrit. Skin corrosion/irritation

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Eye Dam./Irrit.	Serious eye damage/eye irritation
STOT SE	Specific target organ toxicity — single exposure
Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
H335	May cause respiratory irritation.
H314	Causes severe skin burns and eye damage.
H411	Toxic to aquatic life with long lasting effects.
H400	Very toxic to aquatic life.

If you have any queries relating to this MSDS, it's contents or any other product safety related questions, please write to the following e-mail address: kat@kat-germany.de

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. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.