

SAFETY DATA SHEET

MOL-LUB Ltd.

Trade name: **AdBlue[®] NO_x-reduction additive**

Version: 5

Latest revision: 04.08.2010

Date of issue: 26.09.2006

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1. Identification of the substance / preparation and company

Product name:

AdBlue[®]

Product type / recommended uses:

Preparation / additive

Manufacturer identification:

DUSLO, a.s. Administratívna budova ev. č 1236

927 03 Šala, Slovak Republic

e-mail: duslo@duslo.sk

Phone: 00 421 31 775 4112

Supplier identification:

MOL-LUB Lubricant Production Trade and Service Limited Liability Company

H-2931 Almásfüzitő, Fő u. 21., Hungary

Phone / Fax: +36 34 526 330 / +36 34 526 391

Request SDS of:

MOL-LUB Lubricant Production Trade and Service Limited Liability Company

Customer Service Center

H-2931 Almásfüzitő, Fő u. 21., Hungary

Phone / Fax: +36 80 201 296 / +36 34 348 010

Responsible for SDS:

MOL-LUB Ltd. Csaba Horváth, head of HSE and QOP

Phone: +36 34 526 343; Mobile: +36 20 474 2644

e-mail: csahorvath@mol.hu

Technical information:

MOL-LUB Ltd. Product Development and Technical Service

H-1117 Budapest, Október huszonharmadika u. 18., Hungary

Phone/Fax: +36 80 201 296 or +36 1 464 0236 / +36 1 464 0304

Emergency telephone (07-15²⁰ h): +36 34 526 210

Health Toxicological Information Service (ETTSZ 1096 Budapest, Nagyváradi tér 2.)

Tel.: +36 1 476 6464, or +36 80 201 199

2. Hazards identification

Human health hazards: Danger symbol not required.

Note: Prolonged and/or repeated contact may cause irritation skin and/or eye, depending on individual sensitivity (see also Protective equipment).

May cause irritation and burns of the airways.

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Safety hazards: Danger symbol not required.

Environmental hazards: Danger symbol not required.

3. Composition / information on ingredients

Chemical description: Aqueous Urea Solution.

Ingredients / Hazardous components:

Name	EINECS number	CAS number	Hazard symbol	Risk phrase	Conc. %(m/m)
Carbonic acid diamide	200-315-5	57-13-6	-	-	max. 32.5

The full text of each relevant R phrase see in Section 16.

4. First aid measures

General information: Never give anything by mouth to an unconscious person, or never induce vomiting.

Inhalation: Remove the affected person to fresh air. If rapid recovery does not occur, obtain medical attention.

Skin contact: Wash skin with large amounts of water, use soap. If irritation persists, obtain medical attention.

Eye contact: Flush eyes with plenty of water for 10-15 minutes. Obtain medical attention.

Ingestion: Do not induce vomiting, drink a small amount of clean water (room temperature, up to 2 dl for an adult).

Note to physician:

5. Fire-fighting measures

Fire hazards:

Urea solution is not flammable.

Suitable extinguishing media:

According to burning environment.

Unsuitable extinguishing media:

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Hazardous decomposition products:

Urea decomposes and releases ammonia and CO₂ when heated.

Gases contain ammonia and NO_x during high-temperature decomposition.

Special protective equipment:

According to the existing fire-fighting regulations.

Further information:

-

6. Accidental release measures

Personal precautions:

See Section 8.

Environmental precautions:

Prevent spills from entering into natural water, soil and drains by containing the liquid.

Notify relevant authority.

Clean-up procedures / recovery

On soil: Rinse the given area immediately with water. Dispose of according to local regulations. According to size and character of the contamination, use the spilled product for agricultural purposes or dispose of in a controlled way (waste-water treatment plant).

On water: Notify local authorities according to regulations.

7. Handling and storage

Handling:

When handling ensure ventilation and avoid contact with skin by wearing protective clothing.

Keep general measures applied for normal operations with chemicals.

Storage and transport:

The producer dispatches the urea solution with a temperature up to max. 30 °C.

In order to avoid crystallization or hydrolysis in the urea solution, store under common conditions (optimally to 25 °C).

Transported in insulated tank trucks or palletized plastic tanks (IBC).

Materials suitable for these tanks are alloy steels, various plastics, as well as metal tanks with plastic coating.

Plain steels, copper, aluminium, alloys containing copper and aluminium, galvanized steels must not be used.

Requirements for materials to be used in direct contact with the product : in AUS 32 (CEFIC) Quality Assurance Guidance Document.

8. Exposure controls / personal protection

Engineering control measures:

Ensure ventilation.

Exposure limits (Commission Directive 2000/39/EC):

Ammonia: 14 mg/m³ (eight-hours time-weighted average)36 mg/m³ (short-term)

Personal protection:

Respiratory protection: Breathing apparatus not required.

Hand protection: Protective gloves.

Eye protection: Protective goggles.

Skin protection: Protective clothing.

Other special:

General protective measures / hygiene:

Avoid contact with skin and eyes.

Ensure washing facilities after working hours and before breaks.

Environmental exposure controls:

9. Physical and chemical properties

Appearance:

Physical state:	liquid
Colour:	colourless, clear liquid
Odour:	slight ammonia scent

Change in physical state:

Crystallization point (ASTM D 1177): typ. -11.5°C

Others:

Flash point :	not applicable
Ignition point :	not available
Thermal conductivity (at 25 °C):	cca 0.57 W/m.K
Explosive properties:	not explosive
Oxidizing properties:	
Specific heat (at 25 °C):	cca 3.4 kJ/kg.K
Density at 20 °C:	1087 – 1093 kg/m ³
Solubility in water:	soluble
n-Octanol/water partition coefficient:	not available
Others:	
Viscosity (at 25 °C):	cca 1.4 mPa.s
Surface tension:	min. 65 mN/m
Molecular weight:	60.06 kg/kmol
Refractive index at 20 °C:	1.3814 – 1.3843
pH value of a 10 %-water solution:	max. 10

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10. Stability and reactivity

Stability:	The product is stable under normal conditions.
Conditions to avoid:	Elevated temperatures. Heating above 75 °C causes thermal decomposition and the formation of gases: CO ₂ , NH ₃ , NO _x .
Materials to avoid:	The reaction of urea with nitric acid may lead to the creation of explosive urea nitrate.
Hazardous decomposition products:	Gases contain ammonia and NO _x during high-temperature decomposition. Under normal conditions no dangerous decomposition products are formed.
Notes:	

11. Toxicological information

Acute toxicity:	
Oral:	LD ₅₀ (rat) > 2000 mg/kg (based on components)
Dermal:	
Acute toxicity: irritation	
Skin:	not irritant (based on components)
Eye:	not irritant (based on components).
Note:	Prolonged and/or repeated contact may cause irritation skin and/or eye, depending on individual sensitivity. May cause irritation and burns of the airways.
Ingestion:	Swallowing a large amount may cause indigestion disorders.
Sensitization:	not sensitising (based on components)
Chronic toxicity:	not known
Other information, specific effects:	
Carcinogen effect:	not known, resp. not carcinogen (based on components)
Mutagen effect:	not known, resp. not mutagen (based on components)
Reproduction-damaging effect:	not known, resp. no reproduction-damaging effect (based on components)

12. Ecological information

Mobility:	Soluble in water.
Degradability / persistence:	
Biodegradability:	Substantial biodegradation in water and soil.

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Bioaccumulative potential:	Low bioaccumulative potential.
Ecotoxicity:	Not available.
Aquatic organisms:	
Soil organisms:	
Plants:	
Biological oxygen demand:	
Chemical oxygen demand:	
Heavy metal content:	None.
PCT, PCB and other chlorinated hydrocarbons:	None.
Environmental effects:	Contamination of water by a large amount may because of the high oxygen demand cause damage to the aquatic environment.
Water hazard class (German):	

13. Disposal considerations

Product disposal:

Wastes of the product should be treated according to national and local disposal regulations.

EWC cod: 16 05 09

discarded chemicals

or

EWC cod: 06 10 99

wastes not otherwise specified

Dependent on size and character of the contamination the using for agricultural purposes is possible.

Packaging disposal:

Dispose of in accordance with all applicable local and national regulations.

EWC cod: 15 01 02

Plastic packaging.

Note: Empty containers can be reused after cleaning with water.

Wastewater:

Quality of wastewater emitted to natural water must comply with national and local regulations.

Care should be taken in any case to ensure compliance with EC, national and local regulations. It is the responsibility of the user to know all relevant national and local regulations.

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14. Transport information

Land transport:

Road/ Railway

ADR/RID:

Not classified.

Waterways:

Inland waterways/ Sea transport

ADN/IMDG:

Not classified.

Air transport: ICAO / IATA:

Not classified.

15. Regulatory information

Classification and labelling according to EU directives [67/548/EEC and 1999/45/EC (existing versions)] and to Hungarian regulation [44/2000. (XII. 27.) EüM rendelet (existing version)] for hazardous substances and hazardous preparations:

Not required.

Hazardous component(s): -

The packaging must bear the inscription: -

R-phrases: Not required.

S-phrases: Not required.

Tactile warning of danger: Not required.

16. Other information

References

® registered trademark of the Verband der Automobilindustrie e.V. (VDA)

Recommended application / restrictions:

See product sheets.

The information given in this data sheet is based on our best knowledge at the time of publication. The information is related only to this product and is intended to assist its safe transport, handling and use. The given physical and chemical parameters describe the product only for the purpose of safety requirements and therefore should not be construed as guaranteeing any specific property of the product or as being part of a product specification or any contract.

The manufacturer or supplier shall not take responsibility for any damages from the use other than recommended or other misuse of the product. It is the responsibility of the user to keep regulatory precautions and observe recommendations for safe use of the product.

This safety data sheet has been prepared according to Regulation (EC) No 1907/2006, Directives 1999/45/EC.

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Source of data presented in this material safety data sheet:

Test results of this product

Material safety data sheets of product's components

Hungarian and EU lists of dangerous substances

Relevant Hungarian regulation and EU directives

The full text of each relevant R phrase in Section 3.:

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Revision Indicators:

Section	Subject of change	Date	Version
15	Regulatory information: S-phrases	23.04.2007	1
6 7	Accidental release measures: Clean up procedures Storage and transport	25.05.2007	2
	Regulatory informations, other corrections	20.07.2007	3
1-16	Regulatory informations, other corrections	20.05.2010	4
13	Disposal considerations	04.08.2010	5