



## Material Safety Data Sheet - MSDS

### CHAPTER 1. Identification of the chemical and information about the person who places the chemical on the market

#### 1.5. 1.5. Chemical identification

Trade name: AdBlue

#### 1.6. Identified uses of the chemical and uses not recommended

Identified uses: Exhaust gas reduction agent for diesel engines according to SCR technology.

Uses not recommended: Not recommended for other uses.

### CHAPTER 2. Hazard identification

#### 2.1. Chemical classification

In accordance with the Ordinance on the classification, packaging, labeling and advertising of chemicals and certain products in accordance with Globally Harmonized UN Classification and Labeling System ("Official Gazette of RS", No. 105/2013): Chemical it is not classified as dangerous.

#### 2.2. Marking elements

In accordance with CLP / GHS regulations  
Chemical labeling is not required.

#### 2.3. Other hazards

The chemical does not meet the criteria for identification as PBT or vPvB.

### CHAPTER 3. Composition / information on ingredients

#### 3.1 Podaci o sastojcima

Ingredient	Classification	Concentration%
Urea CAS number: 57-13-6 EC number: 200-315-5	The chemical is not classified as hazardous.	31,8-33,2
DeminerIALIZED water		66,8 - 68,2



## **CHAPTER 4. First aid measures**

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

If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.

In case of skin contact: Remove / remove all contaminated clothing and shoes. Rinse skin thoroughly with soap and water.

In case of contact with eyes: Rinse eyes with water for at least 15 minutes, eyelids open.

If swallowed: Rinse mouth and drink plenty of water.

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

Data not available.

### **4.3. Emergency medical care and special treatment**

Data not available.

## **SECTION 5. Firefighting measures**

### **5.1. Extinguishing media**

Suitable extinguishing media: water, carbon dioxide, dry powder, sand.

Unsuitable extinguishing media: no data available.

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

Harmful fumes.

### **5.3. Firefighters Council**

Use appropriate protective equipment and self-contained breathing apparatus. Additional information: Contaminated fire extinguishing water must be removed in accordance with local regulations.

## **CHAPTER 6. Accidental release measures**

### **6.1. Personal precautions, protective equipment and procedures in the event of an accident**

Instructions for persons not trained in the event of an accident: General procedures: In the event of an accident or emergency, evacuate persons which do not participate in remediation. Avoid inhalation of dust. Use personal protective equipment (Chapter 8).

Instructions for persons involved in responding to an accident: Use appropriate protective equipment (Chapter 8).

### **6.2. Environmental precautions**

Prevent spillage and release of chemicals into soil, watercourses and sewers.

### **6.3. Measures to be taken and material to prevent spread and remediation**

For small amounts: Rinse with water. Remove absorbed material according to regulations.

For large quantities: Rinse with water. Remove absorbed material according to regulations.

### **6.4. Reference to other chapters**

For personal protective equipment, see Chapter 8 (8.2).

For waste, see Chapter 13.



## CHAPTER 7. Handling and storage

### 7.1. Precautions for safe handling

No special precautions are required, provided the product is used properly.

Fire and explosion protection: No special precautions required.

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

Suitable materials for containers: high density polyethylene (HOPE), low density polyethylene (LOPE), stainless steel 1.4301, stainless steel 1.4401. Unsuitable materials for containers: paper, iron, tin (white sheet metal), copper, aluminum, glass, brass, zinc.

Storage stability:

Storage temperature: from -5°C to 30°C

Protect from temperatures below: -11°C

The packaged product is not damaged due to low temperatures or frost.

Protect from temperatures above: 35°C

It is not necessary to additionally protect the packaged product when the temperature exceeds the specified values.

### 7.3. Special uses

Apart from the identified uses indicated in Chapter 1 (1.2), no other data are available.

## CHAPTER 8. Exposure controls

### 8.1. Exposure control parameters

Exposure limits for the given ingredients of the mixture are not prescribed by the national Ordinance on preventive measures for safe and healthy work when exposed to chemicals ("Official Gazette of RS", No. 106/2009).

### 8.2. Exposure controls and personal protection

DNEL value: no effect: no data available.

PNEC value: concentration predicted to have no environmental effect: no data available.

Professional hygiene: Wash hands before each break and after handling the chemical.

Contaminated clothing must be replaced. Do not eat, drink or smoke in the work area.

Personal protective equipment

#### a) Eye/ face protection

-Protective goggles for splash protection, EN 166 standard.

#### b) Skin protection

- Leather protection: rubber boots with protective equipment.

- Hand protection: chemically resistant protective gloves, EN 374 standard:

natural rubber/ natural latex (NR) - 0.5 mm thick

chloroprene rubber (CR) - 0.5 mm thick

nitrile rubber (NBR) - 0.4 mm thick

butyl rubber (butyl) - 0.7 mm thick

fluorelastomer (FKM) - 0.7 mm thick

polyvinyl chloride (PVC) - 0.7 mm thick

#### c) Respiratory protection



Wear respiratory protection if ventilation is insufficient. Gas filter for inorganic gases / vapors is recommended compounds, standard EN 143.

d) Protection against thermal hazards No data available.

e) Environmental exposure control

Prevent spillage and release of chemicals into soil, watercourses and sewers.

## CHAPTER 9. Physical and chemical properties

9.1. Data on basic physical and chemical properties of the chemical	
a) Appearance-physical state	shape: liquid
b) Odor	color: colorless
c) Odor threshold	mild specific, like ammonia
d) pH value	data not available
e) Melting point/ freezing point	9 -10
D Starting boiling point and boiling range	- 11 ° C
d) Flash point	about 100oC (1,013 bar)
h) Evaporation rate	it is not a flammable chemical
i) Flammability (solid, gaseous)	data not available
j) Upper/ lower flammability or explosive limit	it is not a flammable chemical
k) Steam voltage	it is not an explosive chemical
l) Vapor density	23 mbar (20oC)
lj) Relative density	data not available
m) Solubility in water	1,085 - 1,095 kg / m3 (20oC)
n) Partition coefficient in the n-octanol / water system	(15oC) completely(>= 90%)
nj) Auto-ignition temperature	not applicable
o) Decomposition temperature	data not available
p) Viscosity	data not available
r) Explosive properties	1.4 mPas (25oC)
s) Oxidizing properties	has no explosive properties

## 9.2. Other data

Hygroscopicity: has no hygroscopic properties

Solids content: about 32.5%

## CHAPTER 10. Reactivity and stability

### 10.1. Reactivity

The product is not reactive at the recommended temperatures and storage and handling conditions (Chapter 7).

### 10.2. Chemical stability

The product is stable at recommended temperatures and storage and handling conditions.

### 10.3. Possibility of hazardous reactions

At the recommended temperatures and storage and handling conditions, there is no possibility of dangerous reactions.

### 10.4. Conditions to avoid

Avoid the possibility of metal contamination (corrosive effect on non-ferrous metals), dust and direct action



of the sun's rays.

#### 10.5. Incompatible materials

Nitrites, nitrates, strong oxidizing agents, acids and bases.

#### 10.6. Hazardous decomposition products

Ammonia. At the recommended temperatures and storage and handling conditions (Chapter 7), no hazardous products are produced decomposition.

### **SECTION 11. Toxicological information**

#### 11.1. Information on the toxic effects of the mixture

##### a) Acute toxicity

LDS0 (oral, rat): 14,300 mg/ kg bw / day

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

##### b) Corrosive skin damage / irritation

Tests performed on rabbits. Does not cause corrosive damage or skin irritation.

##### c) Severe eye damage / eye irritation

Tests performed on rabbits. Does not cause severe damage or irritation to the eye.

##### d) Respiratory or skin sensitization

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

##### e) Mutagenicity of germ cells

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

##### f) Carcinogenicity

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

##### g) Reproductive toxicity

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

##### h) Specific target organ toxicity - single exposure

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

##### i) Specific target organ toxicity - repeated exposure

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

##### j) Danger of aspiration

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

### **CHAPTER 12. Ecotoxicological data**

#### 12.1. Toxicity

Fish: LCS0 (96 h) > 6.810 mg/ l, *Leuciscus idus* (DIN 38412 Annex 15).

Aquatic invertebrates: ECS0 (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.

#### 12.2. Persistence and degradability

96% DOC reduction (16 d) biodegradable.

#### 12.3. Bioaccumulative potential

Due to the inapplicability of the partition coefficient in the n-octanol / water system (log Pow), bioaccumulation is not to be expected.



#### 12.4. Mobility in soil

Data not available.

#### 12.5. Results of PBT or vPvB assessment

The chemical does not meet the criteria for identification as PBT or vPvB.

#### 12.6. Other adverse effects

Data not available.

### CHAPTER 13. Disposal

#### 13.1. Waste treatment methods

Unused product

This product is not classified as hazardous waste. It must be shipped to a landfill or to an appropriate incineration, in accordance with local regulations.

Contaminated packaging

Contaminated packaging is disposed of, recycled or destroyed, in accordance with local regulations.

### SECTION 14. Transport information

14.1. UN number No data available.

14.2. UN name for cargo in transport The product is not classified as dangerous in terms of regulations of transport (**ADR / RID, IMDG Code, IATA**).

14.3. Transport hazard class (es) The product is not classified as dangerous according to the regulations of transport (ADR / RID, IMDG Code, IATA).

14.4. Packaging group No data available.

14.5. Environmental hazards No data available.

14.6. Special precautions for user No data available.

14.7. Transport in bulk No data available.

### CHAPTER 15. Regulatory information

#### 15.1. Safety, health and environmental regulations

Law on Safety and Health at Work ("Official Gazette of **RS**", No. 101/05)

Law on Environmental Protection ("Official Gazette of **RS**", No. 135/2004, 36/2009, 36/2009-other law, 72/2009-other law and

43/2011-decision US)

#### 15.2. Chemical safety assessment

A chemical safety assessment for this mixture has not been performed.

### CHAPTER 16. Other information

The safety data sheet is in accordance with the Rulebook on the content of the safety data sheet ("Official Gazette of **RS**", No. 100/2011) which is harmonized with EU Regulation 453/2010.



Literature:

Law on Chemicals ("Official Gazette of RS", No. 36/09, 88/10, 92/11, 93/12 and 25/15)

Rulebook on the content of the safety data sheet ("Official Gazette of RS", No. 100/11)

Instructions for the application of the regulations governing the safety data sheet.

Abbreviations and acronyms:

The CLP/ GHS Code is the Code of Classification, Packaging, Marking and Advertising chemicals and a specific product in accordance with the Globally Harmonized System for UN classification and labeling.

The CAS number is the identification number assigned to each individual substance that is published in the scientific literature and entered in the CAS register.

The EC number, ie EINECS, ELINCS or NLP number is the official identification number of the substance in the European Union.

REACH means EC Regulation No. 1907/2006 governing registration issues, evaluations (assessments), authorizations (licensing) and restrictions (restrictions and prohibitions) in the use of chemicals.

PBT: Persistent, bioaccumulative and toxic.

vPvB: Very persistent and very bioaccumulative.

LOSO: Acute toxicity value, route of exposure (oral, dermal, inhalation).

LC50: Acute aquatic toxicity (fish).

EC50: Acute aquatic toxicity (for crustaceans).

EC10: Chronic toxicity to aquatic organisms.

DNEL value: Dose without effect.

PNEC value: Concentration predicted to have no effect on the environment.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road traffic.

RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.

IMDG Code: International Regulations concerning the Maritime Transport of Dangerous Goods.

IATA: Technical Guidelines for the Safe Transport of Dangerous Goods by Air.

**The information in this SAFETY DATA SHEET is based on our current knowledge and applicable laws. The product should not be used for any purpose other than that specified in Chapter 1, without written instructions for handling. It is always the responsibility of the user to take all necessary steps to meet the requirements listed in local regulations and law. The information in this SAFETY DATA SHEET is intended as a description of the safety requirements for this product. They should not be considered as a guarantee of the properties of this product.**