

SAFETY DATA SHEET

In conformity with Regulation 1907/2006 and Regulation 830/2015



SAFEGENT Premium AdBlue®

Revised edition - version № 004

Edition of the revised edition – № 004/1

Previous version edition № 003/1: 05.01.2017

Date of issuance, version № 004/1: 29.05.2017

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

<p>1.1 Product identifier: (under article 18, paragraph 3, letter “a” of Regulation 1272/2008)</p> <p>Commercial appellation of the mixture: (under article 18, paragraph 3, letter “b” of Regulation 1272/2008)</p> <p>1.2. Relevant identified uses of the substance or mixture and uses advised against:</p> <p>1.3. Details of the Manufacturers and distributors of the safety data sheet:</p> <p>Contact concerning the safety data sheet</p> <p>1.4. Emergency telephone number:</p>	<p>AdBlue – product for harmful emissions reduction from diesel engines</p> <p>SAFEGENT Premium AdBlue®</p> <p>No ingredients are contained in the product with the described dangers.</p> <p>Product for reduction of nitrogen oxides emissions in the processed gases of diesel engines. NOx reduction.</p> <p>The product is not suitable for use with gasoline and engines with another fuel type, except for naphtha.</p> <p>Manufacturer: TSAKI LTD Republic of Bulgaria, city of Sofia 1324 Housing complex “Lyulin” № 8, 34, “Casimir Ehrnrooth” Str. - Licensed manufacturer of products with the AdBlue® trademark – certificate № 0003253 – VDA QMC – Germany – www.vda-qmc.de</p> <p>Distributor: SAFEGENT GmbH Hörvelsinger Weg 62/2, D-89081 Ulm, Germany</p> <p>Contact: SAFEGENT GmbH Hörvelsinger Weg 62/2, D-89081 Ulm, Germany Tel. +49 731 790 348 60, Email: info@safegent.one</p> <p>National emergency telephone: 112 Toxicology emergency, Berlin: Hindenburgdamm 30 12203 Berlin +49 30 192 40</p>
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification in conformity with Regulation 1272/2008 (CLP) – The mixture is not classified as dangerous.

2.2. Label elements

Labelling in conformity with Regulation (EC) 1272/2008 (CLP)

Danger pictogram	None
Signal word	None
Danger warnings	The mixture is not classified as dangerous
Safety recommendations	The mixture is not classified as dangerous

2.3. Other hazards

PBT (persistent, bioaccumulative, and toxic) / vPvB (very Persistent and very Bioaccumulative) criteria:	Under Annex XIII of Regulation (EC) 1907/2006, no assessment was performed of the ingredient for PBT and vPvB because of its inorganic origin.
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Other dangers – Not known

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SECTION 3: Composition/information on ingredients

3.1. Substance – Not applicable. The product is mixture.

3.2. Mixture contents:

- Chemical name: Urea water solution

Information about the components:

1. Carbamide - Urea

Chemical name	CAS №	EC №	IUPAC name	Concentration in weight %
Carbamide	57-13-6	200-315-5	Urea Synonyms Carbonyl Diamide	32,5

Chemical formula: CH₄N₂O

Manufacturer of the ingredient, registrant under Regulation 1907/2006 (REACH)

Grupa Azoty Zakłady Chemiczne „Police” S.A. – Reg. № 01-2119463277-33-0044

Under Regulation 1272/2008 – the ingredient is not classified as dangerous.

2. Water

Chemical name	CAS №	EC №	IUPAC name	Concentration in weight %
Water, distilled, conductive or with approximate cleanliness H ₂ O	7732-18-5	231-791-2	Water	67,5

Chemical formula: H₂O

Under Regulation 1907/2006 (REACH), Appendix IV, the ingredient is covered by the exceptions in conformity with article 2, paragraph 7, letter A? of the registration obligation.

Under Regulation 1272/2008 – the ingredient is not classified as dangerous.

SECTION 4: First aid measures

4.1. Description of first aid measures

- | | |
|--------------------|--|
| - General remarks: | Take off and wash the contaminated clothes via laundering. |
| - Inhalation: | Take the person to clean air. Consult a doctor in the case irritation symptoms appear. |
| - Skin contact: | Longer contact could cause skin irritation.
Wash the impacted section with abundant water and soap quantities. If the symptoms persist, call a doctor. |
| - Eye contact: | Longer contact could cause eye irritation. Keep the eyes open and wash continuously with water. Take the contact lenses away and immediately wash with abundant water quantities for at least 10 minutes. If the symptoms persist, consult a doctor. |
| - Ingestion: | Ingesting larger quantity (over 50 g) causes stomach-intestinal disorders. Do not cause vomiting. Wash the mouth and then give water or milk for drinking. In the case larger quantity was swallowed, immediately seek medical aid. |

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<p>- Self-defence of the first-aider:</p> <p>4.2. Most important symptoms and effects, both acute and delayed</p> <p>4.3. Indication of any immediate medical attention and special treatment needed</p>	<p>No dangers present</p> <p>In the case of normal use no acute and delayed symptoms and effects are observed (see Section 11)</p> <p>Remark to the attention of the medical worker: Gas inhalation as a result of fire or decay that contain ammonium and carbon dioxide, could cause skin and eyes irritation effects.</p>
SECTION 5: Firefighting measures	
<p>5.1. Extinguishing media</p> <p>Suitable extinguishing media:</p> <p>Unsuitable extinguishing media:</p> <p>5.2. Special hazards arising from the substance or mixture</p> <p>5.3. Advice for firefighters Additional information</p>	<p>The urea solution has no flammable properties. In the case of fire implement measures that do not harm the environment.</p> <p>Water spray, foam, dry chemical of carbon dioxide</p> <p>Not known</p> <p>In the case of fire the following could be emitted: Ammonium (NH₃) Nitrogen oxides (NO_x) Carbon oxide and carbon dioxide</p> <p>Open the warehouse doors and windows for maximum ventilation. Avoid breathing in the fume, stay in the wind direction opposite to the fire. Use self-contained breathing apparatus if you get in touch with the fume. Complete fire-fighting clothing and protective mask.</p>
SECTION 6: Accidental release measures	
<p>6.1. Personal precautions, protective equipment and emergency procedures</p> <p>6.2. Environmental precautions</p> <p>6.3. Methods and material for containment and cleaning up</p> <p>6.4. Reference to other sections</p>	<p>Provide sufficient ventilation. There is danger of slipping onto the leaked/spilled product. Avoid contact with the skin and the eyes. Use suitable protective equipment. Keep away from heat sources.</p> <p>Do not let the product enter the sewerage, drainage systems, surface and groundwater. Inform the authorities in the case of accidental pollution of water storages.</p> <p>Cover up with absorbing material (sand or wooden chips). Depending on the pollution degree and type, as well as the absorbing material type, the collected product could be utilized as FERTILIZER for agricultural purposes, dispersed into thin layer onto a field or product. It could be submitted to specialized company for neutralization.</p> <p>See Section 8 on personal protective equipment and Section 13 on disposal of the resulting waste.</p>

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Provide good ventilation at the workplace. Avoid skin and eye contact. No special protective measures are required. In the case of handling the product for longer, wear suitable protective clothing and gloves.

7.2. Conditions for safe storage, including any incompatibilities

Behave in conformity with all local and national rules on storage of the water-freezing products. Use only containers especially designated to that product. Keep it at cool and dry place. Keep away from inflammation sources.

Technical storage conditions

Keep the IBC containers tightly closed. The storage temperature is essential to the shelf life of AdBlue®, according to the information below:
 ≤ 10°C - 36 months,
 ≤ 25°C - 18 months,
 ≤ 30°C - 12 months,
 ≤ 35°C - 6 months,
 Higher than 35°C - significant durability decrease. Every batch is being inspected before use. Do not hold the product at direct sunlight.

Package material

The synthetic plastic materials (polyethylene/polypropylene) that are not plastic and are part of the IBC container.

None. Urea is not classified as dangerous ingredient. No exposition scenarios were drawn.

7.3. Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Recommendable exposition thresholds to employees and population (as a result of chemical safety assessment).

The present product does not contain ingredients of critical values that are to be monitored at the workplace. Urea in concentrated condition as well as in diluted condition is not in conformity with the classification criteria as dangerous ingredient according to Directive 67/548/EEC or Directive 1999/45/EC and is not classified as persistent, bioaccumulative, and toxic and very persistent and very bioaccumulative hence there are no grounds for exposition assessment

DNELs for employees

Acute – systematic effects	Dermal	580 mg/kg bw/d
Acute – systematic effects	Inhalation	292 mg/m ³
Long-term – systematic effects	Dermal	580 mg/kg bw/d
Long-term – systematic effects	Inhalation	292 mg/m ³

DNELs for the population

Acute – systematic effects	Dermal	580 mg/kg bw/d
Acute – systematic effects	Inhalation	125 mg/m ³
Acute – systematic effects	Oral	42 mg/kg bw/d
Long-term – systematic effects	Dermal	580 mg/kg bw/d
Long-term – systematic effects	Inhalation	125 mg/m ³
Long-term – systematic effects	Oral	42 mg/kg bw/d

PNEC2

PNEC water (clean water)	0.047 g/L

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<p>8.2. Exposure controls</p> <p><u>Control measures</u></p> <p>Engineering measures</p> <p><u>Personal protective measures</u></p> <ul style="list-style-type: none"> - Respiratory tract protection - Hand protection <p>Suitable glove materials Permeability time of the material from which gloves are manufactured</p> <ul style="list-style-type: none"> - Eye protection - Skin and body safeguarding - Hygiene measures <p><u>Environmental exposure controls</u></p>	<p>Provide ventilation in the premises where you work with the product. Provide waste bath in the work premises in the case of product spillage.</p> <p>Not necessary if the premise is with good ventilation.</p> <p>When working with the product for longer period, wear suitable protective gloves. In order to avoid skin problems, minimize wearing gloves to the necessary extent. The material from which the gloves are manufactured should be impermeable and resistant to the product. Excessive sensitivity could occur to the components of gloves' material.</p> <p>Natural resin NR. The choice of suitable gloves does not depend on the material, but on the quality and varies depending on the manufacturer. The shelf time for using gloves should be provided by the manufacturer and it would be conformed.</p> <p>Protective goggles</p> <p>Occupational clothes and boots</p> <p>Keep the product away from foodstuff, beverages and food. Wash your hands during breaks and after finishing work with the product. While working with the product do not eat, drink or smoke. After working with the product and before eating, smoking or using the WC, as well as in the end of the workday – wash your hands.</p> <p>See Section 6 and Section 13.</p>
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SECTION 9: Physical and chemical properties

<p>9.1. Information on basic physical and chemical properties</p> <p><u>Appearance</u></p> <p><u>Odour</u></p> <p><u>Odour threshold</u></p> <p><u>pH</u></p> <p><u>Melting point/melting threshold</u></p>	<p>Physical state: Liquid Ingredient state: liquid Colour: From colourless to yellowish</p> <p>Slight ammonium aroma is possible</p> <p>No information</p> <p>Weakly alkaline max 10</p> <p>None</p>
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<p><u>Initial boiling point and boiling range</u></p> <p><u>Freezing point</u></p> <p><u>Flash point</u></p> <p><u>Flammability (solid, gas)</u></p> <p><u>Upper/lower flammability or explosive limits</u></p> <p><u>Auto-ignition temperature</u></p> <p><u>Vapour pressure</u></p> <p><u>Vapour density</u></p> <p><u>Density</u></p> <p><u>Water solubility</u> <u>For dry ingredient-urea</u></p> <p><u>Partition coefficient: n-octanol/ water</u></p> <p><u>Thermal decomposition</u></p> <p><u>Viscosity</u></p> <p><u>Explosive properties</u></p> <p><u>Oxidising properties</u></p> <p>9.2. Other information <u>Molecular mass</u></p>	<p>103°C</p> <p>- 15°C</p> <p>None</p> <p>The product is not self-flammable.</p> <p>None.</p> <p>None.</p> <p>Insignificant.</p> <p>Not applicable</p> <p>Volumetric density: 1090 kg/m³ Relative weight: 1.09 g</p> <p>Fully soluble >624 g/l at 20°C</p> <p>Not applicable</p> <p>➤ 100°C 32,5 % (weight)</p> <p>None</p> <p>It has no oxidative properties</p> <p>60,06 g/mol</p>
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SECTION 10: Stability and reactivity

<p>10.1. Reactivity</p> <p>10.2. Chemical stability</p> <p>10.3. Possibility of hazardous reactions</p> <p>10.4. Conditions to avoid</p> <p>10.5. Incompatible materials</p> <p>10.6. Hazardous decomposition products</p>	<p>It does not react in the case of storage, work and application in normal conditions.</p> <p>Stable in the recommendable storage and operational conditions.</p> <p>Not known.</p> <p>Do not store it at direct sunlight. Do not store it in other utensils except for in plastic vessels.</p> <p>Strong oxidizers, acids, alkaline, nitrates, calcium hypochlorite or sodium hypochlorite.</p> <p>Nitrogen oxides (NO_x); Ammonium (NH₃); Carbon oxide and carbon dioxide Urea reacts with calcium hypochlorite or sodium hypochlorite thus forming an explosive nitrogen trichloride.</p>
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	LD50 ³ (oral)	14300 mg/kg bw – rat (Wistar) male/female sex
Irritation	Dermal	Not irritable – human, rabbit ((New Zealand White), mouse (Nude MF1h)
	Eyes	Non-irritable to rabbit (Vienna White)
Corrosiveness	Data about people and animals show that urea (carbamide) is not corrosive.	
Sensibilization	Dermal	Non-sensibilizing – it is naturally present in relatively high concentrations in human skin (to 1% of the weight)
	Respiratory	Not sensibilizing
Repeated exposure toxicity	NOAEL ⁴ (oral)	2250 mg/kg bw/day (rat, mouse)
Mutagenicity	Genetic toxicity: negative	
Carcinogenicity	NOAEL (oral)	2250 mg/kg bw/day (NCI screening research performed on rat and mouse)
Reproductive toxicity	LOAEL ⁵	500 mg/kg bw/day

SECTION 12: Ecological information

12.1 Toxicity

Water environment – including sediments (deposits)

Short-term toxicity - fish	LC50 ⁶ for freshwater fish: 6810 mg/L
Long-term toxicity - fish	Urea is with inherent low toxicity to the fish species. It is natural product of protein catabolism.

³ LD50 Median Lethal Dose .

⁴ NOAEL No Observed Adverse Effect Level

⁵ LOAEL Lowest Observed Adverse Effect Level

⁶ LC50 Lethal concentration

Short-term toxicity to water invertebrates	EC50 ⁷ /LC50 for freshwater invertebrates: 10000 mg/L (Daphnia, freshwater larvae of Aedes egypti larvae)
Long-term toxicity to water invertebrates	Urea is with inherent low toxicity to the water invertebrate species and the exposition would be limited by microorganisms' effect and the urea (carbamide) inclusion in the carbamide cycle.
Algae and water plants	EC10/LC10 or NOEC for freshwater algae: 47 mg/L – blue-green algae
Sediment organisms	The very high urea water solubility and low adsorption additionally shows very low exposition to the sediment organisms.
Water microorganism, organism toxicity	72-hour threshold of Entosiphon sulcatum toxicity to urea (carbamide) is 29 Mg / l and 16-hour threshold of urea toxicity to Pseudomonas Putida is > 10000 mg / L.

Land environment

Microorganism toxicity	In the case of urea application (together with other nitrogen fertilizers) Ammonium-N is being released nitrified to nitrate: acidic type that causes gradual pH decrease within the soil unless the effect is being compensated by liming> It is not a direct effect of urea exposition.
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Plant toxicity	Low plant toxicity is presumed: the ingredient is being extensively utilized as FERTILIZER hence it has favourable impact on plant growth.
Soil microorganism toxicity	In essence, urea is of low toxicity to microorganisms since it is being utilized as nutrients and nitrogen source.
Other terrestrial organism' toxicity	No available data

12.2. Persistence and degradability – Urea is not in conformity with the P or vP criteria.

12.3. Bioaccumulative potential – Urea is not in conformity with the B or vB criteria.

12.4. Mobility in soil – Highly biodegradable in soil and in water.

12.5. Results of PBT and vPvB assessment – Urea is neither PBT, nor vPvB ingredient.

12.6. Other adverse effects – No data.

SECTION 13: Disposal considerations

Product waste:	Depending on the pollution degree and type, treat them either as agricultural fertilizer or as raw material for the production of liquid fertilizer or treat them in the permitted facilities to this end.
Package waste:	Take into consideration the local legislation, depending on the used package (reusable or for single use)
Recommendable clean-up means:	Water, if necessary, with cleaning detergent Product residues, including package waste should be transferred to the specialized companies with suitable permit for waste management. In the case of spillage, see Section 6.

SECTION 14: Transport information

Urea (carbamide) is not classified as dangerous product, i.e. it is not perceived as dangerous cargo under the codes of the UN Orange Book and the international transport codes, for example RID (railway transport), ADR (road transport) and IMDG (see transport).

14.1. UN number – Not applicable.

14.2. UN proper shipping name – Not applicable.

14.3. Transport hazard class(es) – Not applicable.

14.4. Packing group – Not applicable.

14.5. Environmental hazards – Not applicable.

14.6. Special precautions for user – Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code – Not applicable

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**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance (urea) in the mixture:**

- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC. (Official journal of the European union of 30.12.2006., L 396. With the following modifications)
- Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), L 132
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Official journal of the European union of 31.12.2008, L 353 with the following modifications)

15.2. Chemical Safety Assessment

The chemical safety assessment was performed by the registrant/manufacture of the ingredient (urea) under Regulation 1907/2006 (REACH)

Grupa Azoty Zakłady Chemiczne „Police” S.A. – Reg. № 01-2119463277-33-0044, according to the present safety data sheet (MSDS).

SECTION 16: Other information

The information provided in the present safety data sheet is precise to the best of our knowledge. It includes data from the safety data sheet provided by the registrant of the product – urea (carbamide) and information as of the date of its publishing.

The defined information was created only as guideline for safe processing, use, procedures, storage, transport, disposal and discharge and cannot be perceived as quality guarantee or specification. The information refers only to the abovementioned specific product AdBlue®BlueSky and could not be valid and used in combination with all other materials or derivatives, unless explicitly provided for in the text. The provided information is not guarantee for the properties of whatever product and does not provide for statutory relation.

Training – The employees should be trained in the area of correct use. Before use read the safety data sheet.

Department that issues the Safety Data Sheet

Contact: SAFEGENT GmbH

Hörvelsinger Weg 62/2, D-89081 Ulm, Germany

Tel. +49 731 790 348 60, Email: info@safegent.one

Classification under Regulation 1272/2008, according to the description provided in Annex VI:

The ingredient urea (carbamide) is not classified as dangerous according to the criteria of the Dangerous Substances Directive (67/548/EEC) or under CLP Regulation, 1272/2008/EC on classification, labelling and packaging of substances and mixtures.

Classification under Regulation 1272/2008, own classification based on the performed chemical safety assessment CSA: Not individually classified under CSA.

The present safety data sheet contains all necessary attributes under directives 91/155/ECC, 93/112/EEC, 2001/58/EC and regulation 2015/830 EC

The information complements the technical operation guidelines but does not replace them.