

MATERIAL SAFETY DATA SHEET

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name NOXy ®(otherwise AdBlue®)

The former commercial product name: AdBlue®

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

1.2.1 Relevant identified uses

NOXy ®(otherwise AdBlue®) is used to selectively reduce emissions of nitrogen oxides from diesel engines which have been equipped with Selective Catalytic Reduction (SCR) systems.

1.2.2 Uses advised against

No data available.

1.3 Details on the supplier of the safety data sheet

Producer Grupa Azoty ZAK S.A.
Address PO Box 163; ul. Mostowa 30A;
47-220 Kędzierzyn-Koźle; Poland
Telephone No (+48 77) 481 20 00 (operator)
Person responsible for safety data sheet karta_nawozy@grupaaazoty.com

1.4 Emergency telephone numbers (in Poland)

Company's Dispatch Office (+48 77) 481-34-01
Emergency system 112
Police 997
Fire Dept. 998
Medical aid 999

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Classification according to EC Regulation No 1272/2008

The product does not meet the classification criteria of that Regulation.

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2.2 Label elements

Not applicable (no labelling requirements).

2.3 Other hazards

No data available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Name of substance	REACH registration number	EC number	CAS number	IUPAC name	Conc. [% (m/m)]	Classification
						Regulation 1272/2008 (CLP)
Urea	01-2119463277-33-0005	200-315-5	57-13-6	Urea	31.8÷33.2	Not classified

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

Eyes

Flush eye(s) immediately with plenty of tampered water. Consult an eye specialist in case of any/every eye contact.

Skin

Wash the affected area with plenty of water.

Inhalation

Evacuate the affected person from the place of exposure and provide access of fresh air.

Ingestion

Evacuate the affected person from the place of exposure and arrange the recovery position; keep warm and at rest. Give 2-3 glassfuls of water to drink. Provide medical attention.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5. FIRE-FIGHTING MEASURES**5.1 Extinguishing media**

Small fire: dry chemical extinguishers, carbon-dioxide extinguishers (for ABC or BC fires) and/or foam extinguishers. Large fire: water spray, fire foam, dry chemical powders.

The containers exposed to flames and/or high temperature should be removed from the area of hazard. Alternatively, they should be cooled down with water supplied from a safe distance until the fire is completely put out. Prevent entry of fire water to the storm-water drainage system and/or ground water.

5.2 Special hazards arising from the substance or mixture

Urea may decompose under high temperature conditions, releasing toxic gases, ammonia, carbon dioxide and nitrogen oxides.

5.3 Advice for fire-fighters

Wear gas-tight protective clothing and use self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

- Use protective gloves which are resistant to urea.
- Wear protective clothing.

6.2 Environmental precautions

The following precautions should be taken:

- Prevent the product entry to sewage systems and ground water. Protect sewer inlets, in particular during rainfall (the product is responsible for eutrophication).
- Pump the spilled mixture for recovery.
- When the product is discharged to surface water, notify its potential users. When the product is discharged to the soil or sewage systems, notify relevant local authorities.

6.3 Methods and material for containment and cleaning up

In order to clean up the contaminated area:

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Large spillage: Pump the product to a properly labelled waste container to be then used as a fertiliser. In case of excessive contamination, transfer to an authorised waste processing company.

Small spillage: Flush the spill site thoroughly with water and send to a biological sewage treatment plant.

6.4 Reference to other sections

Refer also to sections 8 and 13 in this MSDS.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Handle in well-ventilated places only. Local exhaust ventilation systems should be provided. Keep away all sources of ignition (sparks, flames).

7.2 Conditions for safe storage, including any incompatibilities

The product should be stored in properly closed and labelled containers, in dry and well-ventilated storage rooms. The floor must be solid and efficient ventilation must be provided. The containers should be protected against excessive heat. In order to avoid product solidification, avoid storage temperatures below (-10°C). Keep all combustible materials away.

Recommended packing materials: austenitic-chromium-nickel steel, chromium-nickel-molybdenum steel, or alloy steels with equivalent quality. Polypropylene containers may be used alternatively.

Materials to avoid: unalloyed steel and zinc-coated steel, and copper-containing steel grades; strong oxidisers; nitrites – no common storage or simultaneous transport in one car is allowed.

The product may not be stored jointly with nitrate fertilisers, either.

7.3 Specific end use(s)

No data available.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**8.1 Control parameters****8.1.1 OEEL(s) for Poland**

PEL for urea – not established
STEL for urea – not established

8.1.2 Derived No Effect Levels (DNELs) – Workers**8.1.2.1 *Acute / short term exposure (systemic effects)***

DNEL, urea (dermal)	580 mg/kg bw/ day
DNEL, urea (inhalation)	292 mg/m ³

8.1.2.2 *Acute / short-term exposure (local effects)*

DNEL, urea (dermal)	No data available.
DNEL, urea (inhalation)	No data available.

8.1.2.3 *Long-term exposure (systemic effects)*

DNEL, urea (dermal)	580 mg/kg bw/ day
DNEL, urea (inhalation)	292 mg/m ³

8.1.2.4 *Long-term exposure (local effects)*

DNEL, urea (dermal)	No data available.
DNEL, urea (inhalation)	No data available.

8.1.3 Derived No Effect Levels (DNELs) – general population**8.1.3.1 *Acute / short-term exposure (systemic effects)***

DNEL, urea (dermal)	580 mg/kg bw/ day
DNEL, urea (inhalation)	125 mg/m ³
DNEL, urea (oral)	42 mg/kg bw/ day

8.1.3.2 *Acute / short-term exposure (local effects)*

DNEL, urea (dermal)	No data available.
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DNEL, urea (inhalation) No data available.

8.1.3.3 Long-term exposure (systemic effects)

DNEL, urea (dermal) 580 mg/kg bw/ day
 DNEL, urea (inhalation) 125 mg/m³
 DNEL, urea (oral) 42 mg/kg bw/ day

8.1.3.4 Long-term exposure (local effects)

DNEL, urea (dermal) No data available.
 DNEL, urea (inhalation) No data available.

8.1.4 Predicted No Effect Concentration (PNEC)

PNEC urea (freshwater/marine water): 0.047 mg/l
 PNEC urea (sediment): No data available.
 PNEC urea (soil): No data available.





8.2 Exposure controls


8.2.1 Appropriate engineering controls

Avoid exposure of workers to urea solutions as far as possible – use suitable ventilation systems.

Eyewash stations should be located close to the work sites and they should be easily accessible. Workers should be given training on how to use safety measures.

8.2.2 Individual protection measures

	<p>EYE AND FACE PROTECTION Face-fitting safety goggles.</p>
	<p>RESPIRATORY PROTECTION No respiratory protection is required under normal operating conditions.</p>
	<p>HAND PROTECTION Use protective gloves.</p>
	<p>SKIN AND BODY PROTECTION Wear protective clothing.</p>

	<p>HYGIENE MEASURES Wash hands after the work is finished. Do not eat, do not drink and do not smoke when handling NOXy™ (otherwise AdBlue®)</p>
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8.2.3 Environmental exposure controls

Do not allow any entry of the product to the sewage system. Store in well-ventilated rooms.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	liquid
Colour:	colourless to straw-yellow
Odour:	faint odour of ammonia
Odour threshold:	no data available
pH:	no data available
Melting/freezing point:	-11.5°C
Boiling point:	no data available
Boiling range:	no data available
Flash point:	no data available
Evaporation rate:	no data available
Flammability:	no data available
Upper/lower explosive limit:	no data available
Vapour pressure:	in accordance with CSR for urea: 0.002 Pa at 298 K 1.2×10^{-5} mm Hg at 25°C (Jones, 1960)
Vapour density:	no data available
Relative density, at 20°C:	1.087 - 1.093 g/cm ³
Solubility:	urea will dissolve readily in water, alcohols and liquid ammonia; it is poorly soluble in ether, ethyl acetate, benzene and pyridine; urea is not soluble in chloroform and in many other organic solvents;
<i>n</i> -Octanol/water partition coefficient:	in accordance with CSR for urea: 624 g/l at 20°C in accordance with CSR for urea: log Kow (Pow) = -1.73 at 20°C
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
Viscosity:	no data available

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Explosive properties: this substance is a non-flammable material which has no structural chemical groups elements indicating explosive or auto-ignition properties

Oxidising properties: no

9.2 Other information

Molecular weight: 60.056

Refractive index for NOXy™ (otherwise AdBlue®) : 1.3814 - 1.3843 (20°C, 1013 hPa)

Surface tension (urea): 0.036 N/m (T_T = 133.3°C)

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

Urea reacts with numerous chemical compounds, both organic and inorganic. It behaves like a weak base in the solutions of strong acids, and it behaves like a weak acid in the solutions of strong bases.

10.2 Chemical stability

The product is stable under recommended storage conditions. Because of its hygroscopicity, humid atmosphere should be eliminated in storage rooms.

10.3 Possibility of hazardous reactions

Toxic fumes will be released in a fire (ammonia, carbon dioxide, nitrogen oxides).

10.4 Conditions to avoid

Avoid storage at excessively high temperatures (over 133°C - initial decomposition point). Avoid humid atmospheres since the product is hygroscopic. Moreover, do not mix with nitrate fertilisers since deliquescence of the mixture will be experienced.

10.5 Incompatible materials

Do not mix with other chemicals (strong acids and bases, strong oxidisers, nitrates, sodium hypochlorite and calcium hypochlorite). In particular, do not mix with pure ammonium nitrate - the resultant urea nitrate may undergo explosive decomposition and gases will be released in the process. Similarly, urea may produce explosive nitrogen trichloride when mixed with hypochlorites.

10.6 Hazardous decomposition products

Thermal decomposition produces ammonia and carbon dioxide.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxicokinetics

Large amounts of urea are produced in a human body as a product of normal metabolism. Urea is then excreted in the unchanged form via urine. Hence, no study on toxicokinetics for urea is required.

Absorption

Urea is present in various layers of human skin where it may absorb water to control moisture in the horny epidermal layer. At very high exposure levels, however, urea may be a contaminant and it may enhance dermal absorption of other chemical compounds.

According to Bronaugh *et al.* (1982), the dermal absorption value equals to 7.2 % (based on *in vivo* tests in rats, which is comparable to *in vitro* findings).

Absorption rate in accordance with CSA is 9.5 %.

Metabolism

Urea is produced in the body of mammals as a consequence of normal physiological processes, primarily by the detoxification of ammonia resulting from protein catabolism, via the urea cycle.

Excretion

Urea produced by the urea cycle is removed from the blood by glomerular filtration, but it is largely reabsorbed by the renal tubules. Some urea is transported by specific transport systems back into the urine. The clearance of urea is estimated to be 75 ml / minute, equivalent to approximately 1.5 % of the total blood volume per minute.

11.1.1 Relevant hazard classes

Acute toxicity

LD50 urea (rabbit):	14300 mg/kg bw (male)
LD50 urea (mouse):	11500 mg/kg bw (male)
LDLo urea (cattle):	600 mg/kg bw (male/female)
LDLo urea (pigs):	> 16000 mg/kg bw (male)

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Skin corrosion/irritation

In accordance with column 2 in Annex VIII to the REACH Regulation, acute toxicity of urea is very low (based on oral, subcutaneous and intravenous administration to rodents).

Respiratory sensitisation

In accordance with column 2 in Annex VIII to the REACH Regulation, urea is a solid and it is not volatile. In the mixture with water (i.e. in the liquid form), it produces no potential risk for the respiratory system.

Skin/eye irritation

Urea is a component of treatment creams which are used in case of skin diseases, hence it is not likely to produce dermal irritation in humans. Moreover, urea is present in the epidermis at high levels where it plays a role in skin hydration.

Irritation of respiratory tract

There is no information available on incidences of asthma as the occupational disease.

Mutagenicity

Large amounts of urea are produced in a human body as a product of normal metabolism. It is present in the blood circulation system at pretty high concentrations. Hence, it is not likely to have any genotoxic potential.

Carcinogenicity

There are no indications for carcinogenic properties of urea. The physiological role of urea and the level of its production in a human body are indicative for urea having no carcinogenic potential.

Toxicity for reproduction

No studies are available. Considerable amounts of urea are naturally present in a human body, as the product of normal protein catabolism, and it is not very likely that urea is harmful for reproduction.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Tests in fish

PNEC values

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Acute toxicity: Urea produces very low acute toxicity to fish: LC50 covers the range from > 6810 to 28000 mg/l.

Long-term toxicity: Urea produces low toxicity to that species: it is a normal product of the protein catabolism and fish developed efficient mechanisms of its excretion.

Tests in aquatic invertebrates

Short-term toxicity: In accordance with CSA: the value of EC50/LC50 equals to 10000 mg/l.

Long-term toxicity: Urea produces low toxicity to aquatic invertebrates.

Tests in algae

In accordance with CSA: the value of EC10/LC10 or NOEC for freshwater algae equals to 47 mg/l

Tests in sediment organisms

Urea is converted quickly in soil by sediment bacteria and it is assimilated to the nitrogen cycle in the nature. High water solubility of urea and its low adsorption are indicative for very low toxicity of that substance to sediment organisms.

Tests in terrestrial organisms

Tests in soil organisms, other than arthropods

Application of urea (together with other nitrogen-containing fertilisers) reduces the number of earthworms and the amount of biomass, and it lowers the pH parameter of soil. Long-term application of nitrogen fertilisers may be harmful to earthworms when no liming is provided.

Tests in terrestrial arthropods

Urea produces low toxicity to terrestrial arthropods.

Tests in terrestrial plants

Urea produces low toxicity to terrestrial plants. This substance is in common use as a fertiliser and it is beneficial to the plant growth.

12.2 Persistence and degradability

Stability in organic solvents

In accordance with column 2 in Annex IX to the REACH Regulation, stability of the substance in organic solvents is not its essential physical property.

Hydrolysis

Urea is stable in aqueous solutions under normal conditions. No hydrolysis takes place because of its molecular structure. The urea molecule undergoes decomposition in the hydrolysis process at elevated temperatures.

Photo-transformation/photolysis

Phototransformation in air, in water and in soil

No data available.

Biodegradation

Biodegradation in water

In accordance with CSA, urea is easily biodegradable.

Biodegradation in soil

Enzymatic digestion of urea makes the most widespread method of its decomposition. Urea is expected to undergo biodegradation to ammonia and bicarbonate reasonably quickly in soil and in water when the temperature is not too low.

12.3 Bioaccumulative potential

In accordance with CSR: log Kow (Pow) equals to -1.73 at 20°C.

12.4 Mobility in soil

Adsorption/desorption

The adsorption factor for urea in soil: Koc = 0.037-0.064.

12.5 Results of PBT and vPvB assessment

In accordance with Directive 67/548/EEC, urea (i.e. principal component of NOXy[™] (otherwise AdBlue[®]) does not meet the criteria for classification as PTB and vPvB (it

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is easily biodegradable and undergoes no bioaccumulation), and it is not a hazardous substance.

12.6 Other adverse effects

No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal must be in compliance with the national and local waste management regulations. The appropriate disposal method depends on the product composition at the time of disposal as well as the local statutes. The product wastes are classified as hazardous - in accordance with the Regulation of the Minister of Environment of 27 September 2001, on wastes catalogue.

Classification of wastes:

07 01 99 Wastes not otherwise specified.

15 01 02 Plastic packaging.

16 03 03 Off-specification batches and unused products.

16 03 04 Inorganic wastes other than those mentioned in 16 03 03 and 16 03 80, or

16 81 01 Wastes resulting from accidents and unplanned events.

16 81 02 Wastes other than those mentioned in 16 81 01.

13.2 Recommended product disposal methods

Waste urea solution should be recycled and re-used as far as possible (e.g. for soil fertilisation). If that outlet is not possible, the collected waste should be transferred for recovery or rendering it harmless to authorised waste processors. Diluted urea solutions may also be discharged to a biological sewage treatment plant which is capable of processing nitrogen compounds.

13.3 Recommended disposal methods for empty packaging

Spent containers should be emptied carefully and cleaned, and then transferred to specialist companies which are involved in recovery and recycling of spent packaging materials. The information on the nearest local waste processing companies is available from the local environmental protection government agencies. It is recommended to pass the wastes to the nearest waste collecting company.

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13.4 Special precautions

Do not discharge product into the aquatic environment without pre-treatment (biological treatment plant). Observe the applicable regulations.

13.5 Regulations applicable to wastes

Legal regulations on waste

- a) Directive of the European Parliament and of the Council 2008/98/EC of 19 November 2008 on waste and repealing certain Directives (OJ of 2008, vol. 51, L 312, as amended);
- b) Act of 14 December 2012 on waste (Journal of Laws of 2013, item 21) along with implementing acts;
- c) Act of 11 May 2001 on the obligations of some entrepreneurs with respect to the management of some waste and on the product fee and deposit fee (Journal of Laws of 2001 No. 63, item 639; consolidated text, Journal of Laws of 2007, No. 90, item 607, as amended) along with implementing acts;
- d) Act of 13 June 2013 on packaging and packaging waste management (Journal of Laws of 2013, item 888).

SECTION 14. TRANSPORT INFORMATION

14.1 UN number

This substance is not covered by any regulations on transport of dangerous goods.

14.2 UN proper shipping name

This substance is not covered by any regulations on transport of dangerous goods.

14.3 Transport hazard class(es)

This substance is not covered by any regulations on transport of dangerous goods.

14.4 Packing group

This substance is not covered by any regulations on transport of dangerous goods.

14.5 Environmental hazards

This substance is not covered by any regulations on transport of dangerous goods. It is not environmentally dangerous.

14.6 Special precautions for user

The mixture is not dangerous in transport. Avoid product spillages.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available.

SECTION 15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU legislation**

1. 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 EU of 2006, Vol. 49, L396, with further amendments).
2. 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 EU of 2008, Vol. 51, L353).
3. Commission Directives: 2000/39/EC of 08 June 2000, and 2006/15/EC of 07 February 2006, establishing the first and the second lists of indicative occupational exposure limit values.

National legal regulations

- a) Act of 25 February 2011 on chemicals and chemical mixtures (Journal of Laws 2011 No. 63, item 322, as amended) along with implementing acts;
- b) Act of 27 April 2001, Environmental Protection Law, (Journal of Laws 2001 No. 62, item 627; consolidated text, Journal of Laws 2013 No. 1232, as amended) along with implementing acts;
- c) Act of 18 July 2001, Water Law, (Journal of Laws 2001 No. 115, item 1229; consolidated text, Journal of Laws of 2012, item 145, as amended) along with implementing acts;
- d) Act of 14 December 2012 on waste (Journal of Laws of 2013, item 21) along

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- with implementing acts;
- e) Act of 11 May 2001 on the obligations of some entrepreneurs with respect to the management of some waste and on the product fee and deposit fee (Journal of Laws 2001 No. 63, item 639; consolidated text, Journal of Laws 2007 No. 90, item 607, as amended) along with implementing acts;
 - g) Act of 13 June 2013 on packaging and packaging waste management (Journal of Laws of 2013, item 888);
 - h) Act of 19 August 2011 on road transport of dangerous goods (Journal of Laws 2011 No. 227, item 1367, as amended) along with implementing acts;
 - i) Act of 6 September 2001 on road transport (Journal of Laws 2001 No. 125, item 1371; consolidated text, Journal of Laws 2007 No. 125, item 874, as amended) along with implementing acts;
 - j) Government Declaration dated 28 May 2013 on coming into effect of the amendments to Annexes A and B of the European Agreement concerning the International Carriage of Dangerous Goods (ADR) made in Geneva on 30 September 1957 (Journal of Laws of 16 July 2013, item 815; it contains the consolidated text.
 - k) Act of 26 June 1974, Labour Code, (Journal of Laws 1974 No. 24, item 141; consolidated text, Journal of Laws 1998 No. 21, item 94, as amended) along with implementing acts;
 - l) Act of 30 August 2002 on the compliance assessment system (Journal of Laws 2005 No. 259, item 2173; consolidated text, Journal of Laws 2004 No. 204, item 2087, as amended) along with implementing acts;
 - m) Act of 24 August 1991 on fire protection (Journal of Laws 1991 No. 81, item 351; consolidated text, Journal of Laws 2002 No. 147, item 1229, as amended) along with implementing acts;
 - n) Government Declaration dated 29 June 2011 on the amendment of the scope of application of the Convention concerning International Carriage by Rail (COTIF), made in Bern on 9 May 1980 (Journal of Laws 2011 No. 180, item 1073);
 - o) Government Declaration dated 16 May 2011 on coming into force of the amendments to the Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) which constitute the annex to the Convention concerning International Carriage by Rail (COTIF), made in Bern on 9 May 1980 (Journal of Laws 2011 No. 137, item 805).

15.2 Chemical safety assessment

Chemical safety assessment has been carried out.

SECTION 16. OTHER INFORMATION

16.1. Changes

According to REACH and CLP Regulations.

16.2 A key or legend to abbreviations and acronyms used

CSR	Chemical Safety Report.
DNEL	Derived No Effect Level.
PNEC	Predicted No Effect Concentration.
NOEC	No Observable Effect Concentration.
LCx	Lethal Concentration x %.
LDx	Lethal Dose x %.
PBT	Persistent, Bioaccumulative and Toxic.
vPvB	Very Persistent and Very Bioaccumulative.
EU	EU list comprises three earlier European lists of chemicals which have been put together pursuant to EU legal provisions: EINECS, ELINCS and "No-longer polymers" (NLP) list.
CAS	Chemical Abstracts Service.
IUPAC	International Union of Pure and Applied Chemistry.
CLP	Classification, labelling and packaging of chemical substances and mixtures
MAC	Maximum Admissible Concentration
MAC (STEL)	Maximum Admissible Short-Term Concentration
ECx	Effective concentration which inhibits the x% growth of the population under investigation
REACH	Registration, Evaluation, Authorisation and restriction of Chemicals.
CSA	Chemical Safety Assessment.
UN	United Nations

16.3 Key literature references and sources for data

Urea - registration dossier.

16.4 Advice on training

- An employer is obliged to inform all the workers who come into contact with **NOXy®** about risks and personal protection equipment listed in the MSDS

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- The distributor/downstream user is obliged to give the recipient the information contained in the MSDS

16.5 In place of

KW-07/ZAK/PZ-025.03_4.

This Material Safety Data Sheet is NOT any product quality specification, and it may NOT be understood as any guarantee for the product quality or for the product compliance with the client's requirements for individual applications. The purpose of this MSDS is to provide the guidelines for safe handling of the product (occupational safety and environmental protection), its transport and storage. The figures and data specified herein are based on our current knowledge and on current legislation. The clients should verify that information against the provisions of the laws and/or regulations which are valid in their countries and/or companies.