

PRODUCT NAME

NOXy®, Urea solution 32,5%

IDENTIFICATION OF THE PRODUCT

NOXy® is an aqueous solution of urea at a concentration of 32,5 % (w/w), a clear or slightly yellow liquid. This mixture is nontoxic, noncombustible and environmentally - friendly. NOXy® is applied in modern Diesel engines with SCR system (Selective Catalytic Reduction).

Commercial product name	NOXy® (also offered under the name AdBlue® ¹)
IUPAC name	Urea solution 32,5%
CAS Number	57-13-6 (urea)
Chemical formula	CH ₄ N ₂ O (urea)
Registration number	01-2119463277-33-0025 (urea)
Manufacturer	Grupa Azoty Zakłady Azotowe „Puławy” S.A. al. Tysiąclecia Państwa Polskiego 13, 24-110 Puławy, tel. +48 (81) 886 34 31; +48 (81) 565 30 00

TOXICOLOGICAL INFORMATION

Product does not have negative effects on human health.
 NOXy® contains urea which does not have mutagenic, carcinogenic and teratogenic effects. Moreover, product is not skin irritant and does not cause sensitization.
 Urea causes a slight irritating effect on eyes.
 Poisoning or industrial diseases caused by NOXy® were not reported.

ECOLOGICAL INFORMATION

NOXy® contains urea which is an easily biodegradable substance and does not have bioaccumulative potential. Taking into account safety assessment studies of urea it is concluded that PBT (persistent, bioaccumulative and toxic) and vPvB (very persistent and very bioaccumulative) criteria are not fulfilled.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Precautions for safe handling

Persons involved in substance turnover should be trained in handling of the substance and have appropriate training in occupational health and safety.
 Protect against direct eye and skin contact.

Recommended personal protective equipment

Respiratory tract protection	Not required.
Hand and skin protection	Use protective anti-permeable gloves according to EN 388 standard and protective clothing.

¹ AdBlue® is a registered trademark of the Verband der Automobilindustrie e.V. (VDA)

Eye and face protection

If excessive risk of splashing exists use tightly fitting protective goggles according to EN 166 standard.

STORAGE

32,5% urea solution should be stored in non - pressure tanks or containers characterized by proper volume. Store in cool, dry and well - ventilated areas at temperatures between $(-11.5 \div 30)^{\circ}\text{C}$. Protect tanks and containers with urea solution against exposure to strong sunlight. Storage temperature should be kept above -11.5°C to prevent crystallization of urea from solution. Non adherence to the above mentioned precautions may affect product quality. Prolonged storage above 35°C will cause hydrolysis to occur, with the consequent formation of ammonia and will reduce shelf life.

Additional precautions:

- before filling up with urea solution, tanks and containers should be rinsed with demineralized water;
- avoid contamination of this product.

TRANSPORT INFORMATION

Technical urea solution 32,5% should be shipped in tank vehicles, tank wagons or in a smaller containers (i.e. drums, canisters). Avoid contamination of this product during transportation by maintaining of a high cleanness. Product is not classified as dangerous with respect to RID and ADR regulations.

REGULATORY INFORMATION

Authorisations:

Material does not require authorisation according to the title VII of EC regulation No. 1907/2006.

Restrictions:

No restrictions on the manufacturing, placing on the market and use of the product are defined according to the title VIII of EC regulation No. 1907/2006.

Other EU regulations:

According to paragraph 31 of EC regulation No. 1907/2006, urea is not classified as hazardous, therefore material safety data sheet is not required.

This product information sheet is in compliance with paragraph 32 of REACH regulation.

No occupational exposure limit values for urea are settled on the territory of the European Union.

OTHER INFORMATION

Quality requirements, analytical methods, transportation and storage conditions as well as loading/unloading precautions should comply with standard ISO 22241-1-2-3-4: 2006 (E) „Diesel Engines - NOX AUS32”.