

**TECHNICAL SHEET 8 A /KA/10/2007
for liquid ammonia synthetic**

The following document has been prepared due to marketing purposes. It briefly specifies data of liquid ammonia synthetic.

1 PRODUCT NAME

- | | |
|-----------------------------------|---|
| a) trade name | - liquid ammonia synthetic |
| b) name in the IUPAC Nomenclature | - ammonia |
| c) trade name in English | - liquid ammonia synthetic |
| trade name in French | - ammoniac liquide synthétique |
| d) trade name in German | - Ammoniak flüssig synthetisch |
| e) other names used | - liquefied ammonia, liquefied anhydrous ammonia, anhydrous ammonia |

2 IDENTIFICATION

- | | |
|--|---|
| 2.1. Degree of purity | - technical |
| 2.2 Form | - liquid |
| 2.3 Chemical formula | |
| a) molecular | - NH ₃ |
| 2.4 Molecular weight | - 17,0304 (1977 r). |
| 2.5 In accordance with Regulation (EC) No 1907/2006 of The European Parliament and The Council of the 18 December 2006 concerning Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) ammonia shall be registered. Registration of ammonia is required. | |
| 2.6 CAS No | - 7664-41-7. |
| 2.7 EINECS No | - 231-635-3. |
| 2.8 EINECS Name | - anhydrous ammonia. |
| 2.9 Chemical name acc. to EN 12126:2006 | - ammonia, liquefied, anhydrous (see p. 9.1.1). |

3 APPLICATION

Liquid ammonia synthetic is used in chemical industry, mainly in production of nitrate fertilizers, and/or refrigeration, metallurgy.

4 TECHNICAL REQUIREMENTS AND TEST METHODS

Requirements		Test methods
a)	Form	colourless liquid, acrid in smell
b)	Ammonia content, % (m/m), not less than	99,85
c)	Dry residue after vaporization, % (m/m), not more than	0,15
*) Requirements according to Polish Standard (see p.9.1.2).		

5 PACKING

Ammonia has to be loaded into tanks according to ADR/RID regulations (see p. 9.2.3/9.2.4).

Tank codes ADR: PxBH, PxCH, PxDH

Tank codes RID: PxBH; PxDH;

where $x \geq 26$ with thermal insulation; tanks, $x \geq 29$ without thermal insulation;
x - minimum test pressure for tanks expressed as bar.

6 TRANSPORT (ADR and RID)

Ammonia is a dangerous good with high risk (see p. 9.2.3/9.2.4).

6.2 Details concerning ADR (see 9.2.3):

UN No: 1005
 Proper shipping name: AMMONIA, ANHYDROUS
 Warning Labels No: 2.3+8
 Packing group: no
 Class No: 2
 Hazard Identification Number: 268

6.2 Details concerning RID (see 9.2.4):

UN No: 1005
 Proper shipping name: AMMONIA, ANHYDROUS
 Warning Labels No: 2.3+8+13
 Packing group: no
 Class No: 2
 Hazard Identification Number: 268

7 STORAGE

Please note that the existing national regulations concerning storage of the product should remain in force until verified European criteria are adopted.

Ammonia has to be kept in suitable solid containers according to regulations of UTD and TDT in Poland (see p.9.2.1/9.2.2).

Ammonia has to be kept in suitable containers, according to obligatory regulations of the local regulation of each European country and international regulations (see p.9.2.5).

Decomposition of ammonia begins at 450 °C. Ammonia does not decompose when stored and handled correctly.

The containers shall be kept tightly closed in a cool, well-ventilated place and handled with care. The containers shall be kept to avoid contact with halogens, acid anhydrous, oxidizing agents, zinc, copper, tin and their alloys.

8 OTHER SAFETY INFORMATION

The valid edition of the Safety Data Sheet for chemical products (SDS) includes all the necessary details for complete identification of ammonia.

9 INFORMATIVE ANNEX

The following regulations and standards are given due to information purposes.

9.1 Standards

9.1.1 European Standard EN 12126:2005 Chemicals used for treatment of water intended for human consumption – Liquefied ammonia (Polish Standard PN-EN 12126:2006 „Chemikalia do uzdatniania wody przeznaczonej do spożycia – Amoniak ciekły skroplony), PN-EN 12126:2006 IDT to EN 12126:2005.

9.1.2 Polish Standard No PN-79/C-84914 Liquid ammonia synthetic

9.2 Regulations

NOTE: Regulations may be changed. Receiver is obliged to use up to date regulations.

9.2.1 UDT – Urząd Dozoru Technicznego – polish regulations concerning storage of dangerous goods

9.2.2 TDT – Transportowy Dozór Techniczny – polish regulations concerning carriage of dangerous goods.

9.2.3 ADR – The European Agreement concerning the International carriage of Dangerous Goods by road

9.2.4 RID – Regulation concerning International carriage of Dangerous Goods by rail

9.2.5 67/548/EEC: Council Directive of 27th June on the approximation of the law, regulations and administrative provisions relating to the classification, packaging and labeling of dangerous substances and its amendments and adaptations

Approved by

2007.10.19

DYREKTOR
Kompleksu Nawozowego

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