

SC "Achema"
Safety data sheet



In accordance with Regulation (EC) 1907/2006 (REACH), Annex II with all subsequent amendments and supplements and EC Regulation No. 830/2015

Liquid Nitrogen Fertilizers (UAN)

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Revision date: 2018.07.10
Version: No. 4.0
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SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name of mixture: Liquid Nitrogen Fertilizers (UAN).

Composition: ammonium nitrate and urea.

Chemical name: ammonium nitrate.

Identification number according to Regulation No. 1272/2008: not applicable.

EC number: 229-347-8

CAS number: 6484-52-2

REACH registration number: 01-2119490981-27-XXXX.

Chemical name: urea.

Identification number according to Regulation No. 1272/2008: not applicable.

EC number: 200-315-5

CAS number: 57-13-6

REACH registration number: 01-2119463277-33-XXXX.

1.2 Relevant identified uses of the mixture and uses advised against

1.2.1 Uses: used as a main and/or additional fertilizer for winter and summer crops, sugar beet, mangel – (wurzel), grasslands and potatoes.

1.2.2 Uses advised against: none.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: AB Achema

Full address: Jonalaukio k., Ruklos sen., LT55550

Country: Lithuania

Tel. Nr.: +370 349 56465

URL website: www.achema.lt

Person responsible for the Safety Data Sheet (with e-mail address): Mindaugas Vaidila, e-mail: m.vaidila@achema.com

1.4 Emergency telephone number

Please contact: Poison Information and Control Office in the Republic of Lithuania by phone +370 52362052 or by the Common emergency Center by 112.

Helpdesk services work 24 hours a day, 365 days a year.

Other remarks (language in which assistance is provided): assistance is provided in Lithuanian.

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance

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2.1.1 Classification according to Regulation No. 1272/2008 [CLP]: does not meet the criteria for classification in accordance with Regulation (EC) No. 1272/2008.

2.2 Label elements

Labeling according to Regulation No. 1272/2008 [CLP]:

Precautionary statement(s):

P102 – Keep out of reach of children;

P220 – Keep/Store away from clothing /food/drinks/animal foodstuffs/ combustible materials;

P262 – Do not get in eyes, on skin, or on clothing;

P280 – Wear protective gloves/protective clothing/eye protection/face protection;

P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing;

P337+P313 – If eye irritation persists: Get medical advice/attention;

P301+P315 – IF SWALLOWED: Get immediate medical advice/attention;

P264 – Wash hands thoroughly after handling.

2.3 Other hazards

According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted since product is inorganic mixture.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

According to the Regulation (EC) No 1907/2006 the liquid nitrogen fertilizers (UAN) is a mixture.

3.2. Mixtures

Identification of hazardous ingredients in the mixture

CAS no.	EC no.	ID No. in accordance with Regulation (EB) No. 1272/2008	REACH registration no.	Content, %	IUPAC name	Classification in compliance with Regulation (EC) No. 1272/2008 (CLP)
6484-52-2	229-347-8	Not listed	01-2119490981-27-xxxx	30 ÷ 47	ammonium nitrate	Oxid. Solid 3, H272; Eye Irrit. 2, H319, Specific conc. limits: Eye Irrit. 2, H319: > 80,0 % ≤ 100,0 %

All precautionary statements are listed in section 16.

SECTION 4. FIRST-AID MEASURES

4.1 Description of first aid measures

4.1.1 General information. Measurements which only the doctor can take: eye healing, stomach cleansing.

The material can get through: the respiratory tract, in contact with skin, eyes, ingestion.

4.1.2 Inhalation: does not affect respiratory tract, non-hazardous.

4.1.3 Skin contact: wash affected skin (body) with water; change affected clothing.

4.1.4 Eye contact: wash with plenty of water at least for 10 minutes; if irritation persists, apply to doctor.

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4.1.5 Ingestion: do not cause vomiting, rinse mouth with water; give the affected person plenty of water or milk to drink; seek medical advice.

4.2 Most important symptoms and effects

None known.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable: water and carbon dioxide or other fire-extinguishing media appropriate for surrounding materials.

Not suitable: do not use chemical extinguishers, water vapor.

5.2 Special hazards arising from the substance or mixture

None.

5.3 Advice for firefighters

None.

5.4 Additional information

None.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1. For personnel not involved in emergency situations: use personal safety measures as specified in section 8.

6.1.2. For the personnel involved in emergency situations: use suitable personal protective equipment, mentioned in section 8.

6.2 Environmental precautions

Keep away from getting into a rain drainage system or trenches an/or ditches.

6.3 Methods and material for containment and cleaning up

Pump (scoop) as much as possible of the spilled substance/preparation into tight containers and eliminate the remains with dry sand. Pumped (taken away) product may be used according to its purpose again. Prevent spread fertilizer from accessing water pools.

6.4 Reference to other sections

See section 8 for personal protective equipment and section 13 for waste disposal.

SECTION 7. HANDLING AND STORAGE

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7.1 Precautions for safe handling

General occupation hygiene: While spraying manually (during fertilizing process) use water-proof coat, rubber gloves, protective glasses and head protection; always spray downwind. After finish of work, wash hands with soap. Remove contaminated clothing and remove contaminated protective equipment before entering area for eating.

Storage requirements: fertilizers should be kept above the crystallization temperature, depending on the marque: UAN-28 > -16 °C, UAN-30 > -9 °C, UAN –32, > 0 °C. Liquid Nitrogen fertilizer (UAN) packed in small packages should be kept in closed storehouses, protected against moisture. Containers for keeping UAN may be produced of carbon steel, as corrosion inhibitor used in the preparation ensures anti-corrosion coefficient at least of 90 %. After emptying the containers, they must be refilled only using a gas mask of PS-1 category, as gas ammonia may be contained therein.

Directions for limited allowable quantities of the substance/preparation to be stored under the specified conditions: is not regulated by company. Avoid spillage and keep away from drains.

7.2 Conditions for safe storage, including any incompatibilities

Incompatible products: Storage with any other chemical substances is not recommended, as possible reactions are not identified.

Requirements to packages: Transported by railway or truck tanks prepared especially for transportation of this kind of fertilizers: clean, hermetic and technically sound; packed into 1-50 dm³ polyethylene packages in compliance with applicable standardizing documents to ensure safe transportation and storage. May be packed in the customer’s package, which must be clean and hermetic (carbon steel containers, tanks, barrels); must be fastened tight while carrying.

The product is not subject to restrictions in accordance with the Resolution No. 966 of the Government of the Republic of Lithuania of 07.08.08 “On the Approval of the Listing and Classification of Criteria for the Listing and Classification of Substances, Mixtures and Preparations of Hazardous Substances in Hazardous Substances in Hazardous Substances” (Official Gazette, 2004, No. 130-4649), with all subsequent amendments and supplements) and Part 2 of Annex I to Directive 2012/18/EU.

7.3 Specific end use(s)

Solution of UAN is widely used as a main and/or additional fertilizer for winter and summer crops, sugar beet, mangel – (wurzel), grasslands and potatoes.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Regulated occupational exposure limit values:

Maximum allowable value for long-term exposure (IPRD): none.

Maximum allowable value for short-term exposure (TPRD): none.

Non-limiting value(s) (DNEL): the product does not meet the Regulation (EC) classification criteria No. 1272/2008. Therefore, no DNEL and PNEC are identified. The tables show the DNEL and PNEC values of the ammonium nitrate contained in the product.

Workers exposure. Ammonium nitrate information.

Exposure mode	Exposure type	Hazardous	Physicochemical property that could have the greatest negative effect
Inhalation	Systemic effect –	DNEL: 36 mg/m ³	Toxicity (ingested)

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	long lasting		
Inhalation	Systemic effect - acute	The hazard is not known	
Inhalation	Local effect – long lasting	The hazard is not known (further research is not necessary)	
Inhalation	Local effect - acute	The hazard is not known (further research is not necessary)	
Skin contact	Systemic effect – long lasting	DNEL: 5,12 mg/kg bw/day	Toxicity (ingested)
Skin contact	Systemic effect - acute	No hazard identified	
Skin contact	Local effect – long lasting	The hazard is not known (further research is not necessary)	
Skin contact	Local effect - acute	No hazard identified	
Contact via eyes	Local effect	Low hazard (limit not identified)	

Predicted inactive concentration(s) PNE. Ammonium nitrate data.

Section	Hazardous	Comments
Fresh water		No effect was observed in all eco-toxicity studies with the highest recommended concentration of ammonium nitrate (nominal 100 mg / l). Therefore, on the basis of the ECHA document "Guidance on information requirements and chemical safety assessment. Part B: Hazard Assessment", assessment of the impact of water bodies is not necessary and PNEC values are not derived.
Sea water		No effect was observed in all eco-toxicity studies with the highest recommended concentration of ammonium nitrate (nominal 100 mg / l). Therefore, on the basis of the ECHA document "Guidance on information requirements and chemical safety assessment. Part B: Hazard Assessment", assessment of the impact of water bodies is not necessary and PNEC values are not derived.
Fresh water sediment		No effect was observed in all eco-toxicity studies with the highest recommended concentration of ammonium nitrate (nominal 100 mg / l). No data on eco toxicity in sediment organisms. In addition, it is considered that such data are not necessary. Therefore, on the basis of the ECHA document "Guidance on information requirements and chemical safety assessment. Part B: Hazard Assessment ", assessment of the impact of water bodies is not necessary and PNEC values are not derived.
Sea water sediment	There is no probability of sediment exposure	No effect was observed in all eco-toxicity studies with the highest recommended concentration of ammonium nitrate (nominal 100 mg / l). No data on eco toxicity in sediment organisms. In addition, it is considered that such data are not necessary. Therefore, on the basis of the ECHA document "Guidance on information requirements and chemical safety assessment. Part B: Hazard Assessment ", assessment of the impact of water bodies is not necessary and PNEC values are not derived.
Microorganisms in sewage treatment system	PNEC STP: 18 mg/l	Exposure factor: 10 Extrapolation method: exposure factor Available test data with sodium nitrate, which is similar in structure to ammonium nitrate, EC50> 1000 mg / l and NOx 180 mg / l. An assessment factor of 10 was used in accordance with the ECHA Guideline on Information Requirements and Chemical Safety Assessment. Section R.10
Soil		No effect was observed in all eco-toxicity studies with the highest recommended concentration of ammonium nitrate (nominal 100 mg / l). No data on eco toxicity to soil. In addition, it is considered that such data are not necessary. Therefore, on the basis of the ECHA document "Guidance on information requirements and chemical safety assessment. Part B: Hazard Assessment ", assessment of the impact of soil bodies is not necessary and PNEC values are not derived.
Air		PNEC (air) was not determined because there is no data that can determine it. Furthermore there are no demands in regulations to determine PNEC (air).

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Food chain	No bioaccumulation potential	According to ammonium nitrate regulation (EB) No. 1272/2008 hazard statements H373, H372, H360, H361 and H362 are excluded. The substance is extremely water soluble and is thus believed to have low bio accumulation potential. Therefore, on the basis of the ECHA document "Guidance on information requirements and chemical safety assessment Part B.7", exposure assessment for the food chain is not necessary and the values for PNEC in the mouth are not derived.
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8.2 Exposure controls

8.2.1 Appropriate engineering controls: not necessary.

8.2.2. Individual protection measures:

8.2.2.1 Eye (face) protection: To ensure protection of eyes wear chemically resistant protective goggles or face shield according to LST EN 166 when using fertilizers.

8.2.2.2 Skin protection

Hand protection: Use protective gloves according to LST EN 420, LST EN 374 and LST EN 388. When choosing gloves, it must be ensured that they are made of suitable materials, are of sufficient thickness and not less than the required penetration resistance. When finished, the gloves must be cleaned and washed before they are washed off. Sufficient attention should be given to hand skin care. Skin protective creams from urea not sufficiently protect hands. The inside of the gloves should not contain powders which can cause hand skin allergies.

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary (breakthrough time \geq 480 min):

- natural rubber NR (or natural latex) at least 0.5 mm thick;
- polychloroprene CR at least 0.5 mm thick;
- nitrile rubber or nitrile latex NBR at least 0.35 mm thick;
- butyl rubber at least 0.5 mm thick;
- fluorocarbon rubber - FKM, at least 0.4 mm thick;
- polyvinyl chloride - PVC, at least 0.5 mm thick.

Please note that the penetration time of the glove material in this section has been set at 22 °C. When using a higher temperature product, the resistance of the glove material can be reduced, therefore in such cases the permitted time to use gloves should be shortened. If you have any questions about the suitability of the gloves, please contact the manufacturers / suppliers of gloves.

Other protection: wear working boots, depending on the risk, wear full body work clothing or suitable chemical resistant work suit. After washing, wash your hands with soap.

8.2.2.3. Respiratory protection: not necessary.

8.2.2.4. Thermal protection: not necessary.

8.2.3 Environmental exposure controls: do not flush into surface water or sanitary sewer system.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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9.1 Information on basic physical and chemical properties

- (a) **Appearance:** colourless or brownish liquid without any sediment.
- (b) **Odor:** mild ammonia odour could be felt.
- (c) **Odour threshold:** mild ammonia odour could be felt in a small quantity of product.
- (d) **pH:** 6,5 ÷ 7,5.
- (e) **Melting/Freezing temperature:**
- 16 °C (UAN-28);
- 9 °C (UAN-30);
0 °C (UAN-32).
- (f) **Initial boiling point and boiling:** 107°C.
- (g) **Flash point:** the substance is inorganic. In accordance with Column 2 of REACH Annex VII, flash point does not need to be conducted in case the substance is inorganic.
- (h) **Speed of vaporization:** not applicable.
- (i) **Flammability:** nonflammable.
- (j) **Limit values of flammability or explosion:** non explosive.
- (k) **Vapor pressure:** 480 Pa.
- (l) **Vapor density:** not applicable.
- (m) **Relative density:** 1,265 ÷ 1,292 (UAN-28); 1,285 ÷ 1,315 (UAN-30); 1,305 ÷ 1,325 (UAN-32).
- (n) **Solubility in water:** fully soluble in water.
- (o) **Partition coefficient n-octanol/water:** not determined for liquid fertilizer solutions.
- (p) **Auto ignition temperature:** In accordance with REACH Annex XI, testing may be omitted if testing does not appear scientifically necessary. Liquid nitrogen fertilizers have no explosive properties. However, Liquid nitrogen fertilizers do not contain groups that may react with oxygen and therefore will not auto-ignite at temperatures between room temperature and melting point. Therefore, a study is not considered necessary.
- (r) **Decomposition temperature:** not applicable.
- (s) **Viscosity:**
3,06 mPa·s (at 20°C), 2,08 mPa·s (at 40°C) (UAN-28);
3,95 mPa·s (at 20°C), 2,57 mPa·s (at 40°C) (UAN-30);
5,26 mPa·s (at 20°C), 3,36 mPa·s (at 40°C) (UAN-32).
- (t) **Explosive properties:** Non explosive.
- (u) **Oxidizing properties:** Non-classified as oxidizing substance.

9.2 Other information

Product brand	Content of nitrogen, %				Crystallization
	N (total), %	N-NH ₃	N-NO ₃	N-NH ₂	
UAN-28	28 ± 0,6	7 ± 0,7	7 ± 0,7	14 ± 1,4	-16 °C
UAN-30	30 ± 0,6	7,5 ± 0,7	7,5 ± 0,7	15 ± 1,5	-9 °C
UAN-32	32 ± 0,6	8 ± 0,8	8 ± 0,8	16 ± 1,6	0 °C

Of all kinds of urea and ammonium nitrate in the weight ratio of 0.73 to 0.83 during the manufacturing process is added to 150 to 200 ppm (0.015 to 0.02%) of corrosion inhibitor. Portion of corrosion inhibitor after dispensing process decreases. The inhibitor is made of organic acids.

SECTION 10. STABILITY AND REACTIVITY

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10.1 Reactivity

Stable under regular conditions.

10.2 Chemical stability

Stable under regular conditions, does not have cumulative properties, does not form any toxic compounds with other substances contained in the air or drainage waters.

10.3 Possibility of hazardous reactions

Possible dangerous reactions with other chemicals are unknown; do not mix with other substances. After refreezing, the properties are not changed.

Need for and the presence of stabilizers: not necessary.

10.4 Conditions to avoid

Possible dangerous reactions with other chemicals are unknown; do not mix with other substances. Store below the crystallization temperature to avoid package damages.

10.5 Incompatible materials

None without changing the physical state of the substance.

10.6 Hazardous decomposition products

None without changing the physical state of the substance.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity: does not fulfill the classification criteria according to Regulation (EC) No. 1272/2008.

Ingested, LD₅₀(rats) > 2000 mg NH₄NO₃ / kg; LD₅₀(rats) > 2000 mg CO(NH₂)₂ / kg.

Skin irritation or/and sensitization: does not fulfill the classification criteria according to Regulation (EC) No. 1272/2008. Not irritating. No sensitizing effect to skin known.

Serious eye damage/irritation: does not fulfill the classification criteria according to Regulation (EC) No. 1272/2008. Not irritating.

Sensitizing of the airways or skin: does not fulfill the classification criteria according to Regulation (EC) No. 1272/2008. Not sensitizing. In skin (eye) contact after rinsing with water no remaining health impacts are identified.

Mutagenicity: does not fulfill the classification criteria according to Regulation (EC) No. 1272/2008.

Carcinogenicity: does not fulfill the classification criteria according to Regulation (EC) No. 1272/2008.

Reproductive toxicity: does not fulfill the classification criteria according to Regulation (EC) No. 1272/2008.

Specific target organs of toxicity (STOT) (unique exposure): does not fulfill the classification criteria according to Regulation (EC) No. 1272/2008.

Specific target organs of toxicity (STOT) (repeated exposure): does not fulfill the classification criteria according to Regulation (EC) No. 1272/2008.

Aspiration hazard: none.

SECTION 12. ECOLOGICAL INFORMATION

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12.1 Toxicity

Eco toxicity (toxicity to water and soil organisms, other animals and plants): if spread, undiluted preparation may destroy vegetation and cause death in fish.

12.2 Persistence and degradability

Persistence and degradability (biodegradation) in the environment: Decomposes in nitrate, ammoniacal and amidic nitrogen during the biodegradation, which are plant nutrients.

12.3 Bio accumulative potential

Ammonium nitrate and urea do not have any bio accumulative properties; do not form any toxic compounds with other substances presented in the air or drainage waters.

12.4 Mobility in soil

Mobility: well-soluble in water; NO₃ ion is extremely mobile; NH₄ cation is absorbed in soil.

12.5 Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted since product is inorganic.

12.6 Other hazards effect

None.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from residues. The contaminant free UAN waste according to Regulation (EC) No. 1357/2014 is classified as non-hazardous waste. Depending on degree and nature of contamination dispose of by use as fertilizer or to an authorised waste facility. Do not empty into drains. Dispose of this material in a safe way and in accordance with all applicable local and national regulations.

Package waste disposal. After UAN fertilizers discharge, the railway and truck tanks are further used for UAN fertilizers transportation. The solution, after railway and truck tanks inside water washing, can be used as fertilizer.

SECTION 14. TRANSPORT INFORMATION

14.1 UN Number

None.

14.2 Proper shipping name

Liquid Nitrogen Fertilizers (UAN).

14.3 Transport hazard classes

None.

14.4 Packaging group

None.

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14.5. Environmental hazards

The product is not classified as hazardous substance according to the Orange Book and International Transport Codes RID (Railway), ADR (Road) and IMDG (sea transport).

14.6. Special precautions for users

None.

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

The product may be transported unpackaged according to the 1973 The International Convention for the Prevention of Pollution from Ships, as amended by the 1978 Convention; Protocol (MARPOL) and the International Code for the Construction and Equipment of Ships Carrying Bulk Hazardous Substances (IBC Code). The name of the product, in accordance with the IBC Code, to be used in the vessel's documents, is “Urea / Ammonium Nitrate Solution”. Pollution category – Z. Hazard – P (product included in the IBC Code due to its risk of contamination). Required type of vessel – 3 (2.1.2.3).

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture

EU legislation:

- 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;
- 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);
- Commission Regulation (EC) No 552/2009 of 22 June 2009 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards Annex XVII;
- 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;
- Commission Regulation (EU) No 1357/2014 of 18 December 2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives;
- Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC;
- Regulation (EU) No 98/2013 of the European Parliament and of the Council of 15 January 2013 on the marketing and use of explosives precursors;
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR);
- The International Rule for Transport of Dangerous Substances by Railway (RID);
- The International Maritime Dangerous Goods (IMDG);
- International Convention for the Prevention of Pollution from Ships (MARPOL 73/78);
- The International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code) (the IBC Code).

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National Legislation (Lithuania):

- Applicable Law on Waste Disposal of the Republic of Lithuania;
- Applicable Law on Package and Package Waste Handling of the Republic of Lithuania;
- HN23 Maximum Allowable Concentrations of Hazardous Chemical Substances and Preparations in Working Environment. General Requirements;
- HN36 Banned and Restricted Substances;
- Applicable Regulations for Workers ”Protection against the Impact of Chemical Factors” and Regulations for Workers “Protection against Carcinogenous and Mutagenous Impacts”;
- Applicable Procedure of Safety Data Sheet Requirements and Supply thereof to Professional Users;
- Applicable Rules on Labeling of Items (Products) to be Sold in Lithuania and Referring Price thereof;
- Applicable Rules on Waste Disposal;
- 17 of August 2004 Governments of the LR resolution No. 966 „On Prevention, Response and Investigation of dangerous objects and substances, mixtures or preparations classified as hazardous materials, and a list of criteria for designation of the Approval, as subsequently amended and supplemented. (Official Gazette, 2004, No. 130-4649; 2005 No. 131-4731, 2008, No. 109-4159; 2009 No. 90-3855; 2010, No. 59-2894; 2012 No. 61-3078), as amended and supplemented;
- LST EN 166 “Personal eye protection. Technical requirements”;
- LST EN ISO 374-1 “Protective gloves against hazardous chemicals and micro-organisms. Part 1. Protective gloves against hazardous chemicals and micro-organisms. Part 1. Terminology and chemical resistance requirements (ISO 374-1: 2016)”;
- LST EN 388 “Protective gloves against mechanical hazards”;
- LST EN 420 “Protective gloves. General requirements and testing methods”.

Additional information about the corresponding Community provisions of safety, health and the environment for the product:

The product is not subject to requirements according to the Government Resolution No. 966 of the Government of the Republic of Lithuania of 2004.08.07 „On Approval of the Description of the List and Attribution Criteria for List of Materials, Mixtures or Preparations of Hazardous Substances in the Hazardous Objects“ (Official Gazette, 2004, No. 130-4649) with all subsequent amendments and supplements).

Preventions via Regulation for the product (EU) No.98/2013: No restrictions are made to the product via Regulation (EU) No.98/2013.

15.2 Chemical safety assessment

As in accordance with Regulation No. 1272/2008 liquid nitrogen fertilizers (UAN) are not classified as hazardous consequently in accordance with REACH Article 14 no Chemical Safety Assessment has been carried out for this mixture.

SECTION 16. OTHER INFORMATION

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(i) A clear evidence of added, deleted or modified information:

According to Commission Regulation (EU) 2015/830 a new document form was altered, changed and

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supplemented safety, health and environmental regulations:

- Section 7.2: Storage conditions are supplemented with information that the product is not subject to restrictions in accordance with Resolution No. 966 of the Government of the Republic of Lithuania of August 2004 and Part 2 of Annex I to Directive 2012/18/EU.
- Section 8.2.2: Standards for personal protective equipment have been changed from European standards to Lithuanian standards.
- Section 9: Changed the product melting / freezing temperature.
- Section 14.7: Changed information on requirements in accordance with Annex II of the MARPOL Convention and the IBC Code for the shipment of the bulk product.

(ii) List of abbreviations and acronyms used throughout the Safety Data Sheet:

ATE – acute toxicity estimate;
ADR – European Agreement on Dangerous Goods by Road;
CLP – Classification, Labeling and Packaging Regulation; Regulation (EC) No 1272/2008;
CAS – Chemical Abstracts Service;
DNEL – Derived No-Effect value;
EC No. – EINECS ir ELINCS numbers;
EU – European Union;
EINECS – European List of Existing Commercial Chemical Substances;
ELINCS – European Register of Substances;
Eye Irrit. 2 – eye irritating 2 category;
HS – Hygiene Standard;
IBC Code – The International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk.
IMDG – International Maritime Dangerous Goods;
IST – Company Standards.
K_{ow} – octanol-water partition coefficient;
IMSBC – International Code for the Carriage of Dangerous Goods by Sea;
LD50 – Lethal dose for 50% of tested population;
LC50 – Lethal concentration of 50% of tested population;
MARPOL 73/78 – International Convention for the Prevention of Pollution from Ships;
Oxid. Solid 3 – oxidizing solids, 3 category;
PBT – Persistent, Bio accumulative, Toxic;
PNEC(s) – Forecast(-s) no effect(-s) concentration(-s);
RID – Regulations Concerning the International Carriage of Dangerous Goods by Rail;
SDS – Safety Data Sheet;
vPvB – very Persistent, very Bio accumulative;
UN – United Nations.

(iii) Bibliography:

- 1) AB „Achema“ standard IST 1566673999–14 Liquide nitrogen fertilizers (UAN).
- 2) Registration of Ammonium Nitrate under the REACH dossier, published on the website of the European Chemicals Agency (data downloaded as of January 1, 2018); European Fertilizer Manufacturers Association (Fertilizers Europe) released Guidance for the storage, handling and transportation of solid mineral fertilizers);
- 3) ECHA Guidance on Information Requirements and Chemical Safety Assessment. Part B: Hazard assessment;
- 4) ECHA Guidance on information requirements and Chemical Safety Assessment, Chapter R.10);
- 5) Containing ammonium nitrate fertilizers evaluation to determine whether it should be classified as an eye

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irritant report prepared by the European Fertilizer Manufacturers Association (Fertilizers Europe) (2011-07-14);
 6) European Fertilizer Manufacturers Association (Fertilizers Europe) released Guidance for UN transport classification of ammonium nitrate based substances (2011);

(iv) Applicable classification and procedures used to determine the classification of mixtures in accordance with Regulation (EC) No. 1272/2008 [CLP Regulation]:

Classification in accordance with Regulation (EC) No. 1272/2008	Classification procedure
The product does not meet the criteria for classification.	The product has been classified by the manufacturer after evaluation in the context of Regulation (EC) No. 1272/2008 for the classification of the hazard class or differentiation referred to in paragraphs 2 to 5 of Annex I in order to determine the hazards associated with the mixture. According to the specific concentration limits given in the REACH dossier (which indicates that mixtures containing less than 80% ammonium nitrate should not be classified as irritating to the eye) the product is not classified as eye irritating on the basis of the registration of ammonium nitrate. The product is not classified as oxidising according to the Guidelines for the Classification of Substances of Ammonium Nitrate under UN Fertilizers Europe (2011), which states that mixtures containing ammonium nitrate with ammonium nitrate content not exceeding 80% are not classified as dangerous.

(v) Relevant precautionary phrases:

- H272 – May intensify fire; oxidizer;
- H319 – Causes serious eye irritation;
- P102 – Keep out of reach of children;
- P220 – Keep/Store away from clothing/reducing agents/acids/alkali/sulphur/chlorates/chlorides/nitrates/permanaganates/powder of metals and materials containing metals as follows: copper, nickel, cobalt, zinc and their alloys/combustible materials;
- P262 – Do not get in eyes, on skin, or on clothing;
- P280 – Wear protective gloves/protective clothing/eye protection/face protection;
- P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing;
- P337+P313 – If eye irritation persists: Get medical advice/attention;
- P301+P315 – IF SWALLOWED: Get immediate medical advice/attention;
- P264 – Wash hands thoroughly after handling.

(vi) Training Advice:

To ensure the protection of people and the environment, people who manufacture, handle and use this product must be trained to work with hazardous substances, hazardous materials, ammonium nitrate properties, have adequate hygiene skills.

Additional information presented on the package (container) label of chemical substance:

- Visual sign No. 3 “Keeps all the features unfreezed” in compliance with LST EN ISO 780.
- UAN-32: “Keeping at lower than 0° C may freeze”.
- UAN-30: “Keeping at lower than 9° C may freeze”.
- UAN-28: “Keeping at lower than 16° C may freeze”.



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This version replaces all previous documents.