

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

1.1. Product identifier

Product form	: Substance
Trade name	: Anhydrous Ammonia
Chemical name	: Anhydrous ammonia
IUPAC name	: ammonia, anhydrous
EC index no	: 007-001-00-5
EC no	: 231-635-3
CAS No	: 7664-41-7
REACH registration No	: 01-2119488876-14-0128
Formula	: NH ₃
Synonyms	: Ammonia gas / Ammonia, anhydrous / Ammonia (anhydrous) / Free ammonia / Anhydrous, ammonia / Anhydrous ammonia / Ammonia anhydrous / Gaseous ammonia / AMMONIA / Ammonium / Non-ionic ammonia

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

1.2.1. Relevant identified uses

Use of the substance/mixture	: Nitric acid production, nitriding, as coolant, for protective atmosphere creation. Fertilizers processing and use in agricultural sector, as nitrogen fertilizer.
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1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Only representative

ITS Testing Services (UK)Ltd
Caleb Brett House
734 London Road
RM20 3NL – West Thurrock Grays
Essex, United Kingdom
Tel. +44(0)161 2458070
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445007 - Russia
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office@kuazot.ru - <http://www.kuazot.ru/>

1.4. Emergency telephone number

Emergency number	: +7 (8482) 56 10 30 (24hr / day)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable gases, Category 2	H221
Gases under pressure : Compressed gas	H280
Acute toxicity (inhalation:gas) Category 3	H331
Skin corrosion/irritation, Category 1B	H314
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400
Full text of H statements : see section 16	

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapour
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P261 - Avoid breathing fume, mist, spray, vapours, gas
P264 - Wash hands, forearms and face thoroughly after handling

2.3. Other hazards

other hazards which do not result in classification

: Exposure to high concentrations may lead to liver and kidney damage and heart muscle degeneration. May have a narcotic effect at high concentrations. Do not allow the product to be released into the environment. Attacks some forms of plastics, rubber, and coatings.

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%
Anhydrous Ammonia	(CAS no) 7664-41-7 (EC no) 231-635-3 (EC index no) 007-001-00-5 (REACH-no) 01-2119488876-14-xxxx	>= 99.75

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Do not induce vomiting. Immediately get medical attention.
First-aid measures after inhalation	: Remove casualty to fresh air and keep warm and at rest. If breathing is difficult, give oxygen. In case of irregular breathing or respiratory arrest provide artificial respiration. Seek medical attention immediately.
First-aid measures after skin contact	: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap. Obtain medical attention if irritation persists. Clothing frozen to the skin should be thawed before being removed.
First-aid measures after eye contact	: Rinse immediately and plentifully with water, also under the eyelids, for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation persists.
First-aid measures after ingestion	: If the person is fully conscious, make him/her drink water. Never give an unconscious person anything to drink. Do not induce vomiting. Seek medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: Irritation of respiratory tract.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: May cause slight irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Exposure to high concentrations may lead to liver and kidney damage and heart muscle degeneration.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide (CO₂), dry chemical powder, foam.

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Unsuitable extinguishing media : Do not use a water jet since it may cause the fire to spread.

5.2. Special hazards arising from the substance or mixture

Fire hazard : None known.
Explosion hazard : None known.

5.3. Advice for firefighters

Firefighting instructions : Cool containers / tanks with spray water if possible. Move undamaged containers from immediate hazard area if it can be done safely.
Protective equipment for firefighters : Exposure controls / Personal protection equipment. In case of fire: Wear self-contained breathing apparatus.
Other information : Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Complete protective clothing. In case of fire: Wear self-contained breathing apparatus.
Emergency procedures : Evacuate unnecessary personnel. When leaks or spills occur, only properly protected personnel should remain in the area.

6.1.2. For emergency responders

Protective equipment : Complete protective clothing. In case of fire: Wear self-contained breathing apparatus.
Emergency procedures : No flames, no sparks. Eliminate all sources of ignition. Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid discharge to the environment. Do not allow uncontrolled discharge of product into the environment. Do not allow run-off from fire fighting to enter drains or water courses.

6.3. Methods and material for containment and cleaning up

For containment : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up : Use appropriate container to avoid environmental contamination. Keep container tightly closed and in a well-ventilated place.
Other information : Do not allow uncontrolled discharge of product into the environment. Do not allow run-off from fire fighting to enter drains or water courses.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use only in well-ventilated areas. In case of insufficient ventilation, wear suitable respiratory equipment. Containers must be properly grounded before beginning transfer. Use only non-sparking tools. Handle in accordance with good industrial hygiene and safety procedures. Do not smoke.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash contaminated clothing prior to re-use. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Avoid static electricity discharges. Ground equipment electrically. Store in dry, cool, well-ventilated area. Use explosion-proof ventilating equipment. Use grounded electrical/mechanical equipment.
Storage conditions : Store in tightly closed, properly ventilated containers away from heat, sparks, open flame. Store in tightly closed, leak-proof containers.
Incompatible materials : Strong oxidizing agents. Strong acid. Bases.
Heat and ignition sources : Keep away from open flames, hot surfaces and sources of ignition.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Anhydrous Ammonia (7664-41-7)		
EU	Local name	Ammonia, anhydrous
EU	IOELV TWA (mg/m ³)	14 mg/m ³
EU	IOELV TWA (ppm)	20 ppm

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Anhydrous Ammonia (7664-41-7)		
EU	IOELV STEL (mg/m ³)	36 mg/m ³
EU	IOELV STEL (ppm)	50 ppm
Austria	MAK (mg/m ³)	14 mg/m ³
Austria	MAK (ppm)	20 ppm
Austria	MAK Short time value (mg/m ³)	36 mg/m ³
Austria	MAK Short time value (ppm)	50 ppm
Belgium	Limit value (mg/m ³)	14 mg/m ³
Belgium	Limit value (ppm)	20 ppm
Belgium	Short time value (mg/m ³)	36 mg/m ³
Belgium	Short time value (ppm)	50 ppm
Bulgaria	OEL TWA (mg/m ³)	14.0 mg/m ³
Bulgaria	OEL TWA (ppm)	20 ppm
Bulgaria	OEL STEL (mg/m ³)	36.0 mg/m ³
Bulgaria	OEL STEL (ppm)	50 ppm
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	14 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	20 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³)	36 mg/m ³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	50 ppm
Cyprus	OEL TWA (mg/m ³)	14 mg/m ³
Cyprus	OEL TWA (ppm)	20 ppm
Cyprus	OEL STEL (mg/m ³)	36 mg/m ³
Cyprus	OEL STEL (ppm)	50 ppm
Czech Republic	Expoziční limity (PEL) (mg/m ³)	14 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	14 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	20 ppm
Estonia	OEL TWA (mg/m ³)	14 mg/m ³
Estonia	OEL TWA (ppm)	20 ppm
Estonia	OEL STEL (mg/m ³)	36 mg/m ³
Estonia	OEL STEL (ppm)	50 ppm
Finland	HTP-arvo (8h) (mg/m ³)	14 mg/m ³ (anhydrous)
Finland	HTP-arvo (8h) (ppm)	20 ppm (anhydrous)
Finland	HTP-arvo (15 min)	36 mg/m ³ (anhydrous)
Finland	HTP-arvo (15 min) (ppm)	50 ppm (anhydrous)
France	Local name	Ammoniac
France	VME (mg/m ³)	7 mg/m ³
France	VME (ppm)	10 ppm
France	VLE (mg/m ³)	14 mg/m ³
France	VLE (ppm)	20 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	14 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	20 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Greece	OEL TWA (mg/m ³)	35 mg/m ³
Greece	OEL TWA (ppm)	50 ppm
Greece	OEL STEL (mg/m ³)	35 mg/m ³
Greece	OEL STEL (ppm)	50 ppm
Hungary	AK-érték	14 mg/m ³
Hungary	CK-érték	36 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	14 mg/m ³ (anhydrous)
Ireland	OEL (8 hours ref) (ppm)	20 ppm (anhydrous)
Ireland	OEL (15 min ref) (mg/m ³)	36 mg/m ³ (anhydrous)

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Anhydrous Ammonia (7664-41-7)		
Ireland	OEL (15 min ref) (ppm)	50 ppm (anhydrous)
Italy	OEL TWA (mg/m ³)	14 mg/m ³
Italy	OEL TWA (ppm)	20 ppm
Italy	OEL STEL (mg/m ³)	36 mg/m ³
Italy	OEL STEL (ppm)	50 ppm
Latvia	OEL TWA (mg/m ³)	14 mg/m ³
Latvia	OEL TWA (ppm)	20 ppm
Lithuania	IPRV (mg/m ³)	14 mg/m ³
Lithuania	IPRV (ppm)	20 ppm
Lithuania	TPRV (mg/m ³)	36 mg/m ³
Lithuania	TPRV (ppm)	50 ppm
Luxembourg	OEL TWA (mg/m ³)	14 mg/m ³
Luxembourg	OEL TWA (ppm)	20 ppm
Luxembourg	OEL STEL (mg/m ³)	36 mg/m ³
Luxembourg	OEL STEL (ppm)	50 ppm
Malta	OEL TWA (mg/m ³)	14 mg/m ³ (anhydrous)
Malta	OEL TWA (ppm)	20 ppm (anhydrous)
Malta	OEL STEL (mg/m ³)	36 mg/m ³ (anhydrous)
Malta	OEL STEL (ppm)	50 ppm (anhydrous)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	14 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	36 mg/m ³
Poland	NDS (mg/m ³)	14 mg/m ³
Poland	NDSch (mg/m ³)	28 mg/m ³
Portugal	OEL TWA (mg/m ³)	14 mg/m ³ (indicative limit value)
Portugal	OEL TWA (ppm)	20 ppm (indicative limit value)
Portugal	OEL STEL (mg/m ³)	36 mg/m ³ (indicative limit value)
Portugal	OEL STEL (ppm)	50 ppm (indicative limit value)
Romania	OEL TWA (mg/m ³)	14 mg/m ³
Romania	OEL TWA (ppm)	20 ppm
Romania	OEL STEL (mg/m ³)	36 mg/m ³
Romania	OEL STEL (ppm)	50 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	14 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	20 ppm
Slovakia	NPHV (Hraničná) (mg/m ³)	36 mg/m ³
Slovenia	OEL TWA (mg/m ³)	14 mg/m ³
Slovenia	OEL TWA (ppm)	20 ppm
Slovenia	OEL STEL (mg/m ³)	35 mg/m ³ (anhydrous)
Slovenia	OEL STEL (ppm)	50 ppm (anhydrous)
Spain	VLA-ED (mg/m ³)	14 mg/m ³ (indicative limit value)
Spain	VLA-ED (ppm)	20 ppm (indicative limit value)
Spain	VLA-EC (mg/m ³)	36 mg/m ³
Spain	VLA-EC (ppm)	50 ppm
Sweden	nivågränsvärde (NVG) (mg/m ³)	14 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	20 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	36 mg/m ³ (reference period for short time exposure is 5 minutes)
Sweden	kortidsvärde (KTV) (ppm)	50 ppm (reference period for short time exposure is 5 minutes)
United Kingdom	Local name	Ammonia, anhydrous
United Kingdom	WEL TWA (mg/m ³)	18 mg/m ³
United Kingdom	WEL TWA (ppm)	25 ppm
United Kingdom	WEL STEL (mg/m ³)	25 mg/m ³

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Anhydrous Ammonia (7664-41-7)		
United Kingdom	WEL STEL (ppm)	35 ppm
Norway	Grenseverdier (AN) (mg/m ³)	11 mg/m ³
Norway	Grenseverdier (AN) (ppm)	15 ppm 20 ppm (this is a transitional norm valid from (2013-2024) applies on famers at livestock production buildings constructed before 2002)
Norway	Grenseverdier (Korttidsverdi) (mg/m ³)	11 mg/m ³
Norway	Grenseverdier (Korttidsverdi) (ppm)	15 ppm 20 ppm (this Norm applies only on farmers during a transition period from 2013 to 2014 and at livestock production farms which were constructed before the year 2002)
Switzerland	VME (mg/m ³)	14 mg/m ³
Switzerland	VME (ppm)	20 ppm
Switzerland	VLE (mg/m ³)	28 mg/m ³
Switzerland	VLE (ppm)	40 ppm

Anhydrous Ammonia (7664-41-7)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	6.8 mg/kg bodyweight/day
Acute - systemic effects, inhalation	47.6 mg/m³
Acute - local effects, inhalation	36 mg/m³
	47.6 mg/m³
Long-term - local effects, inhalation	14 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	0.001 mg/l
PNEC aqua (marine water)	
	0.089 mg/l

8.2. Exposure controls

Type K - Ammonia and amines. Wear appropriate mask. In confined space use self-contained breathing apparatus. EN 141. EN 405



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Gas
Colour	: clear.
Odour	: Acute.

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Odour threshold	: No data available
pH	: No data available
Melting point	: -77.7 °C
Freezing point	: No data available
Boiling point	: -33 °C
Flash point	: Not specifically applicable (gas)
Auto-ignition temperature	: 651 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable gas
Vapour pressure	: 287 hPa at 20°C
Relative vapour density at 20 °C	: No data available
Relative density	: not relevant
Solubility	: Soluble in water. Water: 48200 - 53100 mg/l at 25°C
Log Pow	: 0.23 at 20°C
Viscosity, kinematic	: not relevant
Viscosity, dynamic	: not relevant
Explosive properties	: Not explosive.
Oxidising properties	: Not oxidising.
Explosive limits	: 16 - 25 vol % Flammable gas

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of use. Reacts violently with (some) halogens. Reacts with : acids.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Danger of explosion on contact with : Halogens. Strong oxidisers. Nitric acid. Fluorine oxide. Nitrogen oxides (NOx).

10.4. Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to flames, sparks, heat, or other potential ignition sources.

10.5. Incompatible materials

May be corrosive to metals. Copper and its alloys. Zinc and its alloys. Silver. Mercury.

10.6. Hazardous decomposition products

Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide. Nitrogen oxides (NOx). Nitrogen. Hydrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Inhalation:gas: Toxic if inhaled.

Anhydrous Ammonia (7664-41-7)	
LD50 oral rat	350 mg/kg Wistar male oral: gavage equivalent or similar to OECD 401
LC50 inhalation rat (mg/l)	9850 mg/m³ 1h, rat Wistar inhalation (whole body)

Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Serious eye damage, category 1, implicit
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

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Anhydrous Ammonia (7664-41-7)	
NOAEL (subacute, oral, animal/male, 28 days)	408 mg/kg bodyweight OECD 422
Aspiration hazard	: Not classified
Anhydrous Ammonia (7664-41-7)	
Viscosity, kinematic	0.32258065 mm²/s
Potential Adverse human health effects and symptoms	: Central nervous system depression. Repeated exposure may cause skin dryness or cracking. May cause skin irritation / dermatitis. In high concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. Causes serious eye irritation. High concentrations may cause injuries to gastrointestinal tract, liver, kidneys and central nervous system.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Anhydrous Ammonia (7664-41-7)	
LC50 fish 1	0.74 - 3.4 mg/l Pimephales promelas
LC50 fish 2	0.068 mg/l Oncorhynchus gorboscha
EC50 Daphnia 1	101 mg/l
EC50 72h algae (1)	2700 mg/l Chlorella vulgaris
NOEC (chronic)	1.2 mg/l Oncorhynchus gorboscha (61d)
NOEC chronic fish	< 48 ng/l Ictalurus punctatus (31d)
NOEC chronic crustacea	0.79 mg/l Daphnia magna (96h)

12.2. Persistence and degradability

Anhydrous Ammonia (7664-41-7)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Anhydrous Ammonia (7664-41-7)	
Log Pow	0.23 at 20°C
Bioaccumulative potential	No bioaccumulation.

12.4. Mobility in soil

Anhydrous Ammonia (7664-41-7)	
Ecology - soil	Low mobility (soil).

12.5. Results of PBT and vPvB assessment

Anhydrous Ammonia (7664-41-7)	
Results of PBT assessment	Not considered as PBT/vPvB

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container to industrial incineration plant.
Waste disposal recommendations : Dispose of at authorized waste collection point. Dispose of this material and its container at hazardous or special waste collection point. Can be deposited in landfills, sent to an incineration or other appropriate means of disposal provided they meet the requirements of local laws. Collect in closed containers for disposal.

SECTION 14: Transport information






In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1005	1005	1005	1005	1005
14.2. UN proper shipping name				
AMMONIA, ANHYDROUS	AMMONIA, ANHYDROUS	AMMONIA, ANHYDROUS	AMMONIA, ANHYDROUS	AMMONIA, ANHYDROUS
Transport document description				
UN 1005 AMMONIA, ANHYDROUS, 2.3 (8),	UN 1005 AMMONIA, ANHYDROUS, 2.3 (8),	UN 1005 AMMONIA,	UN 1005 AMMONIA,	UN 1005 AMMONIA,

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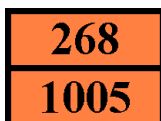
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ADR	IMDG	IATA	ADN	RID
(C/D)	MARINE POLLUTANT	ANHYDROUS, 2.3 (8)	ANHYDROUS, 2.3 (8)	ANHYDROUS, 2.3 (8)
14.3. Transport hazard class(es)				
2.3 (8)	2.3 (8)	2.3 (8)	2.3 (8)	2.3 (8)
				
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				

14.6. Special precautions for user

Classification code (ADR) : 2TC
 Special provisions (ADR) : 23
 Limited quantities (ADR) : 0
 Excepted quantities (ADR) : E0
 Packing instructions (ADR) : P200
 Mixed packing provisions (ADR) :
 Portable tank and bulk container instructions (ADR) : (M), T50
 Tank code (ADR) : PxBH(M)
 Tank special provisions (ADR) : TA4, TT8, TT9
 Vehicle for tank carriage : AT
 Transport category (ADR) : 1
 Special provisions for carriage - Loading, unloading and handling (ADR) : CV9, CV10, CV36
 Special provisions for carriage - Operation (ADR) : S14
 Hazard identification number (Kemler No.) : 268
 Orange plates :



Tunnel restriction code (ADR) : C/D
 EAC code : 2RE
 APP code : A(c)

Special provisions (IMDG) : 23
 Limited quantities (IMDG) : 0
 Excepted quantities (IMDG) : E0
 Packing instructions (IMDG) : P200
 Tank instructions (IMDG) : T50
 EmS-No. (Fire) : F-C
 EmS-No. (Spillage) : S-U
 Stowage category (IMDG) : D
 Stowage and handling (IMDG) : SW2

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Properties and observations (IMDG) : Liquefied, non-flammable, toxic and corrosive gas with a pungent odour. Lighter than air (0.6). Suffocating in low concentrations. Even though this substance has a flammability hazard, it only exhibits such hazard under extreme fire conditions in confined areas. Reacts violently with acids. Highly irritating to skin, eyes and mucous membranes.

PCA Limited quantities (IATA) : Forbidden

PCA packing instructions (IATA) : Forbidden

PCA max net quantity (IATA) : Forbidden

CAO packing instructions (IATA) : Forbidden

CAO max net quantity (IATA) : Forbidden

Special provisions (IATA) : A2

ERG code (IATA) : 2CP

Classification code (ADN) : 2TC

Special provisions (ADN) : 23

Limited quantities (ADN) : 0

Excepted quantities (ADN) : E0

Carriage permitted (ADN) : T

Equipment required (ADN) : PP, EP, TOX, A

Ventilation (ADN) : VE02

Number of blue cones/lights (ADN) : 2

Classification code (RID) : 2TC

Special provisions (RID) : 23

Limited quantities (RID) : 0

Excepted quantities (RID) : E0

Packing instructions (RID) : P200

Mixed packing provisions (RID) :

Portable tank and bulk container instructions (RID) : T50(M)

Tank codes for RID tanks (RID) : PxBH(M)

Special provisions for RID tanks (RID) : TU38, TE22, TE25, TA4, TT8, TT9, TM6

Transport category (RID) : 1

Special provisions for carriage - Loading, unloading and handling (RID) : CW9, CW10, CW36

Hazard identification number (RID) : 268

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Anhydrous Ammonia is not on the REACH Candidate List

Anhydrous Ammonia is not on the REACH Annex XIV List

15.1.2. National regulations

VwVwS Annex reference : Water hazard class (WGK) 2, hazard to waters (Classification according to VwVwS, Annex 1 or 2; ID No. 211)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

Anhydrous Ammonia

Safety Data Sheet

according to Regulation (EU) 2015/830

SZW-lijst van mutagene stoffen :
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

	ACGIH (American Conference of Government Industrial Hygienists)
	ASTM - American Society for Testing and Materials
	CAS (Chemical Abstracts Service) number
	CLP - Classification, Labelling and Packaging
	CSR - Chemical Safety Report
	EC - European Community
	GHS - Globally Harmonised System
	Overland transport (ADR)
	PVC (Polyvinyl chloride).
	REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals
	SDS - Safety Data Sheet

Other information : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. It is the user's responsibility to take mentioned precaution measures and ensure that this information is complete and sufficient for the use of this product.

Acute Tox. 3 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 3
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Compressed gas	Gases under pressure : Compressed gas
Flam. Gas 2	Flammable gases, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H221	Flammable gas
H280	Contains gas under pressure; may explode if heated
H314	Causes severe skin burns and eye damage
H331	Toxic if inhaled
H400	Very toxic to aquatic life

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product