

Blended Products Limited

SAFETY DATA SHEET



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

1.1. Product identifier

Name of the substance Ammonia (Anhydrous)
Identification number -
Registration number -
Synonyms None.
Issue date 26-February-2016
Version number 01

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

Identified uses General industrial, chemical, technical use
Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Company name Blended Products Limited
Address Plot11b
Elsham Wold Industrial Estate
Brigg, North Lincolnshire
DN20 0SP
UK
Telephone 01652 680555
Fax
e-mail sales@blendedproducts.co.uk
Website www.blendedproducts.co.uk
1.4 Emergency telephone number +44(0)1652 680555 (Please use 'Option 4' for 24hr chemical / stock emergency assistance)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards

Flammable gases (including chemically unstable gases)	Category 2	H221 - Flammable gas.
Gases under pressure	Compressed gas	H280 - Contains gas under pressure; may explode if heated.

Health hazards

Acute toxicity, inhalation	Category 3	H331 - Toxic if inhaled.
Skin corrosion/irritation	Category 1B	H314 - Causes severe skin burns and eye damage.

Environmental hazards

Hazardous to the aquatic environment, acute aquatic hazard	Category 1	H400 - Very toxic to aquatic life.
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Hazard summary

Flammable gas - may cause flash fire. Contents under pressure. Heat may cause the containers to explode. Toxic if inhaled. Causes severe skin burns and eye damage. Dangerous for the environment if discharged into watercourses. Occupational exposure to the substance or mixture may cause adverse health effects.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Ammonia, Anhydrous

Hazard pictograms



Signal word

Danger

Hazard statements

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.

Precautionary statements

Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing gas.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE/doctor/first aid.
P363	Wash contaminated clothing before reuse.
P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381	Eliminate all ignition sources if safe to do so.
P391	Collect spillage.

Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P410 + P403	Protect from sunlight. Store in a well-ventilated place.

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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Supplemental label information

None.

2.3. Other hazards

Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Ammonia, Anhydrous	100	7664-41-7 231-635-3	01-2119488876-14-xxxx	007-001-00-5	#
Classification:	Flam. Gas 2;H221, Press. Gas;H280, Skin Corr. 1B;H314, Acute Tox. 3;H331, Aquatic Acute 1;H400				U

List of abbreviations and symbols that may be used above

#: This substance has been assigned Community workplace exposure limit(s).

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

M: M-factor

Note U: Refer to CLP Regulation 1272/2008, section 1.1.3.1 (Notes relating to the identification, classification and labelling of substances)

Composition comments The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

4.1. Description of first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTRE or doctor/physician.

Skin contact In case of contact with liquefied gas, thaw frosted parts with lukewarm water. Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control centre immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control centre immediately.

Ingestion Not likely, due to the form of the product. Call a physician or poison control centre immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

4.2. Most important symptoms and effects, both acute and delayed Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards Flammable gas. Contents under pressure. Pressurised container may explode when exposed to heat or flame.

5.1. Extinguishing media

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).
Use water spray to 'knock down' vapour or cool containers.
Allow gas to burn if flow cannot be shut off immediately.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture During fire, gases hazardous to health may be formed. Decomposition of this product may emit oxides of nitrogen.
Do not allow the spilled product to enter public drainage system or open water courses.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED. In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Move containers from fire area if you can do so without risk. Do not direct water at source of leak or safety devices as icing may occur. Withdraw immediately in case of rising sound from venting safety device or any discolouration of tanks due to fire. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods

In the event of fire and/or explosion do not breathe fumes.
In the event of fire, cool tanks with water spray. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing gas. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Use water spray to reduce vapours or divert vapour cloud drift. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Prevent product from entering drains. Ensure adequate ventilation.

Large Spills: Inform the responsible authorities in case of gas leakage, or of entry into waterways, soil or drains.

Use water spray to reduce vapours or divert vapour cloud drift. Dike the spilled material, where this is possible. Prevent product from entering drains.

Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Only experienced and properly trained persons should handle compressed gases/cryogenic liquids. Please refer to Section 16 'Other Information' for full details

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not smoke. All equipment used when handling the product must be grounded. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop.

When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Suck back of water into the container must be prevented. Do not allow backfeed into the container. Purge air from system before introducing gas.

Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.

Do not get in eyes, on skin, or on clothing.

Avoid breathing gas. Avoid prolonged exposure.

Do not enter storage areas or confined spaces unless adequately ventilated. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment.

Avoid release to the environment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Cylinders should be stored in a purpose built compound which should be well ventilated, preferably in the open air.

Observe all regulations and local requirements regarding storage of cylinders.

Cylinders should not be stored in conditions likely to encourage corrosion.

Cylinders should be stored in the vertical position and properly secured to prevent toppling. The container valves should be tightly closed and where appropriate valve outlets should be capped or plugged. Cylinder valve guards or caps should be in place.

Keep cylinders tightly closed in a cool well-ventilated place below 45°C and out of direct sunlight. Smoking should be prohibited within storage areas and while handling product or cylinders. Store locked up. Store in a cool, dry place out of direct sunlight. Keep away from heat, sparks and open flame.

This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques . Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Stored containers should be periodically checked for general condition and leakage. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

7.3. Specific end use(s)

The specified uses for this material are shown in section 1 of this document

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Ammonia, Anhydrous (CAS 7664-41-7)	STEL	25 mg/m3
	TWA	35 ppm
		18 mg/m3
		25 ppm

EU. Indicative Exposure and Directives relating to the protection of risks related to work exposure to chemical, physical, and biological agents.

Components	Type	Value
Ammonia, Anhydrous (CAS 7664-41-7)	STEL	36 mg/m3
	TWA	50 ppm
		14 mg/m3
		20 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no-effect level (DNEL)

Components	Type	Route	Value	Form
Ammonia, Anhydrous (CAS 7664-41-7)	Industry	Dermal	6.8 mg/kg bw/day	Acute Local effects
		Dermal	6.8 mg/kg bw/day	Long term Systemic effects
	Inhalation	Inhalation	47.6 mg/m3	Acute Systemic effects
		Inhalation	47.6 mg/m3	Long term Systemic effects
	Inhalation	Inhalation	36 mg/m3	Acute Local effects
		Inhalation	14 mg/m3	Long term Local effects

Predicted no effect concentrations (PNECs)

Components	Type	Route	Value	Form
Ammonia, Anhydrous (CAS 7664-41-7)	Not applicable	Water	0.0011 mg/l	freshwater
		Water	0.0011 mg/l	marine water

8.2. Exposure controls

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.
Individual protection measures, such as personal protective equipment	
General information	Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection	Do not get in eyes. Wear safety glasses with side shields (or goggles) and a face shield. (EN166) Face shield over safety glasses is recommended during cylinder connection.
Skin protection	
- Hand protection	Suitable gloves can be recommended by the glove supplier. Select suitable chemical resistant protective gloves (EN 374) with a protective index 6 (>480min permeation time). Materials suitable for prolonged, direct contact: Butyl rubber (Butyl); Min. Breakthrough time:480 min; Glove thickness:0.7mm; Protection index 6 Materials suitable for short-term contact and/or liquid splashes CR(Chloroprene, Polychloroprene rubber); Min. Breakthrough time:30 min; Glove thickness:0,5 mm Protection index: 2 Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Replace damaged gloves.
- Other	Avoid contact with the skin. Wear appropriate chemical resistant clothing and heavy duty work shoes Body protection should be selected based on the task being performed and the risks involved. If contact with the liquids is possible, an appropriate chemical suit should be worn. Guideline: EN 943: Protective clothing against liquid and gaseous chemicals, aerosols and solid particles.
Respiratory protection	Under normal conditions, respirator is not normally required. A suitable mask with filter type K (EN141 or EN405) may be appropriate, or self-contained breathing apparatus. Respiratory protection should be selected based on the task being performed and the risks involved Keep self contained breathing apparatus readily available for emergency use. Use SCBA in the event of high concentrations.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
Environmental exposure controls	Inform appropriate managerial or supervisory personnel of all environmental releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Gas Liquid.
Form	Compressed gas.
Colour	Colourless.
Odour	Pungent suffocating odor; Ammoniacal.
Odour threshold	5 ppm
pH	> 12.0 (conc 100% v/v)
Melting point/freezing point	-77.8 °C (-108.04 °F) @ 1013 Pa
Initial boiling point and boiling range	-33.3 °C (-27.94 °F) @ 1013 Pa
Flash point	Not applicable.

Evaporation rate	Not determined
Flammability (solid, gas)	Flammable gas.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	16.00 % v/v
Flammability limit - upper (%)	27.00 % v/v
Vapour pressure	8.6 bar @ 20°C
Vapour density	0.6 (Air = 1)
Relative density	0.6 (Water = 1)
Solubility(ies)	
Solubility (water)	482 - 531 g/l
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	0.23
Auto-ignition temperature	630 °C (1166 °F)
Decomposition temperature	Not available.
Viscosity	Not applicable
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

9.2. Other information

Density	0.58 g/cm ³ as liquified gas
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SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use. Can react violently if in contact with acids, alkalis, reducing agents and heavy metals. This product may react with oxidizing agents.
10.4. Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Contact with incompatible materials.
10.5. Incompatible materials	Acids. Strong oxidising agents. Copper, copper alloy, Zinc, zinc alloy.
10.6. Hazardous decomposition products	Thermal decomposition can lead to release of irritating gases and vapours : nitrogen dioxide, nitric oxide

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.
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Information on likely routes of exposure

Inhalation	Toxic if inhaled.
Skin contact	Causes severe skin burns. Contact with liquefied gas might cause frostbites, in some cases with tissue damage.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.

Symptoms	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
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11.1. Information on toxicological effects

Acute toxicity	Toxic if inhaled.
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Components	Species	Test results
Ammonia, Anhydrous (CAS 7664-41-7)		
Acute		
<i>Inhalation</i>		
LC50	Rat	13770 mg/m ³ , 60 minutes female

Components	Species	Test results
		9850 mg/m ³ , 60 minutes male
<i>Oral</i>		
LD50	Rat	350 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory sensitisation	Due to partial or complete lack of data the classification is not possible.
Skin sensitisation	Due to partial or complete lack of data the classification is not possible.
Germ cell mutagenicity	Due to partial or complete lack of data the classification is not possible.
Carcinogenicity	Due to partial or complete lack of data the classification is not possible.
Reproductive toxicity	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - single exposure	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Due to partial or complete lack of data the classification is not possible.
Aspiration hazard	Not likely, due to the form of the product.
Mixture versus substance information	No information available.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity Very toxic to aquatic life.
Information given is based on data on the components and the ecotoxicology of similar products.

Components	Species	Test results
Ammonia, Anhydrous (CAS 7664-41-7)		
	EC50	Aquatic plants 2.7 mg/l, 432 hours
Aquatic		
Crustacea	EC50	Daphnia 25.4 mg/l, 48 hours 0.79 mg/l, 4 days
	NOEC	Daphnia 0.79 mg/l, 48 hours
Fish	LC50	Fish 0.048 mg/l, 31 days Oncorhynchus mykiss 0.16 - 1.1 g/l, 96 hours Silver carp (Hypophthalmichthys molitrix) 0.38 mg/l, 96 hours
	NOEC	Oncorhynchus mykiss 1.2 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

12.2. Persistence and degradability	The product is biodegradable.
12.3. Bioaccumulative potential	Does not bioaccumulate.
Partition coefficient n-octanol/water (log Kow)	Not applicable.
Ammonia (Anhydrous)	0.23
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	The substance has low mobility in soil. The substance is soluble in water.
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Return unused or unwanted cylinders to the supplier. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Dispose of in accordance with local regulations.
Contaminated packaging	Empty or unwanted cylinders should be returned to the supplier Since emptied containers may retain product residue, follow label warnings even after container is emptied.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN1005
14.2. UN proper shipping name	Ammonia, Anhydrous
14.3. Transport hazard class(es)	
Class	2.3
Subsidiary risk	8
Label(s)	2.3 +8
Hazard No. (ADR)	268
Tunnel restriction code	C/D
14.4. Packing group	Not applicable.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number	UN1005
14.2. UN proper shipping name	Ammonia, Anhydrous
14.3. Transport hazard class(es)	
Class	2.3
Subsidiary risk	8
Label(s)	2.3+8 (+13)
14.4. Packing group	Not applicable.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number	UN1005
14.2. UN proper shipping name	Ammonia, Anhydrous
14.3. Transport hazard class(es)	
Class	2.3
Subsidiary risk	8
Label(s)	2.3+8
14.4. Packing group	Not applicable.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

14.1. UN number	UN1005
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14.2. UN proper shipping name	Ammonia, Anhydrous
14.3. Transport hazard class(es)	
Class	2.3
Subsidiary risk	8
14.4. Packing group	Not applicable.
14.5. Environmental hazards	No.
ERG Code	2CP
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Forbidden
Cargo aircraft only	Forbidden

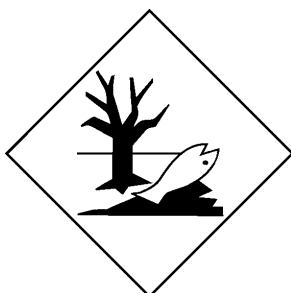
IMDG

14.1. UN number	UN1005
14.2. UN proper shipping name	Ammonia, Anhydrous, Marine pollutant
14.3. Transport hazard class(es)	
Class	2.3
Subsidiary risk	8
14.4. Packing group	Not applicable.
14.5. Environmental hazards	
Marine pollutant	Yes
EmS	F-C, S-U
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

ADN; ADR; IATA; IMDG; RID



Marine pollutant



General information

Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: Ensure that containers are firmly secured. Ensure cylinder valve is closed and not leaking. Ensure valve outlet cap nut or plug (where provided) is correctly fitted. Ensure valve protection device (where provided) is correctly fitted. Ensure adequate ventilation. Ensure compliance with applicable regulations.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use

Not regulated.

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not listed.

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not regulated.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding.

Not regulated.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances

Ammonia, Anhydrous (CAS 7664-41-7)

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Ammonia, Anhydrous (CAS 7664-41-7)

Directive 94/33/EC on the protection of young people at work

Ammonia, Anhydrous (CAS 7664-41-7)

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

Follow national regulation for work with chemical agents. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

International Inventories

Country(s) or region

Inventory name

On inventory (yes/no)*

Australia

Australian Inventory of Chemical Substances (AICS)

Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

SECTION 16: Other information

List of abbreviations	Not available.
References	Not available.
Information on evaluation method leading to the classification of mixture	Not applicable.
Full text of any H-statements not written out in full under Sections 2 to 15	<p>H221 Flammable gas.</p> <p>H280 Contains gas under pressure; may explode if heated.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H331 Toxic if inhaled.</p> <p>H400 Very toxic to aquatic life.</p>
Revision information	None.
Training information	<p>Only trained persons should handle compressed gases.</p> <p>Observe all regulations and local requirements regarding the storage of containers.</p> <p>Do not remove or deface labels provided by the supplier for the identification of the container contents.</p> <p>Ascertain the identity of the gas before using it.</p> <p>Know and understand the properties and hazards associated with each gas before using it.</p> <p>When doubt exists as to the correct handling procedure for a particular gas contact the supplier.</p> <p>Follow training instructions when handling this material.</p>

Other information**BLENDED PRODUCTS LTD GENERAL INFORMATION FOR THE SAFE HANDLING OF COMPRESSED GAS**

HANDLING: Wear stout gloves. Never lift a container by the cap or guard unless the supplier states it is designed for that purpose. Use a trolley or other suitable device or technique for transporting heavy containers, even for a short distance. Where necessary wear suitable eye and face protection. The choice between safety glasses, chemical goggles, or full face shield will depend on the pressure and nature of the gas being used. Where necessary for toxic gases see that self-contained positive pressure breathing apparatus or full face air line respirator is available in the vicinity of the working area. Employ suitable pressure regulating devices on all containers when the gas is being emitted to systems with a lower pressure rating than that of the container. Ascertain that all electrical systems in the area are suitable for service with each gas. Never use direct flame or electrical heating devices to raise the pressure of a container. Containers should not be subjected to temperatures above 45°C. Never re-compress a gas mixture without consulting the supplier. Never attempt to transfer gases from one container to another. Do not use containers as rollers or supports, or for any other purpose than to contain the gas as supplied. Never permit oil, grease or other readily combustible substances to come into contact with valves of containers containing oxygen or other oxidants. Keep container valve outlets clean and free from contaminants, particularly oil and water. Do not subject containers to abnormal mechanical shocks which may cause damage to their valves or safety devices. Never attempt to repair or modify container valves or safety relief devices. Damaged valves should be reported immediately to the supplier. Close the container valve whenever gas is not required even if the container is still connected to the equipment.

(Continued)

STORAGE: Containers should be stored in a well ventilated area. Some gases will require a purpose built area. Store containers in a location free from fire risk and away from sources of heat and ignition. Designation as a no smoking area may be desirable. Gas containers should be segregated in the storage area according to the various categories. The storage area should be kept clear and access should be restricted to authorized persons only, the area should be clearly marked as a storage area and appropriate hazard warning signs displayed (Flammable Toxic etc.). The amount of flammable or toxic gases should be kept to a minimum. Flammable gases should be stored away from other combustible materials. Containers held in storage should be periodically checked for general condition and leakage. Containers in storage should be properly secured to prevent toppling or rolling. Vertical storage is recommended where the container is designed for this. Container valves should be tightly closed and where appropriate, valve outlets should be capped or plugged. Protect containers stored in the open against rusting and extremes of weather. Containers should not be stored in conditions likely to encourage corrosion. Store full and empty containers separately and arrange full containers so that the oldest stock is used first.

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available.

Blended Products Limited cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.