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	AMMONIA ANHYDROUS Bulk & Compressed	PG-SDS-09

This SDS conforms to the Globally Harmonised System (GHS), South African Regulations on Hazardous Chemical Agents, and SANS 10234, SANS 11014 & SANS 10228.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

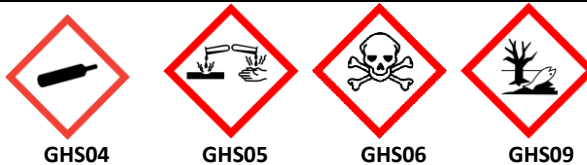
Product name	Ammonia Anhydrous
Chemical Name	Ammonia Anhydrous (NH ₃)
Other means of identification	Ammonia anhydrous, Nitro-sil, AM-FOL, Ammonia gas
Recommended Intended Purpose	This substance is used by consumers, in articles, by professional workers (widespread uses), in formulation or re-packing, at industrial sites, and in manufacturing.
Company Information	Puregas (Pty) Ltd PO Box 123884, Alrode, 1451, Gauteng, South Africa Tel: (011) 903 9760 Fax: (011) 903 9766 Cellphone: 082 889 6946 (1 st) 082 885 7475 (2 nd) Email: info@puregas.co.za Website: www.puregas.co.za
Emergency Telephone	0800 172 743 Rapid Spill Response - 24 hours, 7 days a week

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance - GHS classification as published through ECHA

Hazard Classification	Category	Hazard Statement	
Gases under pressure (Comp.)	2.2	H280	Contains gas under pressure; may explode if heated.
Gases under Pressure (Ref. Liq)	2.2	H281	Contains refrigerated gas, may cause cryogenic burns or injury
Skin corrosion/irritation	1	H314	Causes severe skin burns and eye damage.
Acute toxicity, inhalation	6.1	H331	Toxic if inhaled.
Hazardous to the aquatic environment, acute hazard	9	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment, long term hazard	9	H411	Toxic to aquatic life with long lasting effects.

Hazard Pictograms




Signal Word

Danger

Precautionary Statements

General:	P101 P102 P103	If medical advice is needed, have product container or label at hand Keep out of reach of children Read carefully and follow all instructions
Prevention	P202 P280 P210 P260 P273	Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe gas. Avoid release to the environment.

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	P233	Keep container tightly closed
Response	P370+P376 P377 P303 + P361 + P353 P304 + P340 + P310 P305 + P351 + P338 P391	In case of fire: Stop leak if safe to do so Leaking gas fire: Do not extinguish, unless leak can be stopped safely. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Collect spillage.
Storage	P235 + P271 + P403	Use and store only outdoors or in a well-ventilated place. Store in a well-ventilated place. Keep cool.P405 Store locked up.
Disposal	P501	Dispose of contents/ container to an approved waste disposal plant.
Main Hazard	This substance causes severe skin burns and eye damage, is toxic if inhaled, is very toxic to aquatic life and is a flammable gas.	
Other Hazards	Substance is toxic to aquatic life with long lasting effects and contains gas under pressure and may explode if heated.	

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

CAS No	EC No	Name
7664-41-7	231-635-3	Ammonia, anhydrous
UN Number:	1005	


See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

SECTION 4. FIRST AID MEASURES

In case of inhalation	Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. Monitor breathing, and seek medical advice immediately.
In case of eye contact	Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids for at least 15 minutes. Call a physician immediately.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Contact a physician.
In case of ingestion	Not a likely route of exposure.
Treatment (Advice to doctor)	Do not induce vomiting without advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water spray, Foam, Carbon dioxide (CO2), and Dry chemicals.
Special hazards arising from the substance	Flash-back possible over a considerable distance. Do not allow run-off from firefighting to enter drains of water courses.
Special protective equipment for fire-fighters	In the event of a fire, wear a self-contained breathing apparatus. Use personal protective equipment.
Further Informative.	Cool Containers/ tanks with water spray.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Keep people away from the upwind of spills/leaks. Remove all sources of ignition. Do not breathe vapours or spray mist.
Environmental Precautions	Prevent product from entering drains, and prevent further leakage or spillage if safe to do so.
Methods cleaning up	Soak up with inert absorbent material and dispose of as hazardous waste.
Additional Advice	Never return spills in original containers for re-use.

SECTION 7. HANDLING AND STORAGE


Safe Handling Advice	Do not breathe vapours or spray mist. Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Handle in accordance with good industrial hygiene and safety practices.
Advice on protection against Fire and Explosions.	Keep away from open flames, hot surfaces, and sources of ignition. Use explosion-proof equipment.
Requirements for storage areas and containers.	Keep containers tightly closed in a cool, well-ventilated place.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

COMPONENTS	TYPE	CONTROL PARAMETERS	UPDATES	BASIS
AMMONIA ANYDROUS	TWA	14 mg/m3	02 2006	EU EXPOSURE LIMITS VALUES
	TWA	20ppm	02 2006	EU EXPOSURE LIMITS VALUES
	STEL	36mg	02 2006	EU EXPOSURE LIMITS VALUES
	STEL	50ppm	02 2006	EU EXPOSURE LIMITS VALUES
Respiratory protection	Approved/certified vapour respirator.			
Hand protection	Gloves suitable for permanent contact: Material: butyl-rubber Break through time: 4 h Material thickness: 0.5 mm Unsuitable gloves Material: Polyvinylchloride, leather, nitrile rubber/ nitrile latex Natural rubber/natural latex.			
Eye protection	Safety glasses with side-shield			
Skin and body protection	Protective suit and safety shoes			
Engineering Controls	Provides sufficient air exchange and/or exhaust in the workroom.			

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Foam State of Matter Color Odor pH Melting point/range Boiling point/boiling range Auto ignition temperature Lower explosion limit	White cloud is concentrated Gaseous Colourless Ammoniacal strong 12 Not applicable, Gas at ambient temperature -33.35°C 651.1°C 16% (V); lower flammability limit
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Upper explosion limit Vapour pressure Solubility in other solvents Viscosity dynamics Relative vapour density	25% (V); upper flammability limit 8.587 hPa; 20°C Completely soluble, completely miscible 6.441 mPa.s 6.6924 (Air = 1.0)
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SECTION 10. STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions
Chemical Stability	No data are available
Possibility of Hazardous reactions	No data are available.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	Acids. Metals, Nitrites, Combustible materials, Reducing agents, Nitrates, Chlorates, Chlorides, Permanganates.
Hazardous decomposition products.	Nitrogen oxide (NOX) Ammonia

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	Ammonia anhydrous LD50 rat: 350mg/kg; literature value
Acute inhalation toxicity	Ammonia anhydrous LD50 rat: 4 h (literature value)
Skin Irritation	Ammonia anhydrous Rabbit: Skin Irritation
Eye Irritation	Ammonia anhydrous Rabbit: Skin Irritation

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish	Ammonia, anhydrous: LC50 Cyprinus carpio (Carp); 1.1 mg/l; 96 h; (literature value)
Toxicity to daphnia and other aquatic invertebrates	Ammonia, anhydrous: LC50 Daphnia magna; 25.4 mg/l; 48 h; (literature value)

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods: Dispose of in accordance with local regulations.

Packaging: The disposal of cylinders must only be handled by the gas supplier. Packaging that cannot be cleaned must be disposed of in the same way as the material itself.

SECTION 14. TRANSPORT INFORMATION

UN Pictogram



Land and inland navigation transport ADR/RID

UN No. 1005, Shipping Name Ammonia anhydrous, Class 2 & 8, Hazchem Warning: 2.2 - Non-flammable gas, 8 –

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Corrosive. May add the environmental hazard pictogram

Marine transport IMDG

MDG 1005, Shipping Name Ammonia anhydrous, Class 2 & 8, Hazchem Warning: 2.2 - Non-flammable gas, 8 – Corrosive.

Air transport ICAO/IATA-DGR

ICAO/IATA Code 1005, Class 2 & 8

Special precautions for user

The protective measures listed in Sections 6, 7, and 8 of the Safety Data Sheet have to be considered.

SECTION 15. REGULATORY INFORMATION

Safety, health, and environmental regulations/legislation specific to the substance or mixture:

Occupational Health and Safety Act, Hazardous Chemical Agents Regulations

SANS 11014:2010 Edition 1

SANS 10228:2012 Edition 6

SANS 10234:2019 Edition 2

SUPPLEMENT TO SANS 10234 Edition 1

National Road Traffic Act

Dangerous Goods Regulations

SECTION 16. OTHER INFORMATION

SELECTED BIBLIOGRAPHY

1. Data sheets as supplied by various Suppliers and Manufacturers
2. Emergency Response Handbook - Annex A of SABS 0232-3
3. GHS Purple booklet
4. ECHA
5. Occupational Health and Safety Act, Hazardous Chemical Agents Regulations
6. SANS 11014:2010 Edition 1
7. SANS 10228:2012 Edition 6
8. SANS 10234:2019 Edition 2
9. SUPPLEMENT TO SANS 10234 Edition 1
10. National Road Traffic Act
11. Dangerous Goods Regulations

R/S- phrases :

R10: Flammable

R23: Toxic by inhalation

R34: Causes burns

R50: Very toxic to aquatic organisms

S9: Keep the container in a well-ventilated place.

S16: Keep away from sources of ignition - No smoking

S26: In case of contact with the eye, rinse immediately with plenty of water and seek medical advice.

S36/37/39: Wear suitable protective clothing, gloves, and eye/face protection

S45: In case of an accident or if you feel unwell, seek medical advice immediately. (Show label where possible.)

S61: Avoid release to the environment. Refer to special instructions / Safety Data Sheet.

Disclaimer:

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.