



SAFETY DATA SHEET

Revised edition no : 3
Date : 18/02/2016

Ammonia Anyhydrous

PG 022

SECTION 1. IDENTIFICATION OF THE PRODUCT AND COMPANY UNDERTAKING

MATERIAL NAME	AMMONIA ANYHYDROUS	
Synonyms	Ammonia anhydrous, Nitro-sil, AM-FOL, Ammonia gas	
Product Use	Raw material for synthesis processes in the chemical industry, raw material for fertilizers.	
Company:	Puregas (Pty) Ltd 4 Liebenberg str. Alrode, 1451 Republic of South Africa	
Information (Product Safety)	Telephone: +27 11 903 976 Fax: +27 11 903 9766	
Emergency Telephone	Africa	+27 11 903 9760

SECTION 2. HAZARDS IDENTIFICATION

R10	Flammable
R23	Toxic by inhalation
R34	Causes burns
R50	Very toxic to aquatic organisms

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ammonia Anhydrous
Contents 100.00 % W/W

CAS-NO. 7664-41-7

INDEX -NO. 007-001-00-5

EC-NO. 231-635-3

SYMBOL (S). T,N

R-PHRASE (S). R10-R23-R34-R50

For the full text of the R-Phrases mentioned in this section, see section 16.

SECTION 4. FIRST AID MEASURES

Inhalation	Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. Monitor breathing, seek medical advice immediately.
Eye contact	Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids for at least 15 minutes. Call a physician immediately.
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.
Ingestion	Do not induce vomiting without advice. Never give anything by mouth to an unconscious person. Obtain medical attention.



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SECTION 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray, Foam, Carbon dioxide (CO₂), Dry chemicals.

Specific Hazards During Fire Fighting.

Flash back possible over considerable distance. Do not allow run off from fire fighting to enter drains or water courses.

Special Protective Equipment for Fire fighters.

In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

Further Informative.

Cool Containers/ tanks with water spray.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Keep people away from upwind of spill/leaks. Remove all sources of ignition. Do not breathe vapours or spray mist.

Environmental Precautions

Prevent product from entering drains, 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.

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

Component with workplace control parameters**NATIONAL OCCUPATIONAL EXPOSURE LIMITS**

Contains no substance with occupational exposure limit values

EUROPEAN OCCUPATIONAL EXPOSURE LIMITS

COMPONENTS	TYPE	CONTROL PARAMETERS	UPDATES	BASIS
AMMONIA ANYDROUS	TWA	14 mg/m ³	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



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Engineering Measures

Provides sufficient air exchange and/or exhaust in workroom.

Personal Protective Equipment

Respiratory Protection	Suitable respiratory equipment
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
Hygiene Measures	Wash hands before breaks and immediately after handling the product.
Protective measures	Wear suitable protective equipment

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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

SECTION 10. STABILITY AND REACTIVITY

Materials to avoid	Acids. Metals, Nitrites, Combustible materials, Reducing agents, Nitrates, Chlorates, Chlorides, Permanganates.
Hazardous Decomposition Products	Nitrogen oxides (NOX) Ammonia
Thermal decomposition	Stable under normal conditions



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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

Ecotoxicity effects	
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

Product	Dispose of in accordance with local regulations
Contaminated Packaging	Packaging that cannot be cleaned must be disposed of in the same way as the material itself.

SECTION 14. TRANSPORT INFORMATION

ADR	UN-Number: 1005; Class: 2, (8); 2TC; Description of the goods: AMMONIA, ANHYDROUS
RID	UN-Number: 1005; Class: 2, (8); Description of the goods: AMMONIA, ANHYDROUS
ADNR	UN-Number: 1005; Class: 2, (8); 2TC; Description of the goods: AMMONIA, ANHYDROUS
IMDG	UN-Number: 1005; Class: 2.3, (8); EmS: F-C, S-U; Description of the goods: AMMONIA, ANHYDROUS
ICAO/IATA	UN-Number: 1005; Class: 2.3; Description of the goods: AMMONIA, ANHYDROUS



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SECTION 15. REGULATORY INFORMATION

Labeling



Regulatory base

Symbols (s)

T: Toxic
N: Dangerous for the environment

R-Phrases

R10: Flammable
R23: Toxic by inhalation
R34: Causes burns
R50: Very toxic to aquatic organisms

S-Phrases

S9: Keep container in a well-ventilated place.
S16: Keep away from sources of ignition – No smoking
S26: In case of contact with 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 accident or if you feel unwell, seek medical advice immediately. (Show label where possible.)
S61: Avoid release to environment. Refer to special instructions/Safety Data Sheet.

Hazardous components

which must be listed on the label Ammonia, Anhydrous

SECTION 16. OTHER INFORMATION

Full text of R-phrases referred to under section 2 and 3

R10: Flammable
R23: Toxic by inhalation
R34: Causes burns
R50: Very toxic to aquatic organisms

All reasonable efforts were exercised to compile this MSDS in accordance with ISO 11014 and ANSI Z400.1.1993. The MSDS provides information regarding the health, safety and environmental hazards, at the date of issue, to facilitate the safe receipt, use and handling of the product in the workplace. Since Sasol and its subsidiaries cannot anticipate or control all conditions under which the product may be handled, used and received in the workplace, it remains the obligation of each user, receiver or handler to, prior to usage, review this MSDS in the context within which the product will be received, handled or used in the workplace. The user, handler or receiver must ensure that the necessary mitigating measures are in place as regards health and safety. This does not substitute the need or requirement for any relevant risk assessments to be conducted. It further remains the responsibility of the receiver, handler or user to communicate such information to all relevant parties that may be involved in the receipt, use or handling of the product.

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