



Safety Data Sheet

Ammonia Anhydrous

Version 1.00

Revision Date 04.11.2020

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

Product identifier

Trade name Ammonia Anhydrous
Synonyms Nitro-Sil, AM-FOL, Ammonia gas

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

Use Production of nitric acid for explosives and fertilizers.
Synthesis of organonitrogen compounds. Used for refrigeration purposes.

Manufacturer or supplier's details

Company Sasol Chemicals, a division of Sasol South Africa Ltd
Address Sasol Place, 50 Katherine Street
Sandton
2090
South Africa
Telephone +27103445000
E-mail address sasolchem.info.sa@sasol.com
Emergency telephone number +44 (0)1235 239 670 (Europe, Israel, Africa, Americas)
+44(0)1235 239 671 (Middle East, Arabic African countries)
+65 3158 1074 (Asia Pacific)
+86 400 120 6011 (China)
+27 (0)17 610 4444 (South Africa)
0800 112 890 RSA-Local only
+61 (2) 8014 4558 (Australia)

SECTION 2. Hazards identification

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Classification	Flammable gases	Category 2
	Gases under pressure	Compressed gas
	Acute toxicity	Category 3

Safety Data Sheet

Ammonia Anhydrous

Version 1.00

Revision Date 04.11.2020

Skin corrosion	Category 1B
Short-term (acute) aquatic hazard	Category 1
Long-term (chronic) aquatic hazard	Category 2

Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms



Signal word

: Danger

Hazard statements

: H221 Flammable gas.
 H314 Causes severe skin burns and eye damage.
 H331 Toxic if inhaled.
 H280 Contains gas under pressure; may explode if heated.
 H400 Very toxic to aquatic life.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Safety Data Sheet

Ammonia Anhydrous

Version 1.00

Revision Date 04.11.2020

Prevention

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P260 Do not breathe gas.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P233 Keep container tightly closed.

Response

- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
- P391 Collect spillage.

Storage

- P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.

Disposal

- P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Substance

Ammonia, Anhydrous

Contents: 100.00 %W/W

CAS-No. 7664-41-7

Index-No. 007-001-00-5

EC-No. 231-635-3

Hazard statements H400 H314 H331 H280 H221 H411

Safety Data Sheet

Ammonia Anhydrous

Version 1.00

Revision Date 04.11.2020

SECTION 4. First aid measures

Description of necessary 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, get medical attention 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. Take off all contaminated clothing immediately. Get medical attention immediately if irritation persists.
Eye contact	Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately
Ingestion	Not a likely route of exposure.
Most important symptoms/effects, acute and delayed	

Refer to SECTION 11

SECTION 5. Firefighting measures

Suitable extinguishing media	Water spray. Foam Carbon dioxide. Dry chemical.
Special hazards arising from the substance or mixture	Fight fire remotely due to risk of explosion. Flash back possible over considerable distance. Closed containers may rupture if strongly heated. Ruptured cylinders may rocket. Hazardous/toxic decomposition products may occur.
Special protective equipment for firefighters	Wear self-contained breathing apparatus and protective suit.

SECTION 6. Accidental release measures

Safety Data Sheet

Ammonia Anhydrous

Version 1.00

Revision Date 04.11.2020

- Personal precautions** Keep people away from and upwind of spill/leak. Do not breathe vapours or spray mist.
- Environmental precautions** Prevent further leakage or spillage if safe to do so.
- Methods for cleaning up** Gas will dissipate into air; as a result no cleaning is necessary.
- Reference to other sections** Refer to section 8 and 13

SECTION 7. Handling and storage

- Safe handling advice** 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 practice.
- Advice on protection against fire and explosion** 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. Place cylinders away from working area and exhaust hood. Keep away from sources of ignition - No smoking.
- Advice on common storage** No data available

SECTION 8. Exposure controls/personal protection

Components with workplace control parameters

NATIONAL OCCUPATIONAL EXPOSURE LIMITS

Components	Type	Control parameters	Update	Basis
AMMONIA	TWA	17 mg/m ³	1995	South Africa RELs
AMMONIA	TWA	25 ppm	1995	South Africa RELs
	STEL	24 mg/m ³	1995	South Africa RELs
	STEL	35 ppm	1995	South Africa RELs

Exposure controls

Safety Data Sheet

Ammonia Anhydrous

Version 1.00

Revision Date 04.11.2020

Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms.

Personal protective equipment

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
Eye protection	Safety glasses with side-shields
Skin and body protection	Full protective suit Chemical resistant safety boots.
Hygiene measures	Wash hands before breaks and immediately after handling the product.

SECTION 9. Physical and chemical properties

Information on basic physical and chemical properties

Form	White cloud if concentrated
State of matter	Gaseous; at 20 ° C; 1,013 hPa
Colour	Colourless
Odour	pungent
Odour Threshold	No data available
pH	12
Melting point/range	-77.7 ° C; Gas at ambient temperature
Boiling point/boiling range	-33.35 ° C
Evaporation rate	No data available
Flammability (solid, gas)	No data available
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
Relative vapour density	0.6924(Air = 1.0)
Water solubility	Completely soluble, Completely miscible



SASOL

Safety Data Sheet

Ammonia Anhydrous

Version 1.00

Revision Date 04.11.2020

Viscosity, dynamic 6.441 mPa.s

SECTION 10. Stability and reactivity

Reactivity	Stable under normal conditions.
Chemical stability	No data available
Possibility of hazardous reactions	No data available
Conditions to avoid	Extremes of temperature and direct sunlight.
Materials to avoid	AcidsMetalsNitritesCombustible material. Reducing agents. Nitrates.Chlorates.ChloridesPermanganates.
Hazardous decomposition products	Nitrogen oxides (NOx).ammonia

SECTION 11. Toxicological information

Acute oral toxicity	Ammonia, Anhydrous: LD50 Rat: 350 mg/kg; (literature value)
Acute inhalation toxicity	Ammonia, Anhydrous: LC50 Rat: 4 h; vapour; 2000 ppm; (literature value)
Acute dermal toxicity	No data available
Skin irritation	Ammonia, Anhydrous: Rabbit: Skin irritation;
Eye irritation	Ammonia, Anhydrous: Rabbit: Eye irritation
Sensitisation	No data available
Repeated dose toxicity	No data available
Carcinogenicity	No data available

SECTION 12. Ecological information

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

Safety Data Sheet

Ammonia Anhydrous

Version 1.00

Revision Date 04.11.2020

Toxicity to algae	No data available
Toxicity to bacteria	No data available
Toxicity to fish	No data available
Chronic toxicity in aquatic invertebrates	No data available
Biodegradability	No data available
Bioaccumulation	No data available
Other adverse effects	Not applicable pH changes can occur in the immediate environment of a spill could affect both fauna and flora.

SECTION 13. Disposal considerations

Product	Dispose of in accordance with local regulations.
Packaging	Dispose of spent product packaging responsibly and lawfully with due consideration for health, safety and the environment.

SECTION 14. Transport information

ADR	
UN number:	1005
Class:	2, (8) 2TC;
Proper shipping name:	AMMONIA, ANHYDROUS
RID	
UN number:	1005
Class:	2, (8)
Proper shipping name:	AMMONIA, ANHYDROUS
IMDG	
UN number:	1005
Class:	2.3, (8)
EmS:	F-C, S-U
Proper shipping name:	AMMONIA, ANHYDROUS



SASOL

Safety Data Sheet

Ammonia Anhydrous

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Revision Date 04.11.2020

Marine pollutant	Marine pollutant
ICAO/IATA	
UN number :	1005
Class:	2.3
Proper shipping name:	AMMONIA, ANHYDROUS

SECTION 15. Regulatory information

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

USA TSCA Inventory	All chemical constituents are listed in: USA TSCA Inventory (See chapter 3)
Canadian Domestic Substances List (DSL)	All chemical constituents are listed in: Canadian Domestic Substances List (DSL) (See chapter 3)
Australian Inv. of Chem. Substances (AICS)	All chemical constituents are listed in: Australian Inv. of Chem. Substances (AICS) (See chapter 3)
New Zealand Inventory of Chemicals (NZIoC)	All chemical constituents are listed in: New Zealand Inventory of Chemicals (NZIoC) (See chapter 3)
Jap. Inv. of Exist. & New Chemicals (ENCS)	All chemical constituents are listed in: Jap. Inv. of Exist. & New Chemicals (ENCS) (See chapter 3)
Japan. Industrial Safety & Health Law (ISHL)	All chemical constituents are listed in: Japan. Industrial Safety & Health Law (ISHL) (See chapter 3)
Korea. Existing Chemicals Inventory (KECI)	All chemical constituents are listed in: Korea. Existing Chemicals Inventory (KECI) (See chapter 3)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	All chemical constituents are listed in: Philippines Inventory of Chemicals and Chemical Substances (PICCS) (See chapter 3)
China Inv. Existing Chemical Substances (IECSC)	All chemical constituents are listed in: China Inv. Existing Chemical Substances (IECSC) (See chapter 3)

SECTION 16. Other information



Safety Data Sheet

Ammonia Anhydrous

Version 1.00

Revision Date 04.11.2020

Full text of H-Statements

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All reasonable efforts were exercised to compile this SDS in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The SDS only provides information regarding the health, safety and environmental hazards at the date of issue, to facilitate the safe receipt, use and handling of this product in the workplace and does not replace any product information or product specifications. Since Sasol and its subsidiaries cannot anticipate or control all conditions under which this 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 SDS in the context within which this 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 with respect to 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 this product.

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