



IMS FORMAT

Document No. : IMS -S-HSE-039-F

Page of : 1 of 6

Rev. No. : 02

TITLE : ANHYDROUS AMMONIA SAFETY DATA SHEET

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Anhydrous Ammonia
Formula: NH ₃
Product Use: Agricultural industry: Fertilizer, manufacturing of specialty fertilizers Industrial application: Production of specialty pollution control solutions
Synonyms: Ammonia, Liquefied
Manufacturer's Name: Oman India Fertiliser Company S.A.O.C
Address: P.O. Box:67, P.C:411, Sur, Sultanate of Oman Tel: (+968)25532000, Website: www.omifco.com , Email: info@omifco.com
Emergency Telephone: Tel: (+968)25532167

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

Component	%	CAS Number
Ammonia	100	7664-41-7

SECTION 3 — HAZARDS IDENTIFICATION

Classification of the Substance or Mixture: Flammable gases - category 2 Gases under pressure - liquefied gas Acute toxicity (inhalation) - category 3 Skin corrosion - category 1 Serious eye damage - category 1 Aquatic hazard (acute) - category 1 Aquatic hazard (chronic) - category 2
Label Elements: 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. H410: Very toxic to aquatic life with long lasting effects
Other Hazards: In high concentrations may cause asphyxiation. Contact with liquid may cause frostbite or freezing of skin.



IMS FORMAT

Document No. : IMS -S-HSE-039-F

Page of : 2 of 6

Rev. No. : 02

TITLE : ANHYDROUS AMMONIA SAFETY DATA SHEET

SECTION 4 — FIRST AID MEASURES

Eye Contact:

Rinse immediately with plenty of water while holding the eyelids, for at least 15 minutes. Seek medical attention if necessary.

Skin Contact:

Wash off with plenty of water for at least 15 minutes while removing the contaminated clothing. Seek medical attention if necessary.

Inhalation:

Move to fresh air. Apply artificial respiration if breathing has stopped. Get medical attention.

Ingestion:

Not considered a route of exposure.

Most Important Symptoms and Effects Both Acute and Delayed:

Contact with gas may cause severe eyes & skin irritation/ burns. Toxic if inhaled. Inhalation of gas may cause burns to eyes, nose, throat, and lungs.

Notes to Physician:

Treat with a corticosteroid spray as soon as possible after inhalation.

SECTION 5 — FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Use fire extinguishing methods suitable to surrounding conditions.

Unsuitable Extinguishing Media:

Do not use water jet, as this may cause corrosive liquid to splash.

Specific Hazards Arising from the Substance or Mixture:

Fire or excessive heat may produce hazardous decomposition products.

Hazardous Combustion Products:

Nitrogen monoxide and nitrogen dioxide

Advice for fire-fighters:

Wear self-contained breathing apparatus and full protective gear. Do not allow run-off from the firefighting to enter drains or water courses.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Evacuate surrounding areas. Use self-contained breathing apparatus and chemically protective clothing.

Environmental Precautions:

Do not allow to enter sewers/ surface or ground water.

Methods for Containment and Clean Up:

Wash contaminated equipment or sites of leaks with water.



IMS FORMAT

Document No. : IMS -S-HSE-039-F

Page of : 3 of 6

Rev. No. : 02

TITLE : ANHYDROUS AMMONIA SAFETY DATA SHEET

SECTION 7 — HANDLING AND STORAGE

Precautions for safe handling:

Handle using good industrial hygiene and safety procedures.
Wear appropriate personal protective equipment.
Avoid contact with skin and eyes.

Conditions for safe storage:

Store material in the original container in a clean, cool, dry and well-ventilated area.
Store this material away from incompatible materials (Section 10).

Specific end use(s):

Fertilizer, manufacturing of specialty fertilizers. Production of specialty pollution control solutions

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Guidelines:

For Ammonia product, the followings are exposure limits:

ACGIH TLV (United States, 3/2017).

TWA: 25 ppm 8 hours.

TWA: 17 mg/m³ 8 hours.

STEL: 35 ppm 15 minutes.

STEL: 24 mg/m³ 15 minutes.

OSHA PEL (United States, 6/2016).

TWA: 50 ppm 8 hours.

TWA: 35 mg/m³ 8 hours.

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU (12 2009)

TWA: 20 ppm 8 hours

Engineering Measures:

Provide adequate ventilation in storage and handling areas. Provide emergency eye wash station in the vicinity of potential exposure.

Personal Protective Equipment:

Eye/face Protection: Wear appropriate protective eyeglasses or chemical safety goggles

Skin and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure.

Hand Protection: Impermeable protective gloves should be worn at all times when handling chemical products.

Respiratory Protection: In case of intensive or longer exposure, use self-contained respiratory protective device otherwise wear respiratory filter device.

General Hygiene measures: Wash contaminated clothing before reuse. Wash hands after handling the material particularly before eating or drinking. Do not eat, drink or smoke when using this product.



IMS FORMAT

Document No. : IMS -S-HSE-039-F

Page of : 4 of 6

Rev. No. : 02

TITLE : ANHYDROUS AMMONIA SAFETY DATA SHEET

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical State : Liquid	Appearance : Colorless
Odor : Pungent odor	pH : 11.6
Molecular Weight : 17.03	Melting/Freezing point : -78° C (-108° F)
Boiling Point : -33° C (-28° F)	Flash Point : No data available
Evaporation Rate : No data available	Ignition temperature : 651 °C (1204°F)
Decomposition temperature : not available	Flammability : Flammable
Flammability limits : LEL 15% UEL 28%	Vapor Pressure : 10 atm @ 25.7° C
Relative vapor density : 0.596 @ 0° C (32° F)	Specific Gravity : 0.682 @ 4° C (39° F) @ 70°F (21.1°C) = 0.59
Density : lb / ft ³ 0.0481 (32°C / 89.6 to °F)	Solubility in water : 540 g/l @20°C,
Viscosity, dynamic : No data available	Explosive properties : No data available

SECTION 10 — STABILITY AND REACTIVITY

Reactive Hazard: Not reactive under normal conditions.
Stability: Stable under normal conditions.
Conditions to Avoid: Avoid mixing with sulfuric acid or other strong mineral acids. Avoid mixing with hypochlorites (chlorine bleach) or other halogens and sodium hydroxide. Avoid contact with galvanized surfaces, copper, brass, bronze, aluminium alloys, mercury, gold, silver, and strong oxidizers. Avoid heating.
Incompatible Materials: Gold, silver, mercury, Oxidizing agents, Halogens, Halogenated compounds, Acids, Copper, Zinc, Copper/Zinc alloys (Brass), Chlorates.
Hazardous Decomposition Products: Hydrogen and nitrogen gases above 450° C (842° F)
Hazardous Polymerization: Hazardous polymerization does not occur.
Hazardous Reactions: Hazardous reactions may occur on contact with certain chemicals.



IMS FORMAT

Document No. : IMS -S-HSE-039-F

Page of : 5 of 6

Rev. No. : 02

TITLE : ANHYDROUS AMMONIA SAFETY DATA SHEET

SECTION 11 — TOXICOLOGICAL INFORMATION

Oral: LD50 (rat) =350mg/kg

Dermal: No data available

Skin Corrosion / Irritation: Causes severe burns.

Serious Eye damage / Irritation: Causes severe burns.

Respiratory or skin sensitization: Not classified.

GERM cell mutagenicity: Not classified

Carcinogenicity: Not classified

Mutagenicity: Not classified

Reproductive toxicity: Not classified

Teratogenicity: Not classified

Specific Target Organ toxicity (single exposure): Not classified

Specific Target Organ toxicity (repeated exposure): Not classified

Aspiration Hazard: Not applicable to gases and gas mixtures..

SECTION 12 — ECOLOGICAL INFORMATION

Toxicity

LC50 Fish: 0.068 mg/l (Exposure time: 96 h)

EC50 Algae: 2700 mg/l (Exposure time: 18 d)

Persistence and Degradability:

Easily eliminable from water.

Bio-accumulative Potential:

Does not accumulate in organisms.

Mobility in Soil:

Not available

Other Adverse Effects:

Other Information: Avoid release to the environment.



IMS FORMAT

Document No. : IMS -S-HSE-039-F

Page of : 6 of 6

Rev. No. : 02

TITLE : ANHYDROUS AMMONIA SAFETY DATA SHEET

SECTION 13 — DISPOSAL CONSIDERATIONS

Listed as hazardous substance under CWA (40 CFR 1164.40 CFR 117.3 Reportable Quantity 100 lbs. OR 45.4kg) Classed as a hazardous waste under RCRA (40 CFR 261.32 Corrosive # D002). Dispose in accordance with all local, state and federal regulations. Keep spill from entering streams or lakes.

SECTION 14 — TRANSPORT INFORMATION

Ammonia is listed as a hazardous material by the U.S. Department of Transportation (DOT), Transportation of Dangerous Goods (TDG-Canada), International Maritime Dangerous Goods Code (IMDG), and International Air Transport Association (IATA) with UN Number 1005.

SECTION 15 — REGULATORY INFORMATION

U.S. Federal Regulation:

Ammonia (7664-41-7) is listed in the followings:

CERCLA: This product has a Reportable Quantity (RQ) of 100 lbs.

SARA Hazard Category (311/312): Acute Health, Fire Hazard, Sudden Release of Pressure Hazard

SARA 313: This Product does contains chemicals Subject to Annual Release Reporting Requirements Under **SARA Title III, Section 313 (40 CFR 372).**

EPA TSCA Inventory: All of the components of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

OSHA (Occupational Safety and Health Administration):

Not listed.

Canada

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): This product is on the Domestic Substances List (DSL).

CANADIAN WHMIS CLASSIFICATION: Not a WHMIS controlled product.

WHMIS: This product is not considered hazardous according to WHMIS.

SECTION 16 — OTHER INFORMATION

Issue Date: 01/09/2018

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its issue. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release of this substance. However, this shall not to be considered a warranty or quality specification and OMIFCO assumes no liability in connection with the use of the information contained herein by any party. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.