



Material Safety Data Sheet
Ammonia solution

SECTION 1.1 – PRODUCT IDENTIFICATION

Product name : Ammonia solution
CAS No. : 1336-21-6
Molecular formula : NH_4OH

SECTION: 1.2 – COMPANY IDENTIFICATION

Company Name: Indenta Chemicals (India) Pvt. Ltd.

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SECTION 2: HAZARD IDENTIFICATION

Corrosive. The substance is very corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion. Inhalation of the substance may cause lung damage. Very toxic to aquatic organisms.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Composition:

CAS-No. 1336-21-6 EC-index 007-001-01-2
EC-No 215-647-6

Hazardous ingredients:

Name according to EC directives: Ammonia solution
Hazard symbols: C N R-phrases: 34-50
causes burns Very toxic to aquatic organisms

CAS-No.: 1336-21-6 content: (as NH_3) 25%

SECTION 4: FIRST AID MEASURES

After inhalation: remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.

After skin contact: wash off with plenty of water for at least 20 minutes. Immediately remove contaminated clothing. Get medical attention.

After eye contact: rinse out with plenty of water for at least 20 minutes with the eyelid held wide open. Get medical attention.

attention immediately.

After swallowing: make victim drink plenty of water, avoid vomiting (risk of perforation!). Get medical attention immediately. Do not attempt to neutralize.

Do not give liquids to an unconscious person.

SECTION 5: FIRE FIGHTING MEASURES

Suitable-extinguishing media: powder, foam, spray water. Fire extinguisher: powder, carbon dioxide.

Special risks: Non-combustible. Development of hazardous combustion gases or vapour possible in the event of fire.

Special protective equipment for fire fighting: Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

Other information: contain escaping vapours with water. Cool containers with water. Prevent fire-fighting. water from entering surface water or groundwater.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Person-related precautionary measures: Evacuate area. Stay upwind and away from spill release. Wear impervious full body covering suit with heavy rubber boots. Respiratory protection required where vapors are present. Avoid substance contact. Do not inhale vapor/aerosols.

Procedures for cleaning/absorption: Take up with liquid-absorbent material (e.g. dry sand, earth, vermiculite). Forward for disposal. Clean up affected area.

Environmental-protection measures: Do not allow to enter sewerage system

SECTION 7: HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin, and clothing. Wear all recommended personal protective clothing when handling. Protect against physical damage.

Storage: Tightly closed. In a well-ventilated place. Below +25 oC. (temperature may exceeded to up +40 oC for period of max 48 hours). Ensure supply of fresh air in enclosed rooms, away from all possible sources of ignition. Separate from incompatible materials.

SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION

Specific control parameter

MAK Germany (max .workplace conc.) Ammonia :20 ml/m³ or 14 mg/m³ .

TLV-TWA (USA, ACGIH)	25 ppm	STEL:35 ppm
(USA, NIOSH)	Ceiling 25 ppm,	STEL:35 ppm.

Personal protective equipment:

Ventilation requirements: Mechanical exhaust required. Ventilation must be sufficient to maintain atmospheric concentration below TLV. Ventilate at floor level.

Personal protective equipment:

Respiratory protection: required when vapors/aerosols are generated. Wear a MSHA/NIOSH –approved respirator.

Eye protection: Chemical safety goggles and face shield (8-inch minimum). Do not wear contact lenses.

Hand protection: Chemical resistant gloves.

Skin protection: Chemical resistant protective clothing.

Other protective equipment: safety shower and eye bath.

Industrial hygiene:

Immediately change contaminated clothing. Apply skin-protective barrier cream. Wash hands and face after working

with substance.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Test	Specifications
Form	liquid
M.F	NH ₄ OH
M.W.	35.03
Colour:	colourless
Odour:	pungent
pH value (20°C)	~14
Melting temperature	-57.7°C
Boiling temperature	37.7 °C
Autoignition point	651°C (for ammonia)
Vapour pressure	483 milibar at 20°C
Flash point	not available
Flammable (explosive)limits: lower upper	15% 30.02% (for NH ₃)
Density(20°C)	0.91g/cm ³
Solubility in water (20°C)	Miscible with cold water

SECTION 10: STABILITY AND REACTIVITY

Stable under normal handling and storage conditions.

Conditions to be avoided Heat.

Substances to be avoided

alkalis (formation of ammonia), strong acids, oxidizers. Forms explosive mixture with oxygen, chlorine, bromine, iodine, hypochlorite, mercury oxides, silver. incompatible with various metals and metal alloys (i.g. zinc, copper, aluminum);
Reacts with galvanized iron.

Hazardous decomposition products

in the event of fire: ammonia

Section 11: Toxicological Information

RTECS BQ9625000

Acute toxicity

LD50 (oral, rat): 350 mg/kg (anhydrous substance);

LCLo (inhalation, human): 5000 ppm (V) (anhydrous substance):

LD50 (inhalation, rat): 2000 ppm (V)/4h (ammonia)

LDLo (oral-hmn) ; 43 mg/kg

IDLH 300 ppm

Further toxicological information

After inhalation: coughing, bronchitis, pulmonary oedema. When vapours/aerosols are generated: strong irritant effect.

After skin contact: irritant and caustic effects (dermatitis, necrosis).

After eye contact: burns, risk of blindness!

After swallowing: mucosal irritations, gastric pain, nausea, bloody vomiting, collapse, shock, dyspnoea, unconsciousness. Risk of perforation in the oesophagus and stomach. Carcinogenicity: Not listed as a carcinogen by NTP, IARC, ACGIH or OSHA.

Further data

Water pollution class 2 (polluting substance)

SECTION 16: ADDITIONAL INFORMATION

This information is provided for documentation purposes only.

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