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| AMMONIA AMMONIUM CHLORIDE BUFFER TS ACC. TO USP | MATERIAL SAFETY DATA SHEET SDS/MSDS |
|---|---|

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Ammonia Ammonium Chloride Buffer TS acc. to USP

Product Code : 804805

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

### 1.3 Details of the supplier of the safety data sheet

Company : Central Drug House (P) Ltd
DGL 128-129, DLF The Galleria,
Mayur Vihar Phase 1 Extension,
New Delhi-110091
INDIA

Telephone : +91 11 49404040
Email : care@cdhfinechemical.com

### 1.4 Emergency telephone number

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**
Corrosive tp metals (Category 1), H290
Acute toxicity (Category 4), H332
Skin irritation (Category 1A), H314
Eye irritation (Category 1), H318
Reproductive toxicity (Category 2), H361
Specific target organs/Systemic toxicity following single exposure (Category 2), H371
Specific target organs/Systemic toxicity following Repeated exposure (Category 1), H372
Hazardous to the Aquatic Environment (Category 2), H401

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 Label elements

**Labelling according Regulation (EC) No 1272/2008**

Pictogram




Signal word Warning

Hazard statement(s)

| | |
|---|---|
| H290 | May be corrosive to metals. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye irritation. |

| | |
|---|---|
| H332 | Harmful if inhaled. |
| H361 | Suspected of damaging fertility or the unborn child. |
| H371 | Causes damage to organs. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H401 | Toxic to aquatic life. |

Precautionary statement(s)

| | |
|---|---|
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P234 | Keep only in original container. |
| P260 | Do not breathe fumes, mist, vapors, or spray. |
| P261 | Avoid breathing fumes, mist, vapors, or spray. |
| P264 | Wash arms, hands and face thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves and eye protection. |
| P301+P330+P331 | IF SWALLOWED: rinse mouth. Do NOT induce vomiting. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. |
| P304+P340 | IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P306+P311 | IF exposed: Call a POISON CENTER or physician. |
| P308+P313 | IF exposed or concerned: Get medical attention. |
| P314 | Get medical attention if you feel unwell. |
| P321 | Specific treatment (Wash areas of contact with water. |
| P405 | Store locked up. |
| P501 | Dispose of contents in accordance with local, state, federal and international regulations. |

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.1 Mixtures

**Hazardous ingredients according to Regulation (EC) No 1272/2008**

| Component | Formula | Molecular Weight | CAS Number | weight % |
|---|---|---|---|---|
| Water | $H_2O$ | 18.01 g/mol | 7732-18-5 | 76.54 % |
| Ammonium Hydroxide | $NH_4OH$ | 35.04 g/mol | 1336-21-6 | 15.96 % |
| Ammonium Chloride | $NH_4Cl$ | 53.49 g/mol | 12125-02-9 | 7.50 % |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**

Remove person to fresh air and keep comfortable for breathing.

**In case of skin contact**

Take off immediately all contaminated clothing. Rinse skin with water. May cause irritation and burns.

**In case of eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause severe irritation with possible permanent damage.

**If swallowed**
Rinse mouth. Do NOT induce vomiting. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

**4.2 Most important symptoms and effects, both acute and delayed**
This item is corrosive. May be fatal if swallowed or inhaled. Mist and vapor cause burns to every area of contact. Use with adequate ventilation. Avoid contact with skin, eyes or clothing. Wash areas of contact with plenty of water immediately. For eyes, get medical attention. EYE CONTACT: May cause severe irritation with possible permanent damage. SKIN CONTACT: May cause irritation and burns.

**4.3 Indication of any immediate medical attention and special treatment needed**
Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water).

## SECTION 5: Firefighting measures

**5.1 Extinguishing media**
Use any means suitable for extinguishing surrounding fire. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire.

**5.2 Special hazards arising from the substance or mixture**
Flammable vapors may accumulate in confined spaces.

**5.3 Advice for firefighters**
Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

**5.4 Further information**
No data available

## SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective gloves and eye protection.

**6.2 Cleanup and containment methods and materials**
Ventilate area of leak or spill. Cover spill with a 1:1:1 mixture by weight of Sodium Carbonate or Calcium Carbonate, clay and sand. Scoop mixture into a plastic container and, in the fume hood, add to a pail of cold water. Neutralize this mixture with 5% Hydrochloric Acid, let stand overnight, then pour the liquid into the drain while flushing with water. Dispose of any solid with normal refuse. Wash the area of the spill with plenty of water.

## SECTION 7: Handling and storage

**7.1 Precautions for safe handling**
As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin.
Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.
For precautions see section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Handle and store under inert gas. hygroscopic
Storage class (TRGS 510): Combustible liquids

**7.3 Specific end use(s)**
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## SECTION 8: Exposure controls/personal protection

**8.1 Control parameters**

**8.2 Exposure controls**

**Appropriate engineering controls**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment**

**Eye/face protection**
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body Protection**
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | | |
|---|---|---|
| a) | Appearance | Form: liquid<br>Colour: Colourless |
| b) | Odour | No data available |
| c) | Odour Threshold | No data available |
| d) | pH | Alkaline |
| e) | Melting point/freezing point | Approximately 0ºC |
| f) | Initial boiling point and boiling range | Approximately 36°C - Approximately 36°C |
| g) | Flash point | No data available |
| h) | Evaporation rate | No data available |
| i) | Flammability (solid, gas) | No data available |
| j) | Upper/lower flammability or explosive limits | No data available |
| k) | Vapour pressure | No data available |
| l) | Vapour density | No data available |
| m) | Relative density | 0.9 g/ml at 25 °C |
| n) | Water solubility | Miscible with water |
| o) | Partition coefficient: n-octanol/water | No data available |
| p) | Auto-ignition temperature | No data available |
| q) | Decomposition temperature | No data available |
| r) | Viscosity | No data available |
| s) | Explosive properties | No data available |

t) Oxidizing properties No data available

**9.2 Other safety information**
No data available

## SECTION 10: Stability and reactivity

**10.1 Reactivity**
No data available

**10.2 Chemical stability**
Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**
No data available

**10.4 Conditions to avoid**
No data available

**10.5 Incompatible materials**
Keep only in original container. Strong oxidizers, acids, Calcium Hypochlorite bleaches, gold, mercury, silver, halogens.

**10.6 Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

## SECTION 11: Toxicological information

**11.1 Information on toxicological effects**

**Acute oral toxicity**
No data available

**Acute Dermal toxicity**
No data available

**Acute oral toxicity**
Harmful if inhaled. Avoid breathing fumes, mist, vapors, or spray. Use only outdoors or in a well-ventilated area. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

**Skin corrosion/irritation**
Causes severe skin burns and eye damage. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Serious eye damage/eye irritation**
Causes serious eye damage. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

**Respiratory or skin sensitisation**
No data available

**Germ cell mutagenicity**
No data available

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**
Suspected of damaging fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Specific target organ toxicity - single exposure**
May cause damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed or concerned: Call a POISON CENTER or physician. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Specific target organ toxicity - repeated exposure**
Causes damage to organs through prolonged or repeated exposure. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

**Aspiration hazard**
No data available

**Additional Information**
No data available

## SECTION 12: Ecological information

**12.1 Toxicity**
Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

**12.2 Persistence and degradability**
No data available

**12.3 Bioaccumulative potential**
No data available

**12.4 Mobility in soil**
No data available

**12.5 Results of PBT and vPvB assessment**
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects**
No data available

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods**

**Product**
This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**
Dispose of as unused product.

## SECTION 14: Transport information

**14.1 UN number**
ADR/RID: - 2672 IMDG: - 2672 IATA: - 2672

**14.2 UN proper shipping name**
ADR/RID: CORROSIVE LIQUID, N.O.S. (Ammonia solution)
IMDG: CORROSIVE LIQUID, N.O.S. (Ammonia solution)
IATA: corrosive liquid, acidic, (Ammonia solution)

**14.3 Transport hazard class(es)**

| | | |
|---|---|---|
| ADR/RID: - 8 | IMDG: - 8 | IATA: - 8 |

**14.4 Packaging group**

| | | |
|---|---|---|
| ADR/RID: - III | IMDG: - III | IATA: - III |

**14.5 Environmental hazards**

| | | |
|---|---|---|
| ADR/RID: no | IMDG Marine pollutant: no | IATA: no |

**14.6 Special precautions for user**

No data available

## SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**15.2 Chemical safety assessment**

For this product a chemical safety assessment was not carried out

## SECTION 16: Other information

**Full text of H-Statements referred to under sections 2 and 3.**

| | |
|---|---|
| H290 | May be corrosive to metals. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H361 | Suspected of damaging fertility or the unborn child. |
| H371 | Causes damage to organs. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H401 | Toxic to aquatic life. |

**Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.