

1. General Statements

Ammonia solution (10-35%) is a colourless liquid which is in pungent odour. Non-combustible substance. Mixable with water. Aqueous solution reacts strongly alkaline. Acute or chronic health hazards result from the substance. The substance is hazardous to the aquatic environment.

2. Chemical identification.

Name : Ammonia solution (10-35%)
CAS number(s) : 1336-21-6
EC number : 215-647-6
Molecular formula : $\text{NH}_3 \cdot \text{H}_2\text{O}$

3. Uses and Benefits

This substance is used as laboratory reagent and for manufacture of toluidine, fuchsin and various synthetic dyes.

4. Physical / chemical properties

Property	Value
Physical state :	Liquid
Colour :	Colourless
Odour :	Pungent odour
pH :	> 12 at 20 °C (for 30 % solution)
Melting point :	-69.2°C (for 28% solution)
Boiling point :	37.7°C (for 25 % solution)
Flash point :	NDA
Density :	0.898 – 0.91 (at 20°C)
Solubility in Water:	NDA

5. Health Effects

Effect Assessment	Result
Acute toxicity (Oral / inhalation / dermal)	NA
Irritation / corrosion Skin / eye/ respiratory tract	Causes severe skin burns and eye damage
Respiratory or skin sensitisation	NA

GPS Safety Summary

Ammonia solution (10-35%)

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Toxicity after repeated exposure Oral / inhalation / dermal	NA
Genotoxicity / Mutagenicity	NA
Carcinogenicity	NA
Toxicity for reproduction	NA

6. Environmental Effects

Effect Assessment	Result
Aquatic toxicity	Yes
Fate and behavior	Result
Persistence and degradability	Not rapidly degradable
Bioaccumulative potential	No additional information available

7. Exposure

Human health

Ammonia solution (10-35%) is Causes severe skin burns and eye damage.Irritative and corrosive effects on eyes and skin, irritation and damage to the airways by released gas/aerosol; in cases of oral intake, severe damage to the digestive tract..Chronic irritation of the respiratory system/respiratory complaints.The exposure must be kept as minimum as possible by the use of appropriate risk management measures suitable collective and personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of workers.Careless handling or accidental spillage of the chemical could result in exposure to potentially hazardous levels of chemicals.Industrial workers should ensure that they follow the advice found in the extended safety data sheet (SDS).

Environment:

Care should be taken to avoid releases of these products to sewage, drainage systems and water bodies. Spillage shall be quickly collected in the event of an accidental release. More information about release measures and accidental release measures are available in the extended safety data sheet.

GPS Safety Summary

Ammonia solution (10-35%)

CL-4:PUBLIC

8. Risk Management Recommendations

Human health measures

Organizational	A basic standard of occupational hygiene is recommended. Ensure operatives are well informed of the hazards and trained to minimise exposures. Ensure regular inspection and maintenance of equipment and machines. Handle and store according to the indications of the Safety Data Sheet.	
Protection	Eye protection:	Safety glasses
	Skin and body protection:	Wear suitable protective clothing
	Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment.
Engineering Controls	Ensure good ventilation of the work station.	
Environment protective measures		
Avoid release to the environment		

9. First-aid measures

First-aid measures after inhalation: Remove the person to fresh air and keep them comfortable for breathing.

First-aid measures after skin contact: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a physician immediately.

10. Fire-fighting measures

Extinguishing media

Suitable extinguishing media: Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire: Toxic fumes may be released.

Advice for firefighters

Precautionary measures fire: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.

GPS Safety Summary

Ammonia solution (10-35%)

CL-4:PUBLIC

Firefighting instructions: Fight fire from safe distance and protected location. Do not enter a fire area without proper protective equipment, including respiratory protection.

11. Accidental release measures

Protective equipment : Wear recommended personal protective equipment.

Environmental precautions: Avoid release to the environment.

For containment : : Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.

12. Disposal consideration

Regional legislation (waste) : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

13. Handling and storage

Precautions for safe handling: Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Wear personal protective equipment.

Hygiene measures: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product..Always wash hands after handling the product.

GPS Safety Summary

Ammonia solution (10-35%)

CL-4:PUBLIC

14. Classification and Labeling

Hazard pictograms (GHS US)



Signal word (GHS US)

Hazard statements (GHS US)

Precautionary statements (GHS US)

- : Danger
- : H314 - Causes severe skin burns and eye damage
- : H400 - Very toxic to aquatic life
- : P260 - Do not breathe dusts or mists.
- : P264 - Wash hands, forearms and face thoroughly after handling.
- : P273 - Avoid release to the environment.
- : P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing 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/shower.
- : P304+P340 - If inhaled: 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.
- : P310 - Immediately call a poison center or doctor.
- : P321 - Specific treatment (see supplemental first aid instruction on this label).
- : P363 - Take off immediately all contaminated clothing and wash it before reuse.
- : P391 - Collect spillage.
- : P405 - Store locked up.
- : P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

15. Conclusion

Ammonia solution (10-35%) is a colourless liquid which is in pungent odour. Non-combustible substance. Mixable with water. Aqueous solution reacts strongly alkaline. Acute or chronic health hazards result from the substance. The substance is hazardous to the aquatic environment. Ammonia solution (10-35%) is Causes severe skin burns and eye damage. Irritative and corrosive effects on eyes and skin, irritation and damage to the airways by released gas/aerosol; in cases of oral intake, severe damage to the digestive tract. Chronic irritation of the respiratory system/respiratory complaints. Ammonia solution is completely miscible with water in any proportions. Risk of explosion in contact with strong acids, iodine. The substance can react dangerously with strong bases. The exposure must be kept as minimum as possible by the use of appropriate risk management measures as suitable collective and personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of workers.

16. Contact Information within company

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GPS Safety Summary

Ammonia solution (10-35%)

CL-4:PUBLIC

This GPS safety summary is intended to give general information about the health, safety and environment and not intended to provide in-depth details. To obtain the most accurate and current information, consult the appropriate Safety Data Sheet (SDS) prior to use of the material named herein.