

## Material Safety Data Sheets (MSDS)

### Ammonia Solution 25%

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#### Identification of Product

Chemical Code: CHE-A20

Chemical Name: Ammonia Solution 25%

Chemical Grade: AR

Chemical Formula:  $\text{H}_5\text{NO}$

Chemical Weight: 35.05 g/mol

CAS No:

Chemical Synonyms: Ammonia Aqueous

Ammonia Water

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#### Hazards Identification

REACH No: No Data Available

Signal Word: Danger

Supplemental Hazard Information:

Additional Hazard Information: 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. Lachrymator. Photosensitizer.



## Hazards statements

H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

H335 - May cause respiratory irritation.

H400 - Very toxic to aquatic life.

## Precautionary statements

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P303 + P361 + P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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.

P391 - Collect spillage.

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## Composition of Chemical

Chemical Formula: H<sub>5</sub>NO

EC No 1272/2008: No Data Available

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## First Aid Measures

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

If: Inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

If: Skin Contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

If: Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If: Swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Important Symptoms: The most important known symptoms and effects are described in the labelling section.

Immediate Medical Attention: No Data Available

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## Firefighting Measures

Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or Carbon Dioxide.

Hazards Arising: No Data Available

Advice for Firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Info for Firefighting: No Data Available

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## Accidental Release Measures

**Personal Precautions:** Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental Precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Method for Containment:** Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

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## Handling and Storage

**Personal Precautions:** Always open containers slowly to allow any excess pressure to vent. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

**Environmental Precautions:** 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. May develop pressure. Refrigerate before opening. Handle and open container with care.

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## Exposure Controls | Personal Protection

Derived No Effect Level (DNEL)

Workers | Application Area | Exposure Routes | Health Effect | Value

No Data Available

Consumers | Application Area | Exposure Routes | Health Effect | Value

No Data Available

Predicted No Effect Concentration (PNEC)

No Data Available

**Engineering Controls:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Eye/Face Protection:** Tightly fitting safety goggles. Faceshield (8-inch minimum). 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 gloves 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Butyl rubber

Minimum layer thickness: 0,3 mm

Break through time: 480 min.

Material tested: Butoject®

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 240 min.

Material tested: Dermatril®

Data source: KCL GmbH, D-36124, Test method: EN 374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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 a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of 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).

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## Physical and Chemical Properties

Appearance: Colourless, pungent gas or White liquid

Odour: No Data Available

Odour Threshold: No Data Available

pH: 11.7 at 20°C

Melting Point: - 60°C

Boiling Point: 27°C at 1.013 hPa

Flash Point: No Data Available

Evaporation: No Data Available

Flammability: No Data Available

Upper/Lower Flammability or Explosive Limits: Upper explosion limit: 27% (V)

Lower explosion limit: 16% (V)

Vapour pressure: 837 hPa at 20°C

Vapour density: 1.21 - (Air = 1.0)

Relative density: 0.9 g/mL at 25°C

Water solubility: No Data Available

Partition Coefficient: No Data Available

Auto-ignition Temperature: No Data Available

Decomposition Temperature: No Data Available

Viscosity: No Data Available

Explosive properties: No Data Available

Oxidizing properties: No Data Available

Other Safety Info: Relative vapour density 1.21 - (Air = 1.0)

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## Stability and Reactivity

Reactivity: No Data Available

Chemical Stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: No Data Available

Conditions to Avoid: No Data Available

Incompatible Materials: Copper, Iron, Zinc

Hazardous Decomposition Products: Hazardous decomposition products formed under fire conditions - Nitrogen Oxides (NOx)

Other decomposition products - No Data Available

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## Toxicological Information

Acute Toxicity: LD50 Oral - Rat - 350 mg/kg

Remarks: Gastrointestinal: Other changes

Liver: Other changes

Kidney, Ureter, Bladder: Other changes

Skin Corrosion/Irritation: No Data Available

Serious Eye damage | Eye Irritation: No Data Available

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: No Data Available

Specific Target Organ Toxicity - Single Exposure: No Data Available

Specific Target Organ Toxicity - Repeated Exposure: No Data Available

Aspiration Hazard: No Data Available

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## Ecological Information

Ecological Toxicity: Toxicity to daphnia and other aquatic invertebrates: LC50 - Daphnia magna (Water flea) - 25.4 mg/l - 48 h

Ecological Persistence and degradability: No Data Available

Bioaccumulative Potential: Does not bioaccumulate

Mobility in Soil: No Data Available

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 bioaccumulative (vPvB) at levels of 0.1% or higher.

Other Adverse Effect: Very toxic to aquatic life

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## Disposal Considerations

Waste Treatment Methods: Product:

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging:

Dispose of as unused product.

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## Transport Information

UN Number: ADR/RID: 2672

IMDG: 2672

IATA: 2672

UN Shipping Hazard: ADR/RID: Ammonia solution

IMDG: Ammonia solution

IATA: Ammonia solution

Transport Hazard Class: ADR/RID: 8

IMDG: 8

IATA: 8

Packaging Group: ADR/RID: III

IMDG: III

IATA: III

Environmental Hazards: ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

Special Precautions: No Data Available

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## Regulatory Information

Safety, Health and environmental regulations: This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Chemical Safety Assessment: For this product a chemical safety assessment was not carried out.

Additional Info: RTECS: Not available

Burning sensation, cough, wheezing, laryngitis, shortness of breath, spasm, inflammation and edema of the larynx, inflammation and edema of the bronchi, pneumonitis, pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes and skin.

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### Disclaimer

The information stated above is considered to be correct, but does not claim to be inclusive and shall only be used as a guideline. The information provided by this document is confirmed by our continuous updating of knowledge and adheres to the products appropriate safety precautions. It does not represent any guarantee of the product's properties. RLS Chemicals and its Associates shall not be held accountable for any damage's consequent of handling the above product.

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