

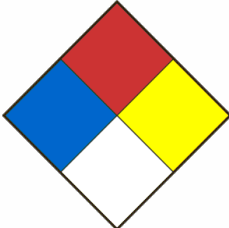


SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

| | | | |
|---|------------------------------------|---|---|
| Product Identifier AMMONIUM HYDROXIDE (0.08M/N) | | Product Use Laboratory use | |
| Chemical formula NH ₄ OH | | Product code AS-0008 | Molar weight 35,05 |
| Chemical name / Commercial name / Synonymous Ammoniaque, Ammonia water, Aqueous ammonia, en solution | | | |
| Supplier's name Laboratoire MAT | | Address-Street 610, Adanac Street | |
| City Québec | | Province Québec | |
| Postal code G1C 7B7 | Internet www.labmat.com | Phone number 418-660-8666 Lun-Ven 8h-16h | |
| Emergency phone | 418-660-8666 Lun-Ven 8h-16h | | CENTRE ANTI-POISON DU QUÉBEC 800-463-5060 |
| Date SDS 2/8/2024 | SDS Prepared by Laboratoire MAT | E-Mail labmat@labmat.com | |

SECTION 02 - HAZARDS IDENTIFICATION

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| Classification WHIMS / GHS | Not a hazardous substance according to WHMIS 2015 |
| Other dangers | NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme) |
|  | Health 0 Fire 0 Reactivity 0 Special danger |

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

| Ingrédients (Dénomination chimique / synonymes) | Numéro CAS et tout identificateur unique | Concentration (%P P) |
|---|--|----------------------|
| Hydroxyde d'ammonium | 1336-21-6 | 0.2 |

SECTION 04 - FIRST AID MEASURES

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| Eye contact | If irritation persists, seek medical attention. |
| Skin contact | Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. If irritation persists, seek medical attention. |
| Inhalation | If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. |
| Ingestion | If the person is conscious, give water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician. |
| Most important symptoms and effects (acute and delayed) | Main symptoms of high exposure: Chemical burns of the skin, eyes and respiratory and digestive mucous membranes. Eye damage. Irritation of the nose and throat. Breathing difficulties. Pulmonary edema. Effects may be delayed. Ref. section 11. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated. |
| Immediate medical attention and special treatment, if necessary | In case of medical consultation, keep this sheet available. |
| General advice | Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. |

SECTION 05 - FIREFIGHTING MEASURES

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| Suitable extinguishing media | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Unsuitable extinguishing media | Data not available. |
| Hazardous combustion products | Hazardous combustion products formed under fire conditions: - nitrogen oxides (NO _x). Ammonia. |
| Specific hazards of the dangerous product | May react violently with incompatible products (Ref Section 10). |
| Special protective equipment and precautions for firefighters | Discard incompatible substances if this can be done without risk. Firefighters should be equipped with standard protective equipment, fireproof clothing, face mask, gloves, protective boots and, where appropriate, self-contained breathing apparatus. |

SECTION 06 - ACCIDENTAL RELEASE MEASURES

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| Methods and materials for containment and cleaning up / Personal precautions, protective equipment | Evacuate personnel to safe areas. Absorb the product with sand or vermiculite. Dilute residues with water, clean and rinse. Ensure a good ventilation of the premises. Dispose of residues in a container for disposal of hazardous materials. When handling, wear suitable safety equipment. Use breathing apparatus if necessary. Avoid breathing vapors, mist or gas. Do not let product enter drains. |
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SECTION 07 - HANDLING AND STORAGE

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| Conditions for safe storage | Store in a well-ventilated area. Store in a cool, dry place. Keep container tightly closed and store away from incompatible products, heat, sparks, and open flame. Over time, the pressure can increase and inflate the containers. |
| Methods of handling | Release of toxic ammonia vapor. This product has a very strong odor. Ensure good ventilation. Use a hood preferably. Avoid ingestion and inhalation. Always open containers slowly to allow any excess pressure to vent. Wear personal protective equipment when handling. Always ensure good ventilation. Transport according to TDG (ref Section 14) |

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace control parameters

| Composants | No.-CAS | Value | Control parameters | Basis |
|---------------------|-----------|-------|--------------------------------|---|
| Ammoniac, anhydrous | 7664-41-7 | VEMP | 25 ppm 17 mg/m ³ | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
| | | VECD | 35 ppm 24 mg/m ³ | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
| | | TWA | 25 ppm 17 mg/m ³ | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) |
| | | STEL | 35 ppm 24 mg/m ³ | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) |
| | | TWA | 25 ppm | Canada. British Columbia OEL |
| | | STEL | 35 ppm | Canada. British Columbia OEL |

Based on ammonia, anhydrous

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|----------------------------|--|
| Data source | Sigma-Aldrich (Millipore Sigma) |
| Ventilation | Fan. |
| Respiratory | If work under the hood is not possible, or if the permissible levels are exceeded, use a mechanical filter / cartridge against NIOSH vapors or a respirator with air supply. |
| Gloves | Handle with gloves. |
| Eyes | Safety goggles with safety shutters. Face shield (20 cm minimum). |
| Shoes | Safety shoes. |
| Clothing | Labcoat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. |
| Engineering control | Have safety showers and eyewash stations in the workplace in case of an emergency and a ventilation system to maintain the level of concentrations in the air below the exposure limit values. |

SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

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| Physical state | Liquid. |
| Appearance | Liquide incolore- |
| Odour threshold | Data not available |
| Melting point / Freezing point | Data not available |
| Initial boiling point | Data not available |
| Boiling range | Data not available |
| Flash point | Data not available |
| Evaporation rate | Data not available |
| Lower flammable / Explosive limit | Data not available |
| Upper flammable / Explosive limit | Data not available |
| Vapour pressure | Data not available |
| Vapour density | Data not available |
| Relative density | 0.99g/ml |
| Partition coefficient water/n-octanol | Data not available |
| Auto-ignition temperature | Data not available |
| Decomposition temperature | Data not available |
| Viscosity | Data not available |

SECTION 10 - STABILITY AND REACTIVITY

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| Reactivity | Basic product, reacts violently with strong acids. |
| Chemical stability | Stable under recommended storage conditions. |
| Possibility of hazardous reactions | May react violently with incompatible substances. |
| Conditions to avoid, including static discharge, shock or vibration | Avoid contact with incompatible materials and extreme temperatures. Excess heat. |
| Incompatible materials | When pure, the product reacts with the following products: Acids, strong oxidizing agents, acrolein, iodine, aluminum, silver, bromine, calcium hypochlorite, chlorine, copper, and its alloys, dimethyl sulphate, iron galvanized, iodine, zinc, mercury, silver salts, nitromethane, gold, bleaches, propylene oxide, heat and moisture. |
| Hazardous decomposition products | Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NO _x). Ammonia. |

SECTION 11 - TOXICOLOGICAL INFORMATION

AMMONIUM HYDROXIDE (28-30% W/W NH₃)

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| Routes of exposure | Inhalation and eyes. |
| Acute exposition effects / symptoms: | By exposure route below. |
| - Eyes | Causes eye burns. |
| - Skin | May be harmful if absorbed through skin. Causes skin burns. |
| - Inhalation | May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. |
| Acute toxicity (Ingestion) | Burns and ulcerations of the mouth, throat and esophagus. Dysphagia, abdominal pain, cramps, diarrhea, hematemesis, headache, dizziness, possible perforation of the stomach and esophagus, stenosis, tremors, convulsions, stupor, circulatory collapse, unconsciousness, coma and can lead to death . |
| Chronic exposure effects / symptoms | Burning sensation, dermatitis, conjunctivitis, nervous disorders, eye and lung damage, chest pain, cough, dyspnoea, laryngitis, headache, dizziness, confusion, irritability, tearing, choking, sweating, salivation, tremors, fatigue loss of weight and loss of appetite, convulsions, nausea and vomiting. |
| DL50 (specify species and route of entry) | LD50 Oral - Rat - 350 mg/kg. (NH ₃) LD50 Dermal - Data not available. |
| CL50 (specify species and route of entry) | LC50 Inhalation - Rat - 4h - 2000 ppm (NH ₃) |

SUMMARY

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|--------------------------------------|---|
| Acute exposure effects / Symptoms: | By exposure routes below. |
| Ingestion | To our knowledge, the product has not been fully evaluated |
| Inhalation | To our knowledge, the product has not been fully evaluated |
| Skin | To our knowledge, the product has not been fully evaluated |
| Eyes | To our knowledge, the product has not been fully evaluated |
| Chronic exposure effects / Symptoms: | To our knowledge, the product has not been fully evaluated |
| ETA Mix (Estimated Acute Toxicity) | LD50 Oral: > 5000 mg/kg - Rat LD50 Dermal: - No data available LC50 Inhalation: >100 000 ppm - 4h - Rat |

SECTION 12 - ECOLOGICAL INFORMATION

SECTION 13 - DISPOSAL CONSIDERATIONS

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| Waste Disposal Method | Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company. |
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SECTION 14 - TRANSPORT INFORMATION

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| UN Number | N/R |
| UN Proper shipping name | |
| Transport hazard class(es) | |
| Packing group | |
| Limited quantity index | |
| ERAP Index | |
| Special precautions | - |

SECTION 15 - REGULATORY INFORMATION

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|--------------|---|
| WHIMS CANADA | Not a hazardous substance according to WHMIS 2015 |
|--------------|---|

SECTION 16 - OTHER INFORMATION

Further information

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. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Last Update: 2/8/2024