



Centre Anti-Poison pour le Québec: (800) 463-5060

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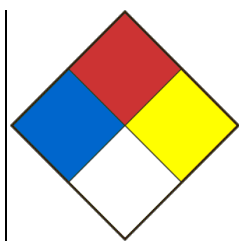
## SAFETY DATA SHEET

### SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

|                                                                                                         |                                                                 |                                             |                       |
|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------|-----------------------|
| Product Identifier<br>NITRIC ACID (FUMING), 90%                                                         |                                                                 | Product Use<br>Laboratory use               |                       |
| Chemical formula<br>HNO <sub>3</sub>                                                                    |                                                                 | Product code<br>NR-0559                     | Molar weight<br>63,02 |
| Chemical name / Commercial name / Synonymous<br>ACIDE NITRIQUE (FUMANTE), 90%, Nitric acid, fuming, 90% |                                                                 |                                             |                       |
| Supplier's name<br>Laboratoire MAT                                                                      |                                                                 | Address-Street<br>610, Adanac Street        |                       |
| City<br>Québec                                                                                          |                                                                 | Province<br>Québec                          |                       |
| Postal code<br>G1C 7B7                                                                                  | Internet<br>www.labmat.com                                      | Phone number<br>418-660-8666 / 800-890-8666 |                       |
| Emergency phone                                                                                         | CANUTEC: 613-996-6666 CENTRE ANTI-POISON DU QUÉBEC 800-463-5060 |                                             |                       |
| Date SDS<br>7/31/2023                                                                                   | SDS Prepared by<br>Laboratoire MAT                              | E-Mail<br>labmat@labmat.com                 |                       |

## SECTION 02 - HAZARDS IDENTIFICATION

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification WHIMS / GHS</b>   | <p>Corrosive to metals-Category 1</p> <p>Skin corrosion/irritation - Skin corrosion category 1A</p> <p>Serious eye damage/eye irritation - Serious eye damage category 1</p> <p>Oxidizing liquids category 3</p> <p>Acute toxicity - Inhalation category 1</p> <p>Health hazard not otherwise classified category 1</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Signal Word</b>                  | DANGER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Hazards statements (H)</b>       | <p>H290 May be corrosive to metals.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H318 Causes serious eye damage.</p> <p>H272 May intensify fire; oxidiser.</p> <p>H330 Fatal if inhaled.</p> <p>LMH003 Causes other adverse health effects that differ from other hazard categories after acute or repeated exposures: Corrosive to the respiratory tract.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Precautionary statements (P)</b> | <p>P234 Keep only in original container.</p> <p>P260 Do not breathe dust / fume / gas / mist / vapors / spray.</p> <p>P264 Wash the areas of the body that have been in contact with the product after handling.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.</p> <p>P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P310 Immediately call a POISON CENTER or doctor/physician.</p> <p>P321 Specific treatment (see section 4 of the SDS and on this label).</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P390 Absorb spillage to prevent material damage.</p> <p>P405 Store locked up.</p> <p>P406 Store in a corrosion resistant container / or a container with corrosion resistant liner.</p> <p>P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company.</p> <p>P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.</p> <p>P220 Keep/Store away from clothing and combustible materials.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P284 Wear respiratory protection.</p> <p>P320 Specific treatment is urgent (see section 4 on this SDS on this label).</p> <p>P370 + P378 In case of fire: Use CO2, dry chemical, dry sand, alcohol-resistant foam for extinction.</p> <p>P403 + P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>LMP004 Caution is advised.</p> |
| <b>PICTOGRAMS</b>                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Other dangers</b>                | NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Significant; 4=Extreme)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |



Health 4  
Fire 0  
Reactivity 1  
Special danger OX

## SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

| Ingrédients (Dénomination chimique / synonymes) | Numéro CAS et tout identificateur unique | Concentration (%) |
|-------------------------------------------------|------------------------------------------|-------------------|
| Acide nitrique                                  | 7697-37-2                                | 80-100            |

## SECTION 04 - FIRST AID MEASURES

|                                                                 |                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye contact                                                     | Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes. 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                                                      | Move the unwell person to the fresh air. If breathing is difficult, give oxygen. 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)         | The product is a material corrosive. Main symptoms of high exposure: Chemical burns of the skin, eyes and respiratory and digestive mucous membranes. Pneumonia. Pulmonary edema. Tooth erosion. The corrosive effect will outweigh the toxicity for the concentrated product. Causes burns, regardless of exposure routes. Ref. section 11. |
| Immediate medical attention and special treatment, if necessary | In case of medical consultation, keep this sheet available.                                                                                                                                                                                                                                                                                  |
| General advice                                                  | Show this safety data sheet to the doctor in attendance.                                                                                                                                                                                                                                                                                     |

## SECTION 05 - FIREFIGHTING MEASURES

|                                                               |                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flammability                                                  | No                                                                                                                                                                                                                                                        |
| Ignition conditions                                           | May cause ignition in contact with reducing agents or combustible materials.                                                                                                                                                                              |
| Suitable extinguishing media                                  | Carbon dioxide (CO <sub>2</sub> ). Dry chemical powder, dry sand, alcohol resistant foam.                                                                                                                                                                 |
| Unsuitable extinguishing media                                | Do not use a heavy water stream.                                                                                                                                                                                                                          |
| Hazardous combustion products                                 | Hazardous combustion products formed under fire conditions: - nitrogen oxides (NO <sub>x</sub> ).                                                                                                                                                         |
| Special fire and explosion hazards                            | Strong oxidizer, contact with combustible material can cause fire or explosion if heated or crushed in presence of organic products. 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

|                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Methods and materials for containment and cleaning up / Personnel precautions, protective equipment | Evacuate personnel to safe areas. Avoid breathing vapors, mist or gas. 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. Do not let product enter drains. |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## SECTION 07 - HANDLING AND STORAGE

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conditions for safe storage | Store in a well-ventilated area. Keep container tightly closed and store away from heat, water, moisture, and incompatible products. Protect from the sun's rays. Preferably refrigerate.                                                                                                                                                                                                                                           |
| Methods of handling         | Bottle in the glass preferably. Do not bottle in a metal container. Keep away from heat and sources of ignition. Avoid ingestion and inhalation. Avoid contact with the skin, eyes and clothes. Wear personal protective equipment when handling. Always ensure good ventilation. Transport according to TDG (ref Section 14) Do not use metal instruments to handle this product. NOTE: Aqueous solutions are corrosive to metals. |

## SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

### Workplace control parameters

| Components  | CAS-No.   | Value | Control parameters              | Basis                                                                                                                                   |
|-------------|-----------|-------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Nitric acid | 7697-37-2 | TWA   | 2.000000 ppm<br>5.200000 mg/m3  | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)                                                                     |
|             |           | STEL  | 4.000000 ppm<br>10.000000 mg/m3 | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)                                                                     |
|             |           | TWA   | 2.000000 ppm                    | Canada. British Columbia OEL                                                                                                            |
|             |           | STEL  | 4.000000 ppm                    | Canada. British Columbia OEL                                                                                                            |
|             |           | TWAEV | 2.000000 ppm<br>5.200000 mg/m3  | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
|             |           | STEV  | 4.000000 ppm<br>10.000000 mg/m3 | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
|             |           | TWA   | 2.000000 ppm                    | USA. ACGIH Threshold Limit Values (TLV)                                                                                                 |
|             |           | STEL  | 4.000000 ppm                    | USA. ACGIH Threshold Limit Values (TLV)                                                                                                 |

|                     |                                                                                                                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data source         | Sigma-Aldrich.                                                                                                                                                                                 |
| Ventilation         | Fan.                                                                                                                                                                                           |
| Respiratory         | 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.                                                                                                                                                           |
| 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

|                                       |                                                                                           |
|---------------------------------------|-------------------------------------------------------------------------------------------|
| Physical state                        | Liquid.                                                                                   |
| Appearance                            | Liquide transparent à jaune clair-                                                        |
| Odour                                 | Odeur suffocante..                                                                        |
| Odour threshold                       | Odor low: 0.75 mg/cu m; Odor high: 2.50 mg/cu m; Irritating concn: 155.0 mg/cu m. (HNO3)- |
| pH                                    | < 1.0.                                                                                    |
| Melting point / Freezing point        | -42°C-                                                                                    |
| Initial boiling point                 | 120.5 °C (248.9 °F) - lit.-                                                               |
| Boiling range                         | Data not available                                                                        |
| Flash point                           | Data not available                                                                        |
| Evaporation rate                      | Data not available                                                                        |
| Flammability                          | No                                                                                        |
| Lower flammable / Explosive limit     | Data not available                                                                        |
| Upper flammable / Explosive limit     | Data not available                                                                        |
| Vapour pressure                       | 56hPa-                                                                                    |
| Vapour density                        | Data not available                                                                        |
| Relative density                      | 1.511g/ml-                                                                                |
| Solubility                            | Miscible avec l'eau en toutes proportions.                                                |
| Partition coefficient water/n-octanol | Data not available                                                                        |
| Auto-ignition temperature             | Data not available                                                                        |
| Decomposition temperature             | Data not available                                                                        |
| Viscosity                             | 0.746 mPa.s @25°C-                                                                        |

## SECTION 10 - STABILITY AND REACTIVITY

|                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactivity</b>                                                                                | Oxidizer: risk of fire in case of contact with combustible / organic substance. Acid product, reacts strongly with strong bases. Reacts strongly with metals.                                                                                                                                                                                                                                                                                                                                                   |
| <b>Chemical stability</b>                                                                        | If heated strongly, it emits toxic fumes. Oxidizer: Fire hazard in case of contact with combustible / organic substance. Sensitive to light.                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Possibility of hazardous reactions</b>                                                        | May react violently with incompatible substances. Oxidizer.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Conditions of instability (Including sensitivity to shock / static discharge / vibration)</b> | Nitric acid is yellowish in color when exposed to light. Old nitric acid inventories (10 years and older) or yellowish-colored batches have formed a nitroz compound with very explosive potential. Avoid contact with incompatible materials and extreme temperatures.                                                                                                                                                                                                                                         |
| <b>Incompatible material</b>                                                                     | Nitric acid is incompatible with bases, most metals, especially alkali metals, powdered metals, metal oxides, reducing agents, organic substances, including anhydrides, alcohols, aldehydes, ketones, ethers, amines, hydrocarbons, toluene, acetonitrile, acrylonitrile, chlorobenzene, methylene chloride, etc., combustible organic materials such as paper, charcoal, wood dust, etc. and with many sulphides, nonmetallic hydrides, carbides, and acetylenides. Cyanides. Ammoniac. Combustible material. |
| <b>Materials to avoid</b>                                                                        | Alkali metals, Organic materials, Acetic anhydride, Acetonitrile, Alcohols, Acrylonitrile                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Hazardous decomposition products</b>                                                          | Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NOx).                                                                                                                                                                                                                                                                                                                                                                                                                         |

## SECTION 11 - TOXICOLOGICAL INFORMATION

### NITRIC ACID (FUMING), 90%

|                                                  |                                                                                                                                                                                                            |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Routes of exposure</b>                        | Ingestion, inhalation, skin and eyes.                                                                                                                                                                      |
| <b>Acute exposition effects / symptoms:</b>      | By exposure route below. The corrosive effect will outweigh the toxicity for the concentrated product.                                                                                                     |
| <b>- Eyes</b>                                    | Irritation and tearing. Severe burns and destruction of ocular tissue that can lead to corneal ulceration and blindness.                                                                                   |
| <b>- Skin</b>                                    | May be harmful if absorbed through skin. Severe burns and tissue ulcerations.                                                                                                                              |
| <b>- Inhalation</b>                              | Spasms, irritation and inflammation of the nose, throat and lungs. Cough, dyspnea, cyanosis, chest pain. Edema of the larynx and bronchi. Chemical pneumonitis and pulmonary edema that can lead to death. |
| <b>Acute toxicity (Ingestion)</b>                | Corrosion and ulceration of the mouth, throat, esophagus, stomach and abdominal wall.                                                                                                                      |
| <b>Chronic exposure effects / symptoms</b>       | Dental erosions have been attributed to repeated exposures. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.                                        |
| <b>DL50 (specify species and route of entry)</b> | LD50 Oral - Data not available. LD50 Dermal - Data not available.                                                                                                                                          |
| <b>CL50 (specify species and route of entry)</b> | LC50 Inhalation - Rat - 4h - 2.65mg/L.                                                                                                                                                                     |

## SECTION 12 - ECOLOGICAL INFORMATION

|                                      |                                                                      |
|--------------------------------------|----------------------------------------------------------------------|
| <b>Ecotoxicity</b>                   | Data not available.                                                  |
| <b>Persistence and degradability</b> | Persistence is unlikely based on information available.              |
| <b>Bioaccumulative potential</b>     | Data not available.                                                  |
| <b>Mobility in soil</b>              | Probable mobility in the environment due to its solubility in water. |
| <b>Other adverse effects</b>         | Harmful effect by pH change. Do not throw residues in the sewer.     |

## SECTION 13 - DISPOSAL CONSIDERATIONS

|                               |                                                                                                                                                              |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Waste Disposal Method</b>  | Dispose of contents / container in accordance with local / regional / national / international regulations / or contact a specialist waste disposal company. |
| <b>Contaminated Packaging</b> | Dispose of as unused product.                                                                                                                                |

## SECTION 14 - TRANSPORT INFORMATION

|                            |                                                                            |
|----------------------------|----------------------------------------------------------------------------|
| UN Number                  | 2032                                                                       |
| UN Proper shipping name    | ACIDE NITRIQUE FUMANT ROUGE                                                |
| Transport hazard class(es) | 8 Corrosive substances<br>5.1 Oxidizing substances<br>6.1 Toxic substances |
| Packing group              | I                                                                          |
| Limited quantity index     | 0L                                                                         |
| ERAP Index                 | 1000                                                                       |
| Special precautions        | 23                                                                         |

## SECTION 15 - REGULATORY INFORMATION

|              |                                                                                                                                                                                                                                                                                              |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WHIMS CANADA | Corrosive to metals-Category 1<br>Skin corrosion/irritation - Skin corrosion category 1A<br>Serious eye damage/eye irritation - Serious eye damage category 1<br>Oxidizing liquids category 3<br>Acute toxicity - Inhalation category 1<br>Health hazard not otherwise classified category 1 |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 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: 7/31/2023