


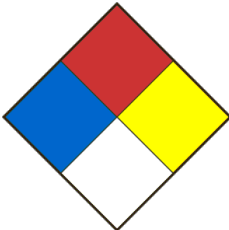


SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier NICKEL 1000PPM REFERENCE SOLUTION		Product Use Laboratory use	
Chemical formula Ni		Product code AA-2500	Molar weight 58,71
Chemical name / Commercial name / Synonymous -			
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 10/25/2024	SDS Prepared by Laboratoire MAT		E-Mail labmat@labmat.com

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	<p>Skin corrosion/irritation - Skin corrosion category 1B</p> <p>Carcinogenicity category 2</p> <p>Specific Target Organ Toxicity - Repeated exposure category 1</p> <p>Serious eye damage/eye irritation - Serious eye damage category 1</p> <p>Corrosive to metals-Category 1</p>
Signal Word	DANGER
Hazards statements (H)	<p>H314 Causes severe skin burns and eye damage.</p> <p>H351 Suspected of causing cancer.</p> <p>H372 Causes damage to organs through prolonged or repeated exposure.</p> <p>H318 Causes serious eye damage.</p> <p>H290 May be corrosive to metals.</p>
Precautionary statements (P)	<p>P260 Do not breathe mists, gases, vapors and other fumes, or the product itself.</p> <p>P264 Wash thoroughly after handling.</p> <p>P280 Wear protective gloves, protective clothing and eye and 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): Take off immediately all contaminated clothing. Rinse skin with water.</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 a doctor.</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>P405 Store locked up.</p> <p>P501 Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company.</p> <p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P308 + P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P314 Get medical advice/attention if you feel unwell.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P234 Keep only in original container.</p> <p>P390 Absorb spillage to prevent material damage.</p> <p>P406 Store in a corrosion resistant container or a container with corrosion resistant liner.</p>
PICTOGRAMS	
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)
	<p>Health 2</p> <p>Fire 0</p> <p>Reactivity 0</p> <p>Special danger</p>

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%P/P)
Acide nitrique	7697-37-2	4
Nickel	7440-02-0	0.1

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: Skin irritation. Eyes irritation. Irritation of the respiratory system. Pneumonia. Pulmonary edema. Tooth erosion. The corrosive effect will outweigh the toxicity for the concentrated product. Ref. section 11.
Immediate medical attention and special treatment, if necessary	Treat according to symptoms. Show this sheet to the attending physician.

SECTION 05 - FIREFIGHTING MEASURES

Flammability	No
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	Do not use a heavy water stream.
Dangerous fumes - combustion	Nitrogen oxides.
Hazardous combustion products	Hazardous combustion products formed under fire conditions: - nitrogen oxides (NO _x). - nikel oxide.
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

Methods and materials for containment and cleaning up / Personal 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. When handling, wear appropriate safety equipment. Use NIOSH cartridge respiratory protection for larger spills. (Reference Section 8 for protective equipment to be used.) Do not let product enter drains.
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SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Keep container tightly closed and store away from heat, water, moisture, and incompatible products (ref. section 10). Store in a dry, cool and well-ventilated place. Preferably refrigerate. Protect from the sun's rays.
Methods of handling	Do not bottle in a metal container. Bottle in the glass preferably. 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. Do not use metal instruments to handle this product. NOTE: Aqueous solutions are corrosive to metals. Apply the usual standard hygiene rules: Wash your hands after use. Do not eat or drink during use.

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 5.200000 mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		STEL	4.000000 ppm 10.000000 mg/m ³	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 5.200000 mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		STEV	4.000000 ppm 10.000000 mg/m ³	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)

Components	No.-CAS	Control parameters	Value	Basis
Nickel	7440-02-0	TWA	1.5mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	0.05mg/m ³	Canada. British Columbia OEL
		TWA	1mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	1mg/m ³	Canada. Ontario OELs

Data source	Sigma-Aldrich.
Ventilation	Fan.
Respiratory	If permitted levels are exceeded, use NIOSH cartridge respiratory protection, or an air-supplied respirator.
Gloves	Handle with gloves. Suggested material: Nitrile. Butyle. Neoprene. The type, thickness and length of the glove must be chosen according to the use, the concentration of the product, as well as the duration of use. Replace gloves regularly for better protection.
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 vert pâle.
Odour	Inodore.
Odour threshold	Data not available
pH	< 1.0.
Melting point / Freezing point	-7°C
Initial boiling point	102°C
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	Data not available
Solubility	Miscible avec l'eau en toutes proportions.
Vapour density	Data not available
Relative density	1.03g/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

Reactivity	Acid product, reacts strongly with strong bases. Reacts strongly with metals.
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	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.
Incompatible materials	When pure, the products react with the following products: Acids, titanium, hydrazoic acid, strong oxidizing agents and sulfides. Heated powdered nickel can react strongly with ammonium nitrate, sulfur, selenium, phosphorus, arsenic, boron, carbon, titanium and silicon. 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.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NO _x). Nickel / Nickel Oxide

SECTION 11 - TOXICOLOGICAL INFORMATION

NITRIC ACID (66-70%W/W)

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below. The corrosive effect will outweigh the toxicity for the concentrated product.
- Eyes	Irritation and tearing. Severe burns and destruction of ocular tissue that can lead to corneal ulceration and blindness.
- Skin	May be harmful if absorbed through skin. Severe burns and tissue ulcerations.
- Inhalation	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.
Acute toxicity (Ingestion)	Corrosion and ulceration of the mouth, throat, esophagus, stomach and abdominal wall.
Chronic exposure effects / symptoms	Dental erosions have been attributed to repeated exposures. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
DL50 (specify species and route of entry)	LD50 Oral - Data not available. LD50 Dermal - Data not available.
CL50 (specify species and route of entry)	Inhalation: 67 ppm, 4hrs, Mouse

NICKEL (POWDER)

Routes of exposure	Inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation and tearing.
- Skin	Irritation and dermatitis.
- Inhalation	Irritation of the mucous membranes and the upper respiratory system.
Acute toxicity (Ingestion)	Narcotic effects, gastrointestinal disorders, cramps, diarrhea, headache, dizziness, drowsiness, confusion, tremors, convulsions, nausea and vomiting.
Chronic exposure effects / symptoms	Burning sensation, cough, breathing problems, laryngitis, conjunctivitis, shortness of breath, headache, nausea and vomiting. May cause skin allergy in some subjects. Is recognized as a possible carcinogen for humans (class 2B) by IARC.
DL50 (specify species and route of entry)	LD50 Oral - Rat - > 9000 mg/kg. LD50 Dermal: Data not available.
CL50 (specify species and route of entry)	LC50 - Inhalation - Data not available.

SUMMARY

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: No data available LD50 Dermal: No data available LC50 Inhalation: 1675 ppm - 4h - Mouse

SECTION 12 - ECOLOGICAL INFORMATION

Available ecological information	No
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SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method	Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company.
Contaminated Packaging	Dispose of as unused product.

SECTION 14 - TRANSPORT INFORMATION

UN Number	3264
UN Proper shipping name	LIQUIDE INORGANIQUE CORROSIF, ACIDE, , N.S.A. (acide nitrique)
Transport hazard class(es)	8 Corrosive substances
Packing group	III
Limited quantity index	5L
ERAP Index	-
Special precautions	16

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Skin corrosion/irritation - Skin corrosion category 1B Carcinogenicity category 2 Specific Target Organ Toxicity - Repeated exposure category 1 Serious eye damage/eye irritation - Serious eye damage category 1 Corrosive to metals-Category 1
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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.

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