



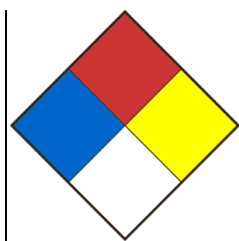
SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier PICKLING SOLUTION FOR STAINLESS STEEL		Product Use Laboratory use	
Chemical formula -		Product code DS-1765	Molar weight
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 8/28/2024	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	Corrosive to metals-Category 1 Serious eye damage/eye irritation - Serious eye damage category 1 Acute toxicity - Oral category 3 Acute toxicity - Dermal category 1 Acute toxicity - Inhalation category 2 Skin corrosion/irritation - Skin corrosion category 1
Signal Word	DANGER
Hazards statements (H)	H290 May be corrosive to metals. H318 Causes serious eye damage. H301 Toxic if swallowed. H310 Fatal in contact with skin. H314 Causes severe skin burns and eye damage. H330 Fatal if inhaled.
Precautionary statements (P)	P234 Keep only in original container. P280 Wear protective gloves, protective clothing and eye and face protection. 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 a doctor. P390 Absorb spillage to prevent material damage. P406 Store in a corrosion resistant container or a container with corrosion resistant liner. P260 Do not breathe mists, gases, vapors and other fumes, or the product itself. P262 Do not get in eyes, on skin, or on clothing. P264 Wash the areas of the body that have been in contact with the product after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P284 Wear respiratory protection. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P320 Specific treatment is urgent (see section 4 on this SDS on this label). P321 Specific treatment (see section 4 of the SDS and on this label). P330 Rinse mouth. P361 + P364 Take off immediately all contaminated clothing and wash it before reuse. P363 Wash contaminated clothing before reuse. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company.
PICTOGRAMS	
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Significant; 4=Extreme)



Health 3
Fire 0
Reactivity 1
Special danger

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%P/P)
Acide nitrique	7697-37-2	39
Acide fluorhydrique	7664-39-3	3

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	Treat the exposed skin with a 2.5% calcium gluconate gel, repeated application, until the burning sensation ceases. Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. Consult a physician.
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. Cough. Nausea and vomiting. Abdominal pain. Effects may be delayed. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated. Ref. section 11.
Immediate medical attention and special treatment, if necessary	Treat according to symptoms. Show this sheet to the attending physician. In case of poisoning, the following can be administered as an antidote: Calcium gluconate 2.5%.

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.
Hazardous combustion products	Hazardous combustion products formed under fire conditions: - nitrogen oxides (NOx). - Gaseous hydrogen fluoride.
Specific hazards of the dangerous product	When concentrated, the product reacts according to the following characteristics: Nitric acid and tetranitromethane form highly explosive mixtures on contact with 1,3-dinitrobenzene. Hydrofluoric acid reacts violently with glass. The contact of hydrofluoric acid with certain metals can release hydrogen, a highly flammable gas. May react violently with incompatible products (Ref Section 10). Violent and explosive reactions may occur in contact with: chlorosulfonic acid, nitric acid + glycerin, nitric acid + lactic acid, nitric acid + propylene glycol, sulfuric acid, acetic anhydride, ammonium hydroxide, arsenic trioxide, calcium oxide, ethylene diamine, fluorine, mercuric oxide + organic materials, oleum, phosphorus pentoxide potassium, potassium hydroxide, potassium permanganate, propylene oxide, sodium, sodium hydroxide and vinyl acetate. To our knowledge, the product has not been fully evaluated.
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. If it is hydrofluoric acid in solution, it may be neutralized with sodium carbonate or calcium carbonate in a mixture, optionally, depending on the quantities, with an inert material. 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.
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SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Keep container tightly closed and store away from heat, moisture, and incompatible products. Store in a dry, cool and well-ventilated place. Preferably refrigerate. Protect from the sun's rays.
Methods of handling	Do not pack in glass. Do not bottle in a metal container. Bottle in plastic containers as this product corrodes the glass. Keep away from heat and sources of ignition. Avoid ingestion and inhalation. Avoid contact with the skin, eyes and clothes. Do not use metal instruments to handle this product. NOTE: Aqueous solutions are corrosive to metals. Wear personal protective equipment when handling. Always ensure good ventilation. Provide an emergency kit nearby. 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/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		STEL	4.000000 ppm 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 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 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)
Components	CAS-No.	Value	Control parameters	Basis
Hydrofluoric acid	7664-39-3	(c)	2 ppm 1.6mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks				
		C	2ppm	Canada. British Columbia OEL
		TWAEV	0.5ppm	Canada. Ontario OELs
		CEV	2 ppm	Canada. Ontario OELs
		C	3ppm 2.6mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
A substance which may not be recirculated in accordance with section 108				
		TWA	0.5 ppm 0.4 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		(c)	2 ppm 1.6 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		C	2 ppm	Canada. British Columbia OEL
		C	3 ppm 2.6 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
A substance which may not be recirculated in accordance with section 108				
		TWA	0.5 ppm	USA. ACGIH Threshold Limit Values (TLV)
		C	2ppm	USA. ACGIH Threshold Limit Values (TLV)
		TWA	0.5 ppm	USA. ACGIH Threshold Limit Values (TLV)
		C	2 ppm	USA. ACGIH Threshold Limit Values (TLV)

Data source	Sigma-Aldrich.
Ventilation	Fan.
Respiratory	If work under the hood is not possible, or if the permissible levels are exceeded, use NIOSH cartridge respiratory protection, or an air-supplied respirator.
Gloves	Handle with gloves. Suggested material: 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. Laminated polyethylene (as Silver Shield/4H).
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. Recirculation is prohibited.

SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid.
Appearance	Liquide clair.
Odour	Odeur suffocante..
Odour threshold	Data not available
pH	< 1.0.
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
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	1.2 g/ml (Théorique).
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. Sensitive to light.
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. Excessive heat and contaminations of all kinds. Light sensitive.
Incompatible materials	When pure, the products react with the following products: Strong bases, glass, ceramics, concrete, carbonates, cyanides, sulfides, acid anhydrides, sulfuric acid, arsenic trioxide, calcium oxide, silicone-based materials, oxidizing or reducing materials, metals alkalis, aluminum, stainless steel, organic and combustible substances, heat, humidity, sunlight and light. 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). - Gaseous hydrogen fluoride.

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, 4hres, Mouse

HYDROFLUORIC ACID (47-51 %W/W)

Routes of exposure	
Acute exposition effects / symptoms:	
- Eyes	
- Skin	
- Inhalation	
Acute toxicity (Ingestion)	
Chronic exposure effects / symptoms	
DL50 (specify species and route of entry)	
CL50 (specify species and route of entry)	

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: 171 ppm - 4h - Undefined species

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	Hydrofluoric acid: Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Water flea): EC50: 270 mg/L-48h. Toxicity to freshwater fish: Leuciscus idus(ide) - 660mg/L-48h.
Persistence and degradability	Persistence is unlikely based on information available.
Bioaccumulative potential	Data not available.
Mobility in soil	Probable mobility due to its solubility in water.
Other adverse effects	Do not throw residues in the sewer.

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	3390
UN Proper shipping name	LIQUIDE TOXIQUE À L'INHALATION, CORROSIF, N.S.A.
Transport hazard class(es)	6.1 Toxic substances 8 Corrosive substances
Packing group	I
Limited quantity index	OL
ERAP Index	1000
Special precautions	16, 23 (Acide fluorhydrique + nitrique)

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Corrosive to metals-Category 1 Serious eye damage/eye irritation - Serious eye damage category 1 Acute toxicity - Oral category 3 Acute toxicity - Dermal category 1 Acute toxicity - Inhalation category 2 Skin corrosion/irritation - Skin corrosion 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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