



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

Tél. (Qc): (418) 660-8666 / 800-890-8666

Fax. (Qc): (418) 660-8998

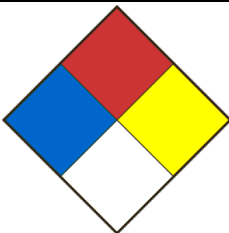
SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier PERCHLORIC ACID (70%)		Product Use Laboratory use	
Chemical formula HClO ₄		Product code PR-0111	Molar weight 100,46
Chemical name / Commercial name / Synonymous PERCHLORIC ACID			
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 / 800-890-8666	
Emergency phone	CANUTEC: 613-996-6666 CENTRE ANTI-POISON DU QUÉBEC 800-463-5060		
Date SDS 11/26/2018	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	Oxidizing liquids category 1 Acute toxicity - Oral category 4 Skin corrosion/irritation - Skin corrosion category 1A Serious eye damage/eye irritation - Serious eye damage category 1 Corrosive to metals-Category 1 Specific Target Organ Toxicity - Repeated exposure category 2 Specific target organ toxicity - Single exposure category 3	
Signal Word	DANGER	
Hazards statements (H)	H271 May cause fire or explosion; strong oxidiser. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H290 May be corrosive to metals. H373 May cause damage to organs through prolonged or repeated exposure. H335 May cause respiratory irritation.	
Precautionary statements (P)	P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking. P220 Keep/Store away from clothing and combustible materials. P260 Do not breathe dust / fume / gas / mist / vapours / spray. 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. P280 Wear protective gloves/protective clothing/eye protection/face protection. P283 Wear fire/ flame resistant/retardant clothing. P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P306 + P360 IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes. P310 Immediately call a POISON CENTER or doctor/physician. P321 Specific treatment (see section 4 of the SDS and on this label). P330 Rinse mouth. P363 Wash contaminated clothing before reuse. P370 + P378 In case of fire: Use water spray or alcohol-resistant foam, or dry powder or carbon dioxide for extinction. P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. P405 Store locked up. P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company. P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P420 Store away from other materials. P234 Keep only in original container. P314 Get medical advice/attention if you feel unwell. P390 Absorb spillage to prevent material damage. P406 Store in a corrosion resistant container / or a container with corrosion resistant liner. P261 Avoid breathing dust / fume / gas / mist / vapours / spray. P271 Use only outdoors or in a well-ventilated area. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P403 + P233 Store in a well-ventilated place. Keep container tightly closed.	

PICTOGRAMS	
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Significant; 4=Extreme)
	Health 3 Fire 0 Reactivity 2 Special danger OX

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Acide perchlorique	7601-90-3	70

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)	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	Risk of fire or explosion in the presence of combustible and organic products. Not flammable or combustible.
Suitable extinguishing media	Dry powder. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	Do not use water.
Hazardous combustion / decomposition products	Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas
Special fire and explosion hazards	Powerful oxidizer. Contact with combustible and organic products may cause fire. This product has a high oxidizing potential and becomes very unstable under the effect of high temperatures (> 160 °C). Potentially explosive in contact with the following organic materials: wood, cellulose, paper and its derivatives. Mixing alcohols, glycols and polyhydroxides with concentrated perchloric acid produces potentially explosive compounds. Reacts violently with the following products: acetonitrile, steel, strong acids, organic and inorganic anhydrides, aniline + formaldehyde, antimony (+ 110 °C), bismuth and its alloys (+ 110 °C), ketones, dimethyl sulfoxide, ethers, ethylbenzene, ferrous sulphate, halogens, hypophosphites, organophosphorus compounds (insecticide, fungicide), pyridine, sodium phosphinate, sulphoxides and trichlorethylene.
Special protective equipment and precautions for firefighters	Wear self contained breathing apparatus for fire fighting if necessary.

SECTION 06 - ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up / Personnel precautions, protective equipment	Evacuate personnel to safe areas. Absorb the product with sand or vermiculite. Avoid spilled product coming into contact with water. Neutralize with sodium bicarbonate. Ensure a good ventilation of the premises. When handling, wear appropriate safety equipment. Use a respirator as needed. Wear respiratory protection. Avoid breathing vapours, mist or gas. Dispose of residues in a container provided for the disposal of hazardous materials.
--	---

SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Store in a cool, dry place. Keep container tightly closed and store away from heat, moisture, combustible and organic products. Protect from the sun's rays. Keep container tightly closed in a dry and well-ventilated place.
Methods of handling	Bottle in the glass only. Always open containers slowly to allow any excess pressure to vent. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking.

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace control parameters

Components	CAS-No.	Value	Control Citric acid	
Perchloric acid	7601-90-3	No data available	TLV, TWA, STEL	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		No data available	TLV, TWA, STEL	Canada. British Columbia OEL
		No data available	TLV, TWA, STEL	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants

Ventilation	Use 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.
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 incolore à jaune-
Odour	Inodore.
Odour threshold	Data not available
pH	Donnée non disponible.
Melting point / Freezing point	-18°C
Initial boiling point	203°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	0.91kPa
Vapour density	Data not available
Relative density	1.6g/ml à 20°C
Solubility	Miscible avec l'eau en toutes proportions (réaction exothermique).
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	Non-reactive under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Amines and alcohols cause exothermic reactions.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	Avoid excessive heat.
Incompatible material	Acids and acid anhydrides, acetonitrile, steel, alcohols, amines, antimony, strong bases, bismuth and its alloys, ketones, dimethyl sulfoxide, ethers, ferrous sulphate, glycols, halogens, combustible and organic materials, organophosphorus compounds, phosphinates, polyhydroxides, pyridine, sulfoxides, trichlorethylene and heat.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. Toxic vapors of hydrogen chloride.

SECTION 11 - TOXICOLOGICAL INFORMATION

PERCHLORIC ACID (70%)

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Severe irritation and burning may cause permanent eye damage.
- Skin	Severe irritation and tissue burn.
- Inhalation	Spasms, irritation and inflammation of the nose, throat and lungs. Edema of the larynx and bronchi. Chemical pneumonitis and pulmonary edema that can lead to death.
Acute toxicity (Ingestion)	Irritation and burning of the mouth, throat, esophagus, stomach and abdominal wall. Dysphagia, abdominal pain, cramps, diarrhea, melena, headache, vertigo, bloody nausea and vomiting, sweating, salivation, intense thirst, shock, circulatory collapse, unconsciousness, coma, and can lead to death.
Chronic exposure effects / symptoms	Burning sensation, dermatitis, conjunctivitis, lung and eye damage, chest pain, cough, dyspnoea, bronchitis, headache, dizziness, confusion, irritability, sweating, salivation, intense thirst, tremor, weakness, weight loss and loss of appetite, convulsions, nausea and vomiting.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 200-2000 mg/kg. LD50 Dermal - Data not available.
CL50 (specify species and route of entry)	LC50 - Inhalation - Data not available.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	Toxicity to daphnia and other aquatic invertebrates: Immobilization EC50 - Daphnia -> 100 mg / l - 48 h.
Persistence and degradability	Data not available.
Bioaccumulative potential	Data not available.
Mobility in soil	Data not available.
Other adverse effects	Avoid release to the environment. Neutralisation will not reduce ecotoxic effects.

SECTION 13 - DISPOSAL CONSIDERATIONS

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

SECTION 14 - TRANSPORT INFORMATION

UN Number	1873
UN Proper shipping name	ACIDE PERCHLORIQUE contenant plus de 50% (masse) mais au maximum 72% d'acide
Transport hazard class(es)	5.1 Oxidizing substances 8 Corrosive substances
Packing group	I
Limited quantity index	0kg
ERAP Index	1000
Special precautions	68

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Oxidizing liquids category 1 Acute toxicity - Oral category 4 Skin corrosion/irritation - Skin corrosion category 1A Serious eye damage/eye irritation - Serious eye damage category 1 Corrosive to metals-Category 1 Specific Target Organ Toxicity - Repeated exposure category 2 Specific target organ toxicity - Single exposure category 3
--------------	---

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: 11/26/2018