SAFETY DATA SHEET

SECTION 01 - IDENTIFICATION

Product Identifier	POTASSIUM TETRABORATE (TETRAHYDRATE)
Other identification (Chemical name, Commercial name, Synonymous)	TETRABORATE DE DIPOTASSIUM TETRAHYDRATE; DIPOTASSIUM TETRABORATE TETRAHYDRATE.
Product code	PC-0782
Chemical formula	$B_4K_2O_7 \cdot 4H_2O$
Molar weight	305.5
Recommended use and Restrictions on use	For laboratory, school, commercial or industrial use. Not for medical or household use. Do not use for medical, food or household purposes.
Supplier	LABORATOIRE MAT 610, rue Adanac Québec Québec G1C 7B7 418-660-8666 Mon-Fri 8h-16h www.labmat.com labmat@labmat.com
Emergency phone	418-660-8666 Mon-Fri 8h-16h CENTRE ANTI-POISON DU QUÉBEC 800-463-5060
Date SDS	2026-06-30

SECTION 02 - HAZARDS IDENTIFICATION

WHIMS CANADA	- Reproductive toxicity - category 2
PICTOGRAMS	
Signal Word	ATTENTION
Hazards statements (H)	- Suspected of damaging fertility or the unborn child
Precautionary statements (P)	- Obtain special instructions before use. - Do not handle until all safety precautions have been read and understood. - Wear protective gloves (nitrile, butyl, neoprene), protective clothing and eye and face protection. - IF exposed or if you feel unwell: Call a POISON CENTER or a physician. - Store locked up. - Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company.
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)

Health	1
Fire	0
Reactivity	0
Special danger	

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Component	No. CAS	% Weight
POTASSIUM TETRABORATE (TETRAHYDRATE)	12045-78-2	<=100%

SECTION 04 - FIRST AID MEASURE

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 contaminated 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. Never give anything by mouth to an unconscious person. Consult a physician.

Most important symptoms and effects (acute and delayed) Main symptoms of high exposure: Skin, eye and respiratory system irritation. 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

Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media Data not available.

Combustion products Hazardous combustion products formed under fire conditions: Boron oxides.

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

Personal precautions, protective equipment and emergency measures Evacuate personnel to safe areas. When handling, wear appropriate safety equipment (reference Section 8 for protective equipment to be used). Ensure a good ventilation. Use NIOSH cartridge respiratory protection if necessary or for larger spills. Cut off all sources of ignition. Avoid dust formation. Avoid breathing dust.

Methods and materials for containment and cleaning up Pick up with a shovel or broom, taking care not to scatter dust. Dispose of residues in a container for disposal of hazardous materials. When handling, wear suitable safety equipment. Discharge into the environment must be avoided.

SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage Store in a cool, dry, and well-ventilated place. Keep container tightly closed and store away from heat, water, moisture, and incompatible products (ref. section 10).

Methods of handling Avoid contact withh eyes, skin and clothing. Avoid ingestion and inhalation. Wear personal protective equipment (ref. section 8) when handling. Always ensure good ventilation. Apply the usual standard hygiene rules: Wash your hands after use. Do not eat or drink during use. Avoid the formation of dust.

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

WORKPLACE CONTROL PARAMETERS

Component	CAS-No.	Value
POTASSIUM TETRABORATE (TETRAHYDRATE)	12045-78-2	No occupational exposure limits established by region-specific regulators - Quebec, Alberta, Ontario, British Columbia.

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 protective gloves. Suggested material: Nitrile. Butyl. 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 Use safety shoes.

Clothes 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 Use fan. 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	Solid.
Color	White.
Odour	Odorless.
Odour threshold	Data not available
Melting point and freezing point	850 °C.
Boiling point	Data not available.
Flammability	Data not available.
Lower flammable / Explosive limit	Data not available.
Upper flammable / Explosive limit	Data not available.
Flash point	Data not available.
Auto-ignition temperature	Data not available.
Decomposition temperature	Data not available.
pH	9.2-9.3, 0.1-5% aq.sol.
Kinematic viscosity	Not applicable.
Solubility	Soluble in water.
Partition coefficient water/n-octanol	Data not available.
Vapour pressure	Data not available.
Relative density	1,92 g/ml at 20 °C.
Vapour density	Data not available.
Particle characteristics	Crystal powder.

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	May react violently with incompatible substances.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	May react violently with incompatible substances.
Conditions to avoid	Avoid moisture. Avoid contact with incompatible materials and extreme temperatures.
Incompatible materials	Strong acids. Acid anhydrides. Strong reducers.
Hazardous decomposition products	Boron oxides.

SECTION 11 - TOXICOLOGICAL INFORMATION

POTASSIUM TETRABORATE (TETRAHYDRATE)

Routes of exposure	Ingestion, inhalation, skin and eye contact.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
- Skin	Irritation. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
- Inhalation	May irritate the respiratory system. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
Acute toxicity (Ingestion)	To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
Chronic exposure effects / symptoms	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)	LC50 Inhalation - Data not available.

SECTION 12 - ECOLOGICAL INFORMATION

POTASSIUM TETRABORATE (TETRAHYDRATE)

Ecotoxicity	Data not available.
Persistence and degradability	Data not available.
Bioaccumulative potential	Data not available.
Mobility in soil	Data not available.
Other adverse effects	Data not available.

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

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA - Reproductive toxicity - category 2

SECTION 16 - OTHER INFORMATION

CNESST: Commission des normes, de l'équité et de la santé et sécurité au travail
NIH: National institute of health (U.S. Naltional Library of Medecine)
ECHA: Agence Européenne de Chimie
ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
VECD: Valeur d'exposition courte durée
VEMP: Valeur d'exposition moyenne pondérée
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TLV : Threshold limit value
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling
RSST: Règlement sur la santé et sécurité au travail (Québec)
INRS: l'Institut national de recherche et de sécurité pour la prévention des accidents du travail et des maladies professionnelles (France)

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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