



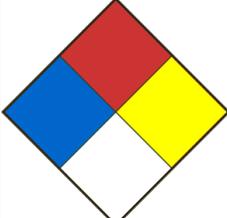
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SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier CADMIUM NITRATE TETRAHYDRATE		Product Use Laboratory use	
Chemical formula Cd(NO ₃) ₂ ·4H ₂ O		Product code CP-0102	Molar weight 308,47
Chemical name / Commercial name / Synonymous CADMIUM NITRATE TETRAHYDRATE, CADMIUM (II) NITRATE TETRAHYDRATE, CADMIUM NITRATE 4-HYDRATE, DINITRATE DE CADMIUM TÉTRAHYDRATE, NITRIC ACID CADMIUM SALT TETRAHYDRATE			
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 10/23/2020	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	<p>Germ cell mutagenicity category 1A</p> <p>Carcinogenicity category 1A</p> <p>Reproductive toxicity category 1B</p> <p>Specific Target Organ Toxicity - Repeated exposure category 1</p> <p>Acute toxicity - Oral category 3</p> <p>Acute toxicity - Dermal category 4</p> <p>Acute toxicity - Inhalation category 2</p>
Signal Word	<p>DANGER</p>
Hazards statements (H)	<p>H301 Toxic if swallowed.</p> <p>H312 Harmful in contact with skin.</p> <p>H330 Fatal if inhaled.</p> <p>H340 May cause genetic defects.</p> <p>H350 May cause cancer.</p> <p>H360 May damage fertility or the unborn child.</p> <p>H372 Causes damage to organs through prolonged or repeated exposure.</p>
Precautionary statements (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>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>P270 Do not eat, drink or smoke when using this product.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P284 Wear respiratory protection.</p> <p>P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</p> <p>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P308 + P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P310 Immediately call a POISON CENTER or doctor/physician.</p> <p>P312 Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P314 Get medical advice/attention if you feel unwell.</p> <p>P320 Specific treatment is urgent (see section 4 on this SDS on this label).</p> <p>P321 Specific treatment (see section 4 of the SDS and on this label).</p> <p>P330 Rinse mouth.</p> <p>P362 + P364 Take off contaminated clothing and wash it before reuse.</p> <p>P403 + P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company.</p>
PICTOGRAMS	
Other dangers	<p>NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Significant; 4=Extreme)</p>
	<p>Health 4</p> <p>Fire 1</p> <p>Reactivity 2</p> <p>Special danger</p>

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Nitrate de cadmium tétrahydrate	10022-68-1	<=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	Give plenty of water to drink. Induce vomiting. 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: Eyes irritation. Headaches. Nausea and vomiting. Gastrointestinal disorders. Kidney damage. Liver damage. Cough. Pneumonia. 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	Not flammable or combustible. Risk of fire or explosion if heated or crushed in presence of combustible products.
Suitable extinguishing media	Use water to extinguish the fire
Unsuitable extinguishing media	Do not use dry chemicals or foam. CO2 or halon can provide limited control.
Hazardous combustion products	Hazardous combustion products formed under fire conditions: - Nitrogen oxides (NOx), Cadmium/cadmium oxides
Special fire and explosion hazards	Contact with combustible and organic products may cause fire. 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. Ensure adequate ventilation. Avoid breathing dust. Use personal protective equipment. Pick up with a shovel or broom, taking care not to scatter dust. Clean and rinse with water. Dispose of residues in a container provided for the disposal of hazardous materials. Do not let product enter drains.
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SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Store in a well-ventilated area. Store in a cool, dry place. Keep container tightly closed and store away from heat, water, moisture, and incompatible products. Do not store near combustible materials. Hygroscopic.
Methods of handling	Avoid contact with the skin, eyes and clothes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust or vapor is formed. Avoid ingestion and inhalation. Wear personal protective equipment when handling. Always ensure good ventilation. Transport according to TDG (ref Section 14)

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Cadmium nitrate tetrahydrate	10022-68-1	TWA	0.002000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks				
		TWA	0.025000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		Carcinogenic effect suspected in humans		
		TWAEV	0.010000 mg/m3	Canada. Ontario OELs Code (table 2: OEL)
		TWAEV	0.002000 mg/m3	Canada. Ontario OELs
		TWA	0.010000 mg/m3	Canada. British Columbia OEL
		ACGIH 'A2' applies to those substances that are considered suspected human carcinogens. IARC '1' applies to substances categorized as carcinogenic to humans, and used when there is sufficient evidence of carcinogenicity in humans.		
		TWA	0.002000 mg/m3	Canada. British Columbia OEL
		ACGIH 'A2' applies to those substances that are considered suspected human carcinogens. IARC '1' applies to substances categorized as carcinogenic to humans, and used when there is sufficient evidence of carcinogenicity in humans.		
		TWA 0.002000 mg/m3 USA. ACGIH Threshold Limit Values (TLV)		
		Suspected human carcinogen		
		TWAEV	0.025000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		A substance to which exposure must be reduced to a minimum in accordance with section 42 Carcinogenic effect suspected in humans		
		TWAEV	0.025 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		A substance to which exposure must be reduced to a minimum in accordance with section 42 Carcinogenic effect suspected in humans		
		TWAEV	0.010000 mg/m3	Canada. Ontario OELs
		TWAEV	0.002000 mg/m3	Canada. Ontario OELs
		TWA	0.010000 mg/m3	Canada. British Columbia OEL
		IARC '1' applies to substances categorized as carcinogenic to humans, and used when there is sufficient evidence of carcinogenicity in humans. ACGIH 'A2' applies to those substances that are considered suspected human carcinogens.		
		TWA	0.002000 mg/m3	Canada. British Columbia OEL
		IARC '1' applies to substances categorized as carcinogenic to humans, and used when there is sufficient evidence of carcinogenicity in humans. ACGIH 'A2' applies to those substances that are considered suspected human carcinogens.		
		TWA	0.002000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		Suspected Human Carcinogen (means that the human data are accepted as adequate in quality but are conflicting or insufficient to classify the agent as A1)		
		TWA	0.002000	Canada. Alberta, Occupational Health and Safety
		TWA	0.01 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		TWA	0.010000	USA. ACGIH Threshold Limit Values (TLV)

			mg/m ³	
		TWA	0.002 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
		TWA	0.002000 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)

Data source	Sigma-Aldrich.
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	Use 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	Solid.
Appearance	Poudre cristalline blanche.
Odour	inodore.
Odour threshold	Data not available
pH	3.9 (solution aqueuse 50%).
Melting point / Freezing point	59.5°C
Initial boiling point	132°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
Vapour density	Data not available
Relative density	2.45g/cm ³
Solubility	Très soluble dans l'eau. Soluble dans l'alcool, l'acétone et l'acétate d'éthyle.
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. Oxidizer: risk of fire in case of contact with combustible / organic substance.
Chemical stability	Stable under recommended storage conditions. Hygroscopic.
Possibility of hazardous reactions	Oxidizer. Risk of fire or explosion if heated or crushed in presence of combustible or organic products. May react violently with incompatible substances.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	Avoid heat and excessive moisture.
Incompatible material	Strong reducing agents (potassium, sodium, metal hydrides), copper and its alloys, phosphorus, combustible and organic products, heat and humidity. Mixtures of metallic / non-metallic nitrates with alkyl esters can explode due to the formation of alkyl nitrates; mixtures of a nitrate with phosphorus, tin (II) chloride or other reducing agents can react explosively.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NO _x), Cadmium/cadmium oxides

CADMIUM NITRATE TETRAHYDRATE

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Severe irritation and may result in inflammation of the conjunctiva.
- Skin	Irritation and dermatitis. NOTE: Contact of the product on moist or moist skin can cause burns. May be harmful if absorbed through skin.
- 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. May be fatal if it gets into the airways.
Acute toxicity (Ingestion)	Toxic if swallowed. Irritation and burning of the mucous membranes. Dysphagia, kidney damage, abdominal pain, cramps, diarrhea, melena, headache, dizziness, sweating, salivation, nausea and vomiting, convulsions, cardiac arrest, coma and can lead to death. Liver damage.
Chronic exposure effects / symptoms	Is recognized as a carcinogen (class 1) by IARC. Burning sensation, dermatitis, conjunctivitis, nervous disorders, lung and kidney damage, chest pain, cough, dyspnoea, laryngitis, headache, dizziness, confusion, irritability, sweating, salivation, fatigue, weight loss and loss appetite, nausea and vomiting. May cause reproductive system problems. May harm fertility Liver and kidney damage. Acute pulmonary edema can develop in 24 hours and reaches a maximum of three days.the first chronic effect of cadmium exposure is usually kidney damage, manifested by excessive protein excretion in the urine, followed by anemia, tooth discoloration and loss of odour. Cadmium is also believed to cause pulmonary emphysema and bone disease.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 300 mg/kg LD50 Dermal - Data not available.
CL50 (specify species and route of entry)	LC50 - Inhalation - Data not available.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	CL50-Ictalurus punctatus (poisson -chat) - 4.48 mg/L - 96 h EC50 - Daphnia magna (Water flea) - 0.048 mg/L - 48 h - static test.
Persistence and degradability	The methods for determining the biological degradability are not applicable to inorganic substances.
Bioaccumulative potential	Bioaccumulation 21 d Bioconcentration factor (BCF): 960 Remarks: Can accumulate in aquatic organisms.
Mobility in soil	Soluble in water. Probable mobility in the environment due to its solubility in water.
Other adverse effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting 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	2570
UN Proper shipping name	COMPOSÉ DU CADMIUM (Nitrate de cadmium tétrahydrate)
Transport hazard class(es)	6.1 Toxic substances
Packing group	II
Limited quantity index	0,5kg
ERAP Index	-
Special precautions	16

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Germ cell mutagenicity category 1A Carcinogenicity category 1A Reproductive toxicity category 1B Specific Target Organ Toxicity - Repeated exposure category 1 Acute toxicity - Oral category 3 Acute toxicity - Dermal category 4 Acute toxicity - Inhalation category 2
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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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