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SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier AMMONIUM DICHROMATE		Product Use Laboratory use	
Chemical formula (NH ₄) ₂ Cr ₂ O ₇		Product code AR-0137	Molar weight 252,07
Chemical name / Commercial name / Synonymous AMMONIUM DICHROMATE, DICHROMATE (VI) D'AMMONIUM			
Supplier's name Laboratoire MAT		Address-Street 610, Adanac Street	
City Québec		Province Québec	
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Emergency phone	CANUTEC: 613-996-6666		CENTRE ANTI-POISON DU QUÉBEC 800-463-5060
Date SDS 9/10/2020	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	<p>Skin corrosion/irritation - Skin irritation category 2</p> <p>Oxidizing solids category 2</p> <p>Respiratory or skin sensitization - Respiratory sensitizer category 1</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 2</p> <p>Acute toxicity - Dermal category 4</p> <p>Acute toxicity - Inhalation category 2</p> <p>Respiratory or skin sensitization - Skin sensitize category 1A</p> <p>Germ cell mutagenicity category 2</p> <p>Serious eye damage/eye irritation - Eye irritation category 2</p>
Signal Word	<p>DANGER</p>
Hazards statements (H)	<p>H272 May intensify fire; oxidiser.</p> <p>H300 Fatal if swallowed.</p> <p>H312 Harmful in contact with skin.</p> <p>H315 Causes skin irritation.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H319 Causes serious eye irritation.</p> <p>H330 Fatal if inhaled.</p> <p>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.</p> <p>H341 Suspected of causing 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>P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.</p> <p>P220 Keep/Store away from clothing and combustible materials.</p> <p>P260 Do not breathe dust / fume / gas / mist / vapours / spray.</p> <p>P261 Avoid breathing dust / fume / gas / mist / vapours / spray.</p> <p>P264 Wash the areas of the body that have been in contact with the product after handling.</p> <p>P270 Do no eat, drink or smoke when using this product.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</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>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>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>

	P332 + P313 If skin irritation occurs: Get medical advice/attention. P333 + P313 If skin irritation or rash occurs: Get medical advice/attention. P337 + P313 If eye irritation persists: Get medical advice/attention. P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. P362 + P364 Take off contaminated clothing and wash it before reuse. P370 + P378 In case of fire: Use water for extinction. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company.
PICTOGRAMS	
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)
	Health 3 Fire 1 Reactivity 3 Special danger OX

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Dichromate d'ammonium	7789-09-5	<=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	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	May cause fire on contact with organic material. Risk of fire or explosion if heated or milled in the presence of combustible or organic products.
Suitable extinguishing media	Use water to extinguish the fire
Unsuitable extinguishing media	Data not available.
Hazardous combustion / decomposition products	Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NO _x), Chromium oxides Ammonia.
Special fire and explosion hazards	Strong oxidizer, contact with combustible material can cause fire or explosion if heated or crushed in presence of organic products. Containers may explode when heated. 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 / Personnel precautions, protective equipment	Evacuate personnel to safe areas. Pick up with a shovel or broom, taking care not to scatter dust. Avoid dust formation. Avoid breathing dust. Dilute residues with water, clean and rinse. Ensure a good ventilation of the premises. When handling, wear appropriate safety equipment. Use a respirator as needed. 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 cool, dry place. Keep container tightly closed and store away from heat, moisture, combustible and organic products. Avoid storing on a wooden floor. Keep container tightly closed in a dry and well-ventilated place. Do not grind or subject to friction or shock. Isolated storage is required.
Methods of handling	Bottle in the glass preferably. Always open containers slowly to allow any excess pressure to vent. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust or vapor is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition. 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
Ammonium dichromate	7789-09-5			Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	0.050000 mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Confirmed Human Carcinogen (means that the agent is carcinogenic to humans)			
		TWAEV	0.050000 mg/m ³	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 A substance to which exposure must be reduced to a minimum in accordance with section 42 Sensitizer Carcinogenic effect detected in humans			
		TWA	0.025000 mg/m ³	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 'A1' applies to those substances confirmed as human carcinogens based on the weight of evidence from epidemiological studies			
		C	0.100000 mg/m ³	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 'A1' applies to those substances confirmed as human carcinogens based on the weight of evidence from epidemiological studies			
				Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	0.05 mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Confirmed Human Carcinogen (means that the agent is carcinogenic to humans)			
	TWAEV 0.05 mg/m ³ 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 A substance to which exposure must be reduced to a minimum in accordance with section 42 Sensitizer Carcinogenic effect detected in humans			
		TWA	0.025 mg/m ³	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 'A1' applies to those substances confirmed as human carcinogens based on the weight of evidence from epidemiological studies			
		C	0.1 mg/m ³	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 'A1' applies to those substances confirmed as human carcinogens based on the weight of evidence from epidemiological studies			
		TWA	0.050000 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
		TWA	0.05 mg/m ³	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 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. 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 mechanical exhaust or laboratory fumehood to avoid exposure.

SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid.
Appearance	Cristaux oranges à rouges.
Odour	Inodore.
Odour threshold	Data not available
pH	Solution aqueuse 10% = pH 3.45.
Melting point / Freezing point	170°C (dec)
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
Vapour density	Data not available
Relative density	2.15g/cm ³
Solubility	Très soluble dans l'eau (356 g/L à 20°C). Soluble dans l'alcool.
Partition coefficient water/n-octanol	Data not available
Auto-ignition temperature	218°C
Decomposition temperature	170-180°C
Viscosity	Data not available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Oxidizer: risk of fire in case of contact with combustible / organic substance.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Oxidizer.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	Avoid excessive heat and confinement.
Incompatible material	Strong reducing agents (potassium, sodium, metal hydrides), strong acids, alcohols, hydrazine and its hydrates, hydroxylamine and its salts, easily oxidizable materials, mercuric cyanide, combustible and organic products, sodium nitrite, heat and humidity.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NOx), Chromium oxides Ammonia.

SECTION 11 - TOXICOLOGICAL INFORMATION

AMMONIUM DICHROMATE

Routes of exposure	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. Exposed areas of the skin, including the fingers, the back of the hand and the forearms may present small ulcerations ("chrome sori").
- Inhalation	Irritation of the mucous membranes and respiratory tract. Nervous disorders, chest pain, cough, dyspnea, pharyngitis, headache, dizziness, fever, sweating, salivation, nausea and vomiting.
Acute toxicity (Ingestion)	Severe irritation of the digestive tract. Dysphagia, abdominal pain, haemorrhagic enteritis, cramps, diarrhea, melena, intense thirst, nausea and vomiting, tubular nephritis and possible hepatotoxicity, convulsions, circulatory collapse, unconsciousness, coma and can lead to death.
Chronic exposure effects / symptoms	Burning sensation, dermatitis, conjunctivitis, skin reactions (chromium sori), liver and kidney damage, chest pain, cough, dyspnoea, laryngitis, pharyngitis, headache, dizziness, ulceration and perforation of the nasal septum, discolouration teeth, metallic taste in the mouth, fatigue, digestive disorders (inflammation and ulceration of the gastrointestinal tract), weight loss and loss of appetite, convulsions, nausea and vomiting. Prolonged exposure to this product is likely to cause cancer.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 53 mg/kg LD50 Dermal - Rabbit - 1860 mg/kg.
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 4 h - 160 ppm

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	Toxicity to freshwater fish: LC50 - Gambusia affinis (Mosquito fish) - 136 mg/L - 96h.
Persistence and degradability	May persist based on information provided.
Bioaccumulative potential	Data not available.
Mobility in soil	Probable mobility in the environment due to its solubility in water.
Other adverse effects	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. All littering must be avoided in the environment.

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	1439
UN Proper shipping name	DICHROMATE D'AMMONIUM
Transport hazard class(es)	5.1 Oxidizing substances
Packing group	II
Limited quantity index	1kg
ERAP Index	-
Special precautions	-

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Skin corrosion/irritation - Skin irritation category 2 Oxidizing solids category 2 Respiratory or skin sensitization - Respiratory sensitizer category 1 Carcinogenicity category 1A Reproductive toxicity category 1B Specific Target Organ Toxicity - Repeated exposure category 1 Acute toxicity - Oral category 2 Acute toxicity - Dermal category 4 Acute toxicity - Inhalation category 2 Respiratory or skin sensitization - Skin sensitize category 1A Germ cell mutagenicity category 2 Serious eye damage/eye irritation - Eye irritation 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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