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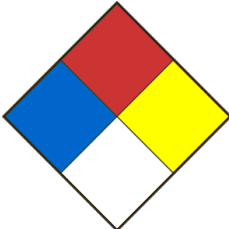
SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier CHROMIUM(VI) OXIDE		Product Use Laboratory use	
Chemical formula CrO ₃		Product code CP-0119; CR-0147; CR-0922	Molar weight 99,99
Chemical name / Commercial name / Synonymous CHROMIUM (VI) OXIDE, OXYDE DE CHROME (VI), ANHYDRIDE CHROMIQUE, TRIOXYDE DE CHROME ANHYDRE, MONOCHROMIUM OXIDE, MONOCHROMIUM TRIOXIDE, CHROMIC ANHYDRIDE			
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 6/2/2020	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	Oxidizing solids category 1 Skin corrosion/irritation - Skin corrosion category 1A Serious eye damage/eye irritation - Serious eye damage category 1 Acute toxicity - Oral category 3 Acute toxicity - Dermal category 3 Acute toxicity - Inhalation category 2 Respiratory or skin sensitization - Respiratory sensitizer category 1 Germ cell mutagenicity category 1A Respiratory or skin sensitization - Skin sensitize category 1 Carcinogenicity category 1A Reproductive toxicity category 2 Specific Target Organ Toxicity - Repeated exposure category 1	
Signal Word	DANGER	
Hazards statements (H)	H271 May cause fire or explosion; strong oxidiser. H301 Toxic if swallowed. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H330 Fatal if inhaled. H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H340 May cause genetic defects. H350 May cause cancer. H361 Suspected of damaging fertility or the unborn child. H372 Causes damage to organs through prolonged or repeated exposure.	
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. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection. P283 Wear fire/flammable resistant/retardant clothing. 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): 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. P312 Call a POISON CENTER or doctor/physician if you feel unwell. 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. P370 + P378 In case of fire: Use dry sand, a chemical powder, or an anti-alcoholic foam for extinction. P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P420 Store away from other materials. P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company. P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing dust / fume / gas / mist / vapours / spray. P272 Contaminated work clothing should not be allowed out of the workplace. P308 + P313 IF exposed or concerned: Get medical advice/attention. P333 + P313 If skin irritation or rash occurs: 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. P314 Get medical advice/attention if you feel unwell.
PICTOGRAMS	
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)
	Health 4 Fire 0 Reactivity 1 Special danger OX

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Trioxyde de chrome (VI)	1333-82-0	<=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	Do NOT induce vomiting. If the person is conscious, rinse the mouth with water. 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	Not flammable or combustible.
Suitable extinguishing media	Dry chemical powder, dry sand, alcohol resistant foam.
Unsuitable extinguishing media	Data not available.
Hazardous combustion / decomposition products	Hazardous decomposition products formed under fire conditions. - Chromium oxides
Special fire and explosion hazards	May react violently with incompatible products (Ref Section 10). Chromium trioxide may react violently with: acetaldehyde, acetone, acetylene, acetic acid (if heated), alcohols, acetic anhydride (if heated), ammonia, arsenic, benzaldehyde, benzene, benzylthylaniline, bromine pentafluoride, butanol, butyraldehyde, butyric acid (above 100 ° C), chlorine trifluoride, cyclohexanol, N, N dimethylformamide, ether, ethyl acetate, glycerin, ethylene glycol, hydrazine, hydrogen sulphide, methanol, methyl dioxane, phosphorus, potassium, potassium ferricyanide, 2-propanol, propionaldehyde, pyridine, selenium, sodium and sulfur.
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. Use personal protective equipment. Pick up with a shovel or broom, taking care not to scatter dust. Dispose of residues in a container provided for the disposal of hazardous materials. Do not let product enter drains. Discharge into the environment must be avoided.
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SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Keep container tightly closed in a dry and well-ventilated place. Store in cool place. Hygroscopic. Heat sensitive.
Methods of handling	Bottle in the glass only. 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. Use a hood preferably. Keep away from sources of ignition - No smoking.

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Chromium trioxide	1333-82-0			Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	0.050000 mg/m3	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/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 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/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 'A1' applies to those substances confirmed as human carcinogens based on the weight of evidence from epidemiological studies			
		C	0.100000 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 '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/m3	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/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 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/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 'A1' applies to those substances confirmed as human carcinogens based on the weight of evidence from epidemiological studies			
		C	0.1 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 'A1' applies to those substances confirmed as human carcinogens based on the weight of evidence from epidemiological studies			
		TWA	0.050000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		TWA	0.05 mg/m3	USA. ACGIH Threshold Limit Values (TLV)

Data source	Sigma-Aldrich.
Ventilation	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	Cristalline violet-rougeâtre.
Odour	inodore.
Odour threshold	Data not available
pH	Solution aqueuse à 25% = pH 0.6.
Melting point / Freezing point	195°C
Initial boiling point	250°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	2.7g/cm ³
Solubility	Très soluble dans l'eau. Soluble dans l'éthyl alcool, dans l'acide sulfurique et l'acide nitrique..
Partition coefficient water/n-octanol	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	198°C
Viscosity	Data not available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Non-reactive under normal conditions.
Chemical stability	Stable under recommended storage conditions. Hygroscopic.
Possibility of hazardous reactions	Stable under normal conditions.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	This product quickly absorbs moisture from the air. Avoid excessive heat.
Incompatible material	Acetone, strong reducing agents (potassium, sodium, hydrides of metals), alcohols, ammonia, acetic anhydride, bromides, chlorides, N, N-dimethylformamide, ether, ethylbenzylamine, glycerine, hydrazine, hydrogen sulphide, iodides, easily oxidizable materials, alkali metals, phosphorus, potassium ferricyanide, combustible and organic products, pyridine, sulfur, sulphites, sulphides, heat and humidity.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Chromium oxides

SECTION 11 - TOXICOLOGICAL INFORMATION

CHROMIUM(VI) OXIDE

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. Exposed areas of the skin, including the fingers, the back of the hand and the forearms may present small ulcerations ("chrome sori").
- 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 and abdominal wall. Dysphagia, abdominal pain, gastrointestinal bleeding, cramps, diarrhea, headache, dizziness, sweating, salivation, intense thirst, tubular nephritis and possible hepatotoxicity, convulsions, circulatory collapse, unconsciousness, coma and can lead to death.
Chronic exposure effects / symptoms	Is recognized as a carcinogen (class 1) by IARC. Burn injury, dermatitis, conjunctivitis, skin reactions (chromium sori), liver, kidney and lung damage, chest pain, cough, dyspnea, laryngitis, headache, dizziness, ulceration and perforation of the nasal septum, metallic taste in the mouth, sweating, salivation, fatigue, digestive disorders (inflammation and ulceration of the gastrointestinal tract), weight loss and loss of appetite, seizures, nausea and vomiting. May cause disorders of the reproductive system.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 52 mg/kg. LD50 Dermal - Rabbit - Male et female. 57 mg/kg.
CL50 (specify species and route of entry)	CL50 inhalation - Rat 0.217 mg/L - 4 h.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	CL50 - Tilapia mossambica - 141.38 mg/L - 96 h. LC50 - Leuciscus idus (Golden orfe) - 100 mg/L - 48 h EC50 - Daphnia magna (Water flea) - 0.8 mg/L - 48 h .
Persistence and degradability	Soluble in water. Persistence is unlikely based on information available.
Bioaccumulative potential	Data not available.
Mobility in soil	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. 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	1463
UN Proper shipping name	TRIOXYDE DE CHROME ANHYDRE
Transport hazard class(es)	5.1 Oxidizing substances 6.1 Toxic substances 8 Corrosive substances
Packing group	II
Limited quantity index	1kg
ERAP Index	-
Special precautions	-

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Oxidizing solids category 1 Skin corrosion/irritation - Skin corrosion category 1A Serious eye damage/eye irritation - Serious eye damage category 1 Acute toxicity - Oral category 3 Acute toxicity - Dermal category 3 Acute toxicity - Inhalation category 2 Respiratory or skin sensitization - Respiratory sensitizer category 1 Germ cell mutagenicity category 1A Respiratory or skin sensitization - Skin sensitize category 1 Carcinogenicity category 1A Reproductive toxicity category 2 Specific Target Organ Toxicity - Repeated exposure 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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