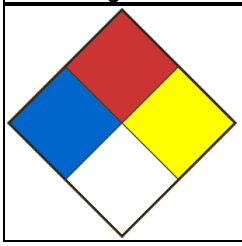
Centre Anti-Poison pour le Québec: (800) 463-5060
Tél. (Qc): (418) 660-8666 / 800-890-8666
Fax. (Qc): (418) 660-8998

SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier FERROUS SULFATE		**Product Use** Laboratory use	
Chemical formula $FeSO_4.7H_2O$		**Product code** FR-0102 ; FP-0103	**Molar weight** 278,02
Chemical name / Commercial name / Synonymous SULFATE DE FER (II) HEPTAHYDRATE, FERROUS SULFATE HEPTAHYDRATE, COPPERAS, IRON VITRIOL, SAL CHALYBIS, VITRIOL VERT			
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 9/6/2018	**SDS Prepared by** Laboratoire MAT	**E-Mail** labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	Acute toxicity - Oral category 4 Skin corrosion/irritation - Skin irritation category 2 Serious eye damage/eye irritation - Eye irritation category 1A
Signal Word	WARNING
Hazards statements (H)	H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation.
Precautionary statements (P)	P264 Wash the areas of the body that have been in contact with the product after handling. P270 Do no eat, drink or smoke when using this product. P280 Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P321 Specific treatment (see section 4 of the SDS and on this label). P330 Rinse mouth. P332 + P313 If skin irritation occurs: Get medical advice/attention. P337 + P313 If eye irritation persists: Get medical advice/attention. P362 + P364 Take off contaminated clothing and wash it before reuse. 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.
PICTOGRAMS	
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Significant; 4=Extreme)
	**Health** 1 **Fire** 0 **Reactivity** 0 **Special danger**

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Sulfate ferreux heptahydrate	7782-63-0	>97

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	If breathing is difficult, give oxygen. If breathed in, move person into fresh air. If not breathing, give artificial respiration. 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)	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	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	Not applicable.
Dangerous fumes - combustion	Sulfur oxides. Iron oxides.
Hazardous combustion products	Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Iron oxides.
Special fire and explosion hazards	Ferrous sulphate mixed with sodium nitrate and arsenic oxide can ignite spontaneously. Addition of a small amount of ferrous sulfate to methyl isocyanoacetate may produce explosive decomposition at 25 ° C. 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 / Personnal precautions, protective equipment	Ensure adequate ventilation. Evacuate personnel to safe areas. 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.

SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Hygroscopic. Air-, heat-, and moisture-sensitive. Store in a cool, dry place. Keep container tightly closed and store away from heat, moisture, and incompatible products. Keep container tightly closed in a dry and well-ventilated place. Store under inert gas.
Methods of handling	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. 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
Ferrous sulfate heptahydrate	7782-63-0	TWA	1.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		TWAEV	1.000000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWAEV	1.000000 mg/m3	Canada. Ontario OELs
		TWA	1.000000 mg/m3	Canada. British Columbia OEL
		STEL	2.000000 mg/m3	Canada. British Columbia OEL
		TWA	1 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		TWAEV	1 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	1 mg/m3	Canada. British Columbia OEL
		STEL	2 mg/m3	Canada. British Columbia OEL
		TWA	1.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		TWA	1 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 googles 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	Solid.
Appearance	Poudre bleue-verte-
Odour	Inodore.
Odour threshold	Data not available
pH	Solution aqueuse à 10% = pH 3.7.
Melting point / Freezing point	64°C
Initial boiling point	300°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	14.6 mm @ 25°CmmHg
Vapour density	Data not available
Relative density	1.898g/cm^3
Solubility	Soluble dans l'eau. Insoluble dans l'alcool.
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	Stable under normal conditions.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	In the presence of moisture, this product oxidizes to ferric sulphate.
Incompatible material	Ferrous sulphate reacts with strong oxidizing agents (nitric acid, perchloric acid, peroxides, chlorates and perchlorates), tannic acid, alkalis, carbonates, infusions and vegetable decoctions, isocyanoacetate methyl, gold and silver salts, lead acetate, potassium iodide, potassium tartrate, sodium borate, sodium tartrate and moisture.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Iron oxides.

SECTION 11 - TOXICOLOGICAL INFORMATION

FERROUS SULFATE

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation and may cause inflammation of the conjunctiva.
- Skin	Irritation and dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Nervous disorders, chest pain, cough, dyspnea, headache, dizziness, sweating, salivation, nausea and vomiting.
Acute toxicity (Ingestion)	Irritation and inflammation of the mucous membranes. Abdominal pain, liver damage, cramps, diarrhea, headache, dizziness, acidosis, sweating, salivation, tachycardia, seizures, nausea and vomiting. NOTE: Ingestion of less than 5 grams, especially in children, may result in bloody diarrhea and vomiting, liver problems, tachycardia, severe dehydration and even peripheral vascular collapse which may be fatal.
Chronic exposure effects / symptoms	Burning sensation, dermatitis, conjunctivitis, nervous disorders, chest pain, cough, dyspnea, laryngitis, headache, dizziness, confusion, irritability, sweating, salivation, paleness, weakness, nausea and vomiting.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 591 mg/kg LD50 Dermal - Rat - 1632 mg/kg
CL50 (specify species and route of entry)	Data not available.

SECTION 12 - ECOLOGICAL INFORMATION

Data not available

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	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	Acute toxicity - Oral category 4 Skin corrosion/irritation - Skin irritation category 2 Serious eye damage/eye irritation - Eye irritation category 1A

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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