



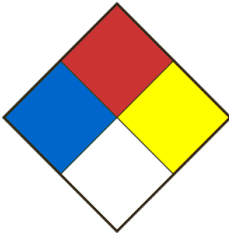
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SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier FILLING SOLUTION (KCl/AgCl)		Product Use Laboratory use	
Chemical formula -		Product code ES-0935	Molar weight
Chemical name / Commercial name / Synonymous SOLUTION DE REMPLISSAGE D'ÉLECTRODE (KCl/AgCl), FILLING SOLUTION (KCl/AgCl)			
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 10/20/2021	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	Not a hazardous substance according to WHMIS 2015
Signal Word	
Hazards statements (H)	LMH001 Not a dangerous substance or mixture according to the Canada WHIMS 2015.
Precautionary statements (P)	LMP001 The use of this product does not present any particular risk. However, standard laboratory safety precautions such as wearing gloves, clothing and eye protection should be followed.
PICTOGRAMS	
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)
	Health 0 Fire 0 Reactivity 0 Special danger

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Chlorure de potassium	7447-40-7	26
Chlorure d'argent	7783-90-6	0.15
Acide chlorhydrique	7647-01-0	0.05

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 breathed in, move person into 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)	Main symptoms of high exposure: Skin, eye and respiratory system irritation. Ref. section 11. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
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.
Hazardous combustion products	Hazardous combustion products formed under fire conditions: - Potassium oxides. Hydrogen chloride gas. - Silver/silver oxides
Special fire and explosion hazards	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. Absorb the product with sand or vermiculite. Dilute residues with water, clean and rinse. Ensure a good ventilation of the premises. Dispose of residues in a container for disposal of hazardous materials. When handling, wear suitable safety equipment. Use breathing apparatus if necessary.
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SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Keep in a dry place. Store in a well-ventilated area. Keep container tightly closed and store away from heat, moisture and incompatible products.
Methods of handling	Avoid ingestion and inhalation. Always open containers slowly to allow any excess pressure to vent. 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.	Control	Value	Basis
Potassium chloride	7447-40-7	TWA	10mg/m3 total dust	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
SILVER CHLORIDE	7758-11-4	TWA	0.01 mg/m3	Canada. British Columbia OEL
Remark				
		STEL	0.03 mg/m3	Canada. British Columbia OEL

Components	CAS-No.	Value	Control parameters	Basis
Hydrochloric acid	7647-01-0	(c)	2.000000 ppm 3.000000 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			
		C	2.000000 ppm	Canada. British Columbia OEL
		C	5.000000 ppm 7.500000 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			
		(c)	2 ppm 3 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			
		C	2 ppm	Canada. British Columbia OEL
		C	5 ppm 7.5 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			
		C	2.000000 ppm	USA. ACGIH

				Threshold Limit Values (TLV)
		C	2 ppm	USA. ACGIH Threshold Limit Values (TLV)

Data source	CNESST Sigma-Aldrich.
Ventilation	Proper ventilation or hood.
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	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	Liquid.
Appearance	Liquide incolore.
Odour	inodore.
Odour threshold	Data not available
pH	Donnée non-disponible.
Melting point / Freezing point	-10°C
Initial boiling point	100°C
Boiling range	Data not available
Flash point	Data not available
Evaporation rate	> 1 (Ether = 1.0).
Flammability	No
Lower flammable / Explosive limit	Data not available
Upper flammable / Explosive limit	Data not available
Vapour pressure	14mmHg
Solubility	Soluble dans l'eau.
Vapour density	Data not available
Relative density	1.2g/ml
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	May react violently with incompatible substances.
Chemical stability	Sensitive to light.
Possibility of hazardous reactions	May react violently with incompatible substances.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	Avoid contact with incompatible materials and extreme temperatures. Moisture, sunlight and extreme temperatures.
Incompatible material	When pure, the products react with the following products: Strong acids, strong oxidants. Ammonia, aluminum, potassium, sodium, bromine trifluoride.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. Gaseous chlorine. - Potassium oxides. - Silver/silver oxides

SECTION 11 - TOXICOLOGICAL INFORMATION

POTASSIUM CHLORIDE

Routes of exposure	Ingestion.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	May cause eye irritation. May cause inflammation of the conjunctiva.
- Skin	Irritation and dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Nervous disorders, cough, dyspnea, headache, dizziness, nausea and vomiting.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Gastrointestinal disorders, blood disorders, cramps, diarrhea, headache, dizziness, salivation, cardiac arrhythmia, nausea and vomiting.
Chronic exposure effects / symptoms	Burning sensation, conjunctivitis, nervous disorders, cough, dyspnea, headache, dizziness, tearing, irritability, tiredness, nausea and vomiting. hyperkalemia.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 3020 mg/kg. LD50 Dermal: Data not available.
CL50 (specify species and route of entry)	LC50 - Inhalation - Data not available.

Routes of exposure	Ingestion and inhalation.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation and may cause inflammation of the conjunctiva.
- Skin	Irritation. May cause argyria (slate gray or bluish gray discoloration of the skin and deep tissues due to the deposit of insoluble silver albuminate).
- 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 of the mucous membranes. Abdominal pain, liver and kidney damage, cramps, headache, dizziness, sweating, salivation, convulsions, nausea and vomiting.
Chronic exposure effects / symptoms	Burning sensation, conjunctivitis, nervous disorders, chest pain, cough, dyspnea, headache, dizziness, confusion, irritability, fatigue, fever, weight loss and loss of appetite, nausea and vomiting.
DL50 (specify species and route of entry)	LD50 Oral - Rat - >5.11 g/kg. LD50 Dermal - Data not available.
CL50 (specify species and route of entry)	LC50 - Inhalation - Data not available.

HYDROCHLORIC ACID

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below. The corrosive effect will outweigh the toxicity for the concentrated product.
- Eyes	Severe burns and destruction of ocular tissue that can lead to corneal ulceration and blindness.
- Skin	Severe burns and tissue ulcerations. Perhaps fatal, if the extent of the burns is considerable.
- 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)	Corrosion and ulceration of the mouth, throat, esophagus, stomach and abdominal wall. Dysphagia, abdominal pain, cramps, diarrhea, melena, hematemesis, possible perforation of the esophagus and stomach, sweating, salivation.
Chronic exposure effects / symptoms	Burning sensation, dermatitis, conjunctivitis, photophobia, lung and eye damage, chest pain, dental enamel abrasion, cough, dyspnoea, laryngitis, tracheobronchitis, headache, dizziness, fever, sweating, salivation , thirst.
DL50 (specify species and route of entry)	Oral 238-277 mg/Kg-Rat LD50 - Dermal 1449 mg/kg-Mouse
CL50 (specify species and route of entry)	LC50 - Inhalation - 3124 ppm/1 h.-Rat

SUMMARY

Acute exposure effects / Symptoms:	By exposure routes below.
Ingestion	To our knowledge, the product has not been fully evaluated
Inhalation	To our knowledge, the product has not been fully evaluated
Skin	To our knowledge, the product has not been fully evaluated
Eyes	To our knowledge, the product has not been fully evaluated
Chronic exposure effects / Symptoms:	To our knowledge, the product has not been fully evaluated
ETA Mix (Estimated Acute Toxicity)	LD50 Oral: > 5000 mg/kg - Rat LD50 Dermal: No data available LC50 Inhalation: No data available

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	Potassium chloride. Toxicity to fish LC50 - Pimephales promelas - 880 mg/l - 96 h Mortality NOEC - Pimephales promelas - 500 mg/l - 7 d Mortality LOEC - Pimephales promelas - 1,000 mg/l - 7 d Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - > 440 mg/l - 48 h.
Persistence and degradability	Data not available.
Bioaccumulative potential	Data not available.
Mobility in soil	Data not available.
Other adverse effects	Avoid release to 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	N/R
UN Proper shipping name	
Transport hazard class(es)	
Packing group	
Limited quantity index	
ERAP Index	
Special precautions	

SECTION 15 - REGULATORY INFORMATION

WHMIS CANADA	Not a hazardous substance according to WHMIS 2015
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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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