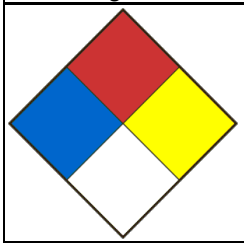
Centre Anti-Poison pour le Québec: (800) 463-5060
Tél. (Qc): (418) 660-8666 / 800-890-8666
Fax. (Qc): (418) 660-8998

SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier BUFFER SOLUTION PH 4 (Red)		**Product Use** Laboratory use	
Chemical formula -		**Product code** TR-0004	**Molar weight**
Chemical name / Commercial name / Synonymous Buffer pH 4			
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 11/20/2018	**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
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 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 (%)
Eau	7732-18-5	99
Biphtalate de potassium	877-24-7	1
Formaldéhyde	50-00-0	0.05
Méthanol	67-56-1	0.02
Fluorescein, 2',4',5',7'-tetraiodo,disodium salt	16423-68-0	Trace

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. 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.
Hazardous combustion / decomposition products	Hazardous decomposition products formed under fire conditions. - Carbon oxides, Potassium oxides. - Sodium 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 / Personnal 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.

SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Keep in a dry place. Keep container tightly closed and store away from heat, moisture, combustible and incompatible products.
Methods of handling	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 Citric acid	
Potassium biphtalate	877-24-7	No data available	TLV, TWA, STEL	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		No data available	TLV, TWA, STEL	Canada. British Columbia OEL
		No data available	TLV, TWA, STEL	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants

Composants	No.-CAS	Valeur	Paramètres de contrôle	Base
Formaldéhyde	50-00-0	(c)	1.000000 ppm 1.300000 mg/m3	Canada. Alberta, Code de santé et de sécurité au travail (tableau 2 : VLE)
Remarques	cancérogène classe A1 pour l'homme			
		TWA	0.750000 ppm 0.900000 mg/m3	Canada. Alberta, Code de santé et de sécurité au travail (tableau 2 : VLE)
	cancérogène classe A1 pour l'homme			
		TWA	0.300000 ppm	Canada. LEP Colombie Britannique
	cancérogène classe A1 pour l'homme			
		C	1.000000 ppm	Canada. LEP Colombie Britannique
	cancérogène classe A1 pour l'homme			
		P	2.000000 ppm 3.000000 mg/m3	Québec. Règlement sur la santé et la sécurité du travail, Annexe 1 Partie 1: Valeurs d'exposition admissibles des contaminants de l'air
	Cancérogène classe A1 pour l'homme. Une substance dont la recirculation est prohibée conformément à l'article 108.			

Components	CAS-No.	Value	Control parameters	Basis
Methanol	67-56-1	TWA	200.000000 ppm 262.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Substance may be readily absorbed through intact skin			
	STEL			

	250.000000 ppm 328.000000 mg/m3 Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)			
	Substance may be readily absorbed through intact skin			
		TWA	200.000000 ppm	Canada. British Columbia OEL
	Contributes significantly to the overall exposure by the skin route.			
		STEL	250.000000 ppm	Canada. British Columbia OEL
	Contributes significantly to the overall exposure by the skin route.			
		TWAEV	200.000000 ppm 262.000000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	Skin (percutaneous)			
		STEV	250.000000 ppm 328.000000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	Skin (percutaneous)			
		TWA	200.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	250.000000 ppm	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	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	Liquid.
Appearance	Rouge-
Odour	inodore.
Odour threshold	Data not available
pH	4.0.
Melting point / Freezing point	0°C
Initial boiling point	100°C
Boiling range	Data not available
Flash point	Data not available
Evaporation rate	1%
Flammability	No
Lower flammable / Explosive limit	Data not available
Upper flammable / Explosive limit	Data not available
Vapour pressure	Data not available
Solubility	Soluble dans l'eau.
Vapour density	Data not available
Relative density	1.0g/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	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)	Light sensitive. May discolor if exposed to light. Avoid contact with incompatible materials and extreme temperatures.
Incompatible material	When pure, the products react with the following products: Acids, Oxidants, Acid Chlorides, Acid Anhydrides, Alkali Metals, Reducing Agents. Strong bases. Isocyanates. Nitriles.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Carbon oxides, Potassium oxides. - Sodium oxides.

SECTION 11 - TOXICOLOGICAL INFORMATION

POTASSIUM BIPHTHALATE

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation and tearing.
- Skin	May be harmful if absorbed through skin. May cause skin irritation.
- Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Irritation of the mucous membranes and respiratory tract. Nervous disorders, dizziness, cough, dyspnea, headache, nausea and vomiting.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Nervous disorders, gastrointestinal disorders, cramps, dizziness, headache, nausea and vomiting.
Chronic exposure effects / symptoms	Burning sensation, nervous disorders, dizziness, headache, cough, dyspnea, loss of appetite, nausea and vomiting.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 3200 mg/kg. LD50 Dermal: Data not available
CL50 (specify species and route of entry)	Data not available.

METHANOL

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	May cause eye irritation.
- Skin	Irritation and dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Narcotic effects, chest pain, cough, dyspnea, headache, dizziness, watery eyes, paresthesia, nystagmus, drowsiness, confusion, nausea and vomiting.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Narcotic effects, liver, kidney and eye damage, abdominal pain, cramps, diarrhea, headache, dizziness, paresthesia, nystagmus, drowsiness, incoordination, acidosis, nausea and vomiting, seizures, hypotension, respiratory collapse, loss of consciousness , coma and can lead to death. Acute absorption of methanol can cause blindness. Damage to: liver, kidneys, eyes, heart, central nervous system.
Chronic exposure effects / symptoms	Headache, dizziness, nausea, visual disturbances, decreased visual acuity, liver and kidney damage.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 1187 mg/kg LD50 Dermal - Lapin-15840 mg/kg
CL50 (specify species and route of entry)	LC50 Inhalation - Rat: 64000 ppm/4 h. LC50 Inhalation - Rat 115.9-130.7mg/L air / 4h.

FORMALDEHYDE 37%

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Severe irritation and burns that may cause permanent eye damage.
- Skin	Irritation and dermatitis. Prolonged skin contact may result in an allergic reaction characterized mainly by erythematous or eczematous lesions.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Pains in the chest, respiratory allergies, cough, dyspnea, headache, dizziness, watery eyes, congestion, bronchial spasms and may lead to pulmonary edema.
Acute toxicity (Ingestion)	Irritation and burning of the esophagus and stomach. Abdominal pain, cramps, diarrhea, nausea and vomiting, hematemesis, acidosis, hematuria, anuria, vertigo, pallor, blindness, convulsions, stupor, respiratory collapse, coma and can lead to death.
Chronic exposure effects / symptoms	58/5000 Is recognized as a carcinogen (class 1) by IARC. Burning sensation, dermatitis, conjunctivitis, chest pain, eye and lung damage, respiratory and skin allergies, cough, dyspnoea, bronchitis, dry throat, headache, dizziness, confusion, irritability, tearing, choking, sleep, intense thirst, sweating, salivation, fatigue, paleness, muscle weakness, weight loss and loss of appetite, convulsions, nausea and vomiting.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 460 mg/kg. LD50 Dermal - Data not available.
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 4h - 463 ppm.

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: >5000 mg/kg -Rat LC50 Inhalation: >100 000 ppm -4h- Rat

SECTION 12 - ECOLOGICAL INFORMATION

Available ecological information	No

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	Not a hazardous substance according to WHMIS 2015

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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