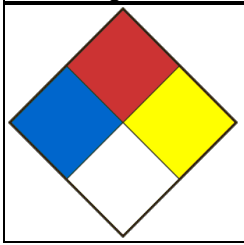
Centre Anti-Poison pour le Québec: (800) 463-5060
Tél. (Qc): (418) 660-8666 / 800-890-8666
Fax. (Qc): (418) 660-8998

SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier BIURET REAGENT		**Product Use** Laboratory use	
Chemical formula -		**Product code** BS-0109	**Molar weight**
Chemical name / Commercial name / Synonymous Biuret's Reagent, réactif de Biuret			
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 9/13/2019	**SDS Prepared by** Laboratoire MAT	**E-Mail** labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	Serious eye damage/eye irritation - Serious eye damage category 1 Skin corrosion/irritation - Skin corrosion category 1
Signal Word	DANGER
Hazards statements (H)	H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.
Precautionary statements (P)	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. P280 Wear protective gloves/protective clothing/eye protection/face protection. P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. 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. P310 Immediately call a POISON CENTER or doctor/physician. P321 Specific treatment (see section 4 of the SDS and on this label). P363 Wash contaminated clothing before reuse. 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** 2 **Fire** 0 **Reactivity** 0 **Special danger**

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Hydroxyde de sodium	1310-73-2	3
Sulfate cuivrique pentahydrate	7758-99-8	0.1
Potassium sodium tartrate tétrahydrate	6381-59-5	0.6

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)	Ref. section 11.
Immediate medical attention and special treatment, if necessary	In case of medical consultation, keep this sheet available.

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. - Sodium oxides. - Sulphur oxides - Potassium oxides. - Nitrogen oxides (NOx), Copper oxides - Carbon 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. Do not let product enter drains.

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, and incompatible products. Protect from light and sunlight.
Methods of handling	Avoid breathing vapors, spray mists or gases. 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.	Value	Control parameters	Basis
Sodium hydroxide	1310-73-2	C	2.000000 mg/m3	Canada. British Columbia OEL
		CEV	2.000000 mg/m3	Canada. Ontario OELs
		(c)	2.000000 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 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		C	2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)

Components	CAS-No.	Value	Control Citric acid	
POTASSIUM SODIUM TARTRATE (TETRAHYDRATE)	6381-59-5	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

Components	CAS-No.	Value	Control parameters	Basis
Copper sulphate (pentahydrate)	7758-99-8	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

Data source	Sigma-Aldrich (Millipore Sigma)
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	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	Liquide bleu translucide-
Odour	Donnée non disponible.
Odour threshold	Data not available
pH	>12.
Melting point / Freezing point	Data not available
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
Solubility	Miscible avec l'eau en toutes proportions.
Vapour density	Data not available
Relative density	~1,04 g/ml à 25°C.
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)	Avoid contact with incompatible materials and extreme temperatures. Avoid direct sunlight.
Incompatible material	When pure, the products react with the following products: Strong oxidizing agents, strong acids, organic materials. Metals. Silver nitrate, magnesium sulfate, calcium and lead salts. Metallic powders, the anhydrous copper (II) sulphate reacts violently with hydroxylamine and magnesium. Strong reducing agents (potassium, sodium, metal hydrides), acetylene, corroded steel, hydroxylamine, magnesium, fine metal powders, heat and moisture.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Sodium oxides. - nitrogen oxides (NOx). Sulfur oxides, Copper oxides. - Potassium oxides. Carbon oxides.

SECTION 11 - TOXICOLOGICAL INFORMATION

SODIUM HYDROXIDE

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Severe burns and destruction of ocular tissue that can lead to corneal ulceration and blindness.
- Skin	May be harmful if absorbed through skin. Causes skin burns.
- Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Acute toxicity (Ingestion)	Corrosion of the digestive tract, bloody vomiting with mucous membrane fragments, diarrhea, inflammation of the larynx and possibility of oesophageal and gastric perforation, death.
Chronic exposure effects / symptoms	Burning sensation, dermatitis, conjunctivitis, lung and eye damage, nerve disorders, chest pain, cough, dyspnea, laryngitis, headache, dizziness, confusion, irritability, sweating, salivation, tearing, fatigue, alopecia, loss weight loss and loss of appetite, seizures, nausea and vomiting.
DL50 (specify species and route of entry)	Oral rat: 140mg/kg Dermal rabbit: 1350mg/kg
CL50 (specify species and route of entry)	LC50 - Inhalation - Data not available.

POTASSIUM SODIUM TARTRATE (TETRAHYDRATE)

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation and tearing.
- Skin	Irritation.
- Inhalation	Irritation of the mucous membranes and respiratory tract.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Gastrointestinal disorders, cramps, diarrhea, headache, dizziness, nausea and vomiting.
Chronic exposure effects / symptoms	Burning sensation, nervous disorders, cough, dyspnea, headache, dizziness, confusion, irritability, tiredness, nausea and vomiting.
DL50 (specify species and route of entry)	Data based on the anhydrous product: LD50 Oral - Rat - 920-5000 mg/kg. LD50 Dermal - Data not available.
CL50 (specify species and route of entry)	Data not available.

COPPER(II) SULFATE (PENTAHYDRATE)

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Severe irritation may result in copper deposition on cornea and opacification of ocular tissue (Wilson's disease).
- Skin	Irritation and dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Nervous disorders, chest pain, cough, dyspnea, headache, dizziness, tearing, sweating, salivation, nausea and vomiting.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Abdominal pain, kidney damage, cramps, diarrhea, headache, dizziness, sweating, salivation, nausea and vomiting, convulsions, tachycardia, hypotension, coma and can lead to death.
Chronic exposure effects / symptoms	Burning sensation, dermatitis, conjunctivitis, kidney and lung damage, nerve disorders, chest pain, cough, dyspnoea, laryngitis, headache, dizziness, tearing, metallic taste in the mouth, sweating, salivation, fatigue, fever loss of weight and loss of appetite, seizures, nausea and vomiting.
DL50 (specify species and route of entry)	LD50 Oral - rat - 482 mg/kg Remarks: anhydrous. LD50 Dermal - rat -> 2,000 mg / kg Notes: Anhydrous
CL50 (specify species and route of entry)	LC50 - Inhalation - Data not available.

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: 4666 mg/kg - Rat LD50 Dermal: > 5000 mg/kg - Rabbit LC50 Inhalation: No data available

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	3266
UN Proper shipping name	LIQUIDE INORGANIQUE CORROSIF, BASIQUE, N.S.A. (hydroxyde de sodium)
Transport hazard class(es)	8 Corrosive substances
Packing group	II
Limited quantity index	1L
ERAP Index	-
Special precautions	16

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Serious eye damage/eye irritation - Serious eye damage category 1 Skin corrosion/irritation - Skin corrosion category 1

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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