



Centre Anti-Poison pour le Québec: (800) 463-5060

Tél. (Qc): (418) 660-8666 / 800-890-8666


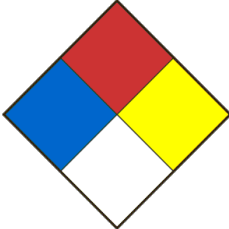
Fax. (Qc): (418) 660-8998

SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

| | | | |
|--|------------------------------------|---|---|
| Product Identifier PH 1.68 BUFFER SOLUTION | | Product Use Laboratory use | |
| Chemical formula - | | Product code TS-0168 | Molar weight |
| Chemical name / Commercial name / Synonymous BUFFER PH 1.68 | | | |
| 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 9/26/2019 | 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 1C |
| 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 1 Fire 0 Reactivity 0 Special danger |

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

| Ingrédients (Dénomination chimique / synonymes) | Numéro CAS et tout identificateur unique | Concentration (%) |
|---|--|-------------------|
| Acide oxalique, dihydrate | 6153-56-6 | 1,26 |
| Hydroxyde de potassium | 1310-58-3 | 0,19 |
| Eau | 7732-18-5 | Balance |

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. 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. |
| 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. |
| Special fire and explosion hazards | When concentrated, the product reacts according to the following characteristics: Oxalic acid dihydrate in high concentration in the air is capable of creating a dust explosion. Reacts with certain silver compounds to form silver oxalate which is explosive. May react violently in the presence of certain metals. 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 residues with vermiculite or other absorbents. Ensure a good ventilation of the premises. Dilute residues with water, clean and rinse. When handling, wear appropriate safety equipment. 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 | Store in cool place. Keep container tightly closed and store away from heat, moisture, and incompatible products. Protect from the sun's rays. Keep container tightly closed in a dry and well-ventilated place. Moisture sensitive. |
| 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 | No.-CAS | Value | Control parameters | Basis |
|-------------|---|-------|----------------------------|---|
| Oxalic acid | 144-62-7 | TWA | 1.000000 mg/m ³ | Canada. LEP Colombie Britannique |
| | | STEL | 2.000000 mg/m ³ | Canada. LEP Colombie Britannique |
| | | TWA | 1.000000 mg/m ³ | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) |
| Remarques | La limite d'exposition professionnelle est basée sur les effets de l'irritation et son ajustement pour compenser les emplois du temps de travail inhabituels n'est pas nécessaire | | | |
| | | STEL | 2.000000 mg/m ³ | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) |
| | La limite d'exposition professionnelle est basée sur les effets de l'irritation et son ajustement pour compenser les emplois du temps de travail inhabituels n'est pas nécessaire | | | |
| | | TWAEV | 1.000000 mg/m ³ | Canada. Ontario OELs |
| | | STEV | 2.000000 mg/m ³ | Canada. Ontario OELs |
| | | VEMP | 1.000000 mg/m ³ | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
| | | VEMP | 1 mg/m ³ | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
| | | VECD | 2 mg/m ³ | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
| | | VECD | 2.000000 mg/m ³ | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
| | | TWA | 1 mg/m ³ | Canada. British Columbia OEL |
| | | | | |
| | | STEL | 2 mg/m ³ | Canada. British Columbia OEL |

| Components | CAS-No. | Value | Control parameters | Basis |
|---------------------|--|-------|----------------------------|---|
| Potassium hydroxide | 1310-58-3 | C | 2.000000 mg/m ³ | Canada. British Columbia OEL |
| | | CEV | 2.000000 mg/m ³ | Canada. Ontario OELs |
| | | (c) | 2.000000 mg/m ³ | 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/m ³ | 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 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 mg/m3 | USA. ACGIH Threshold Limit Values (TLV) |
| | | C | 2 mg/m3 | USA. ACGIH Threshold Limit Values (TLV) |

| | |
|----------------------------|--|
| 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 incolore. |
| Odour | inodore. |
| Odour threshold | Data not available |
| pH | 1.68. |
| 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 | Soluble dans l'eau. |
| Vapour density | Data not available |
| Relative density | 1.00g/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) | Avoid extreme temperatures. Sun exposure. |
| Incompatible material | When pure, the products react with the following products: Strong oxidizing agents (nitric acid, perchloric acid, peroxides, chlorates and perchlorates), acid chlorides, corroded steel, furfuryl alcohol, silver and its salts, bases, alkali metals, chlorate and sodium hypochlorite, heat and humidity. Strong oxidizing agents (nitric acid, perchloric acid, peroxides, chlorates and perchlorates), strong acids, chlorides and acid anhydrides, acrolein, acrylonitrile, alcohols, aluminum, organo-nitro and organochlorine compounds, copper, cyclopentadiene, tin, magnesium, organic materials, lead, sugars, zinc, heat, water and moisture. |
| Hazardous decomposition products | Hazardous decomposition products formed under fire conditions. Carbon oxides. |

SECTION 11 - TOXICOLOGICAL INFORMATION

OXALIC ACID, DIHYDRATE

| | |
|--|--|
| 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 | Severe irritation and tissue burn. Prolonged contact with oxalic acid solutions produces skin lesions that become worse over time; these can cause gangrenous cyanosis. |
| - 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) | Burns and corrosion of the digestive tract. Possibility of oesophageal or gastric perforation and bleeding, kidney damage, abdominal pain, diarrhea, nausea and vomiting, hypocalcemia, paresthesia, myoclonus, spasmodic muscle contractions, fast and irregular pulse, convulsions, hypotension, coma and can lead to death. |
| Chronic exposure effects / symptoms | Burning sensation, dermatitis, conjunctivitis, skin lesions, brittle and blackish nails, kidney damage, nerve disorders, chest pain, cough, dyspnea, laryngitis, headache, dizziness, albuminuria, irritability, sweating, salivation, fatigue, loss of weight and loss of appetite, seizures, nausea and vomiting. |
| DL50 (specify species and route of entry) | LD50 Oral - Rat - 375 mg/kg. LD50 Dermal - Rabbit - 20 000 mg/kg |
| CL50 (specify species and route of entry) | Data not available. |

POTASSIUM HYDROXIDE

| | |
|--|---|
| 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, burns and ulcerations of the tissues. |
| - 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) | Burns and ulcerations of the mouth, throat, esophagus and abdominal wall. Dysphagia, abdominal pain, cramps, diarrhea, melena, possibility of oesophageal and gastric perforations, bloody vomiting with mucous membrane fragments, tremors and convulsions, stupor, circulatory collapse, loss of consciousness, coma and can lead to 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) | LD50 Oral - Rat - 273 mg/kg. LD50 Dermal - Data not available. |
| 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: > 5000 mg/kg - Rat LD50 Dermal: > 5000 mg/kg - Rabbit LC50 Inhalation: No data available |

SECTION 12 - ECOLOGICAL INFORMATION

| | |
|--------------------------------------|---|
| Ecotoxicity | Oxalic acid: Toxicity to fish: LC50: Leuciscus idus melanotus: 160 mg/L - 48 h Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - 137 mg/L -48 h Potassium hydroxide: Toxicity to fish: LC50 - Gambusia affinis (wild guppy) - 80 mg / l - 96 h |
| Persistence and degradability | Data not available. |
| Bioaccumulative potential | Data not available. |
| Mobility in soil | Data not available. |
| Other adverse effects | 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 | Serious eye damage/eye irritation - Serious eye damage category 1 Skin corrosion/irritation - Skin corrosion category 1C |
|---------------------|---|

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.

Last Update: 9/26/2019