

SAFETY DATA SHEET



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BUFFER SOLUTION, PH 10.00

SDS No. M9058

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Buffer Solution, pH 10.00

Synonyms: None

Recommended Use: This product is recommended for laboratory and manufacturing use only. It is not recommended for drug, food or household use.

2. HAZARDS IDENTIFICATION



Label Elements

Signal Word: WARNING!

Hazard Statements:

H303 – May be harmful if swallowed.

Precautionary Statements:

P281 – Use protective equipment as required.

Emergency Overview

May be harmful if swallowed. May be harmful if absorbed through the skin or inhaled. May cause irritation to the eyes, skin, and mucous membranes.

HMIS Rating:

Health – 0 Flammability – 0 Physical Hazard – 0 PPE – User supplied

NOTE: HMIS ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. These ratings are based on the inherent properties of this chemical under expected conditions of normal use and are not intended to be used in emergency situations. PPE is determined by the user based on their needs and conditions.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS No</u>	<u>Percent</u>	<u>Hazardous</u>
Boric Acid	10043-35-3	< 1%	Yes
Potassium Hydroxide	1310-58-3	< 1%	Yes
Water	7732-18-5	> 99%	No

Clear focus. Consistent results. Complete confidence.

4. FIRST-AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Ingestion: Get medical help. Wash mouth out with water. Do not induce vomiting.

Skin Contact: Wash skin with water for at least 15 minutes. Remove any contaminated clothing and wash clothing before reuse. Get medical aid if irritation develops.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if irritation develops.

Notes to Physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flammability: Not combustible

Auto-ignition Temperature: NA

Flash Point: NA

Flammable Limits: NA

Products of Combustion: May decompose into irritating and highly toxic gases (potassium oxides) under fire conditions.

Specific Fire Hazards: As in any fire, always wear self-contained breathing apparatus in pressure-demand (MSA/NIOSH approved or equivalent), and full protective gear.

Fire Fighting Media: Use extinguishing media appropriate to the surrounding fire.

National Fire Protective Association: Health - 1, Flammability - 0, Reactivity - 0

NOTE: NFPA ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. They are for use by emergency personnel to address the hazards that are presented by short term, acute exposure to this product under fire, spill, or similar emergencies. Ratings involve data and interpretations that may vary from company to company.

6. ACCIDENTAL RELEASE MEASURES

Provide ventilation to the affected area and remove all ignition sources. Dilute with plenty of water and wash down the drain with lots of additional water. Always use proper personal protective equipment as described in section 8.

7. HANDLING AND STORAGE

Precautions: Always use proper personal protective equipment as described in section 8. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid breathing vapor or mist.

Storage: Store in a cool, dry, well-ventilated area away from direct sunlight. Protect from freezing and physical damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use proper ventilation equipment. Facilities storing or using the material should be equipped with eyewash station and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protection: Wear protective chemical goggles or other appropriate eye protection. Use butyl rubber gloves and protective clothing to prevent skin exposure. A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever possible. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Exposure Limits for Boric Acid: None established.

Exposure Limits for Potassium Hydroxide:

ACGIH – 2 mg/m³ Ceiling

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State and Appearance: Clear, colorless liquid.

Odor: Not available.

pH: 10.0.

Auto-ignition Temperature: NA

Flash Point: NA

Flammable Limits: NA

Boiling Point: 100° C (212° F)

Freezing/Melting Point: 0° C (32° F)

Decomposition Temperature: Not available

Specific Gravity: 1.02 g/cm³

Vapor Density (Air=1): Not available

Vapor Pressure: Not available.

Evaporation Rate (Butyl acetate = 1): Not available

Viscosity: Not available

Solubility: Completely soluble

10. STABILITY AND REACTIVITY

Stability: Stable.

Conditions to Avoid: Exposure to acids.

Incompatibility With Various Substances: Acids

Hazardous Decomposition Products: Potassium oxides when heated to decomposition.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, skin absorption, skin contact

Acute Exposure Hazards:

INHALATION HAZARD: May cause respiratory tract irritation, coughing, wheezing, laryngitis, and shortness of breath.

INGESTION HAZARD: Harmful if swallowed. May cause abdominal pain and other symptoms similar to inhalation.

SKIN CONTACT HAZARD: May cause skin irritation, dryness, and itching. May be harmful if absorbed through the skin.

EYE CONTACT HAZARD: May cause eye irritation, redness, or pain.

Chronic Exposure Hazards: No information available.

Animal Toxicity for Boric Acid:

Oral, mouse: LD50 = 3450 mg/kg;

Oral, rat: LD50 = 2660 mg/kg.

Animal Toxicity for Potassium Hydroxide:

Draize test, rabbit, skin: 50 mg/24H Severe;

Oral, rat: LD50 = 273 mg/kg.

Carcinogenicity: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: Potassium Hydroxide has been investigated as a mutagen.

Neurotoxicity: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Boric Acid:

Oral, mouse: LD50 = 3450 mg/kg;

Oral, rat: LD50 = 2660 mg/kg;

Ecotoxicity Potassium Hydroxide:

TLm: 80 ppm/Mosquito fish/ 24 hr./ Fresh water.

Environmental Fate: No information available.

13. DISPOSAL CONSIDERATIONS

Material that cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options. Waste generators must decide if discarded material is a hazardous waste. State and local disposal regulations may differ from federal disposal definitions found in 40 CFR 261.3. Dispose of container and unused contents in accordance with federal, state and local requirements. This material is neither a "P" listed waste nor a "U" listed waste under 40 CFR 261.33.

14. TRANSPORT INFORMATION

Not regulated for transportation.

15. REGULATORY INFORMATIONUS Federal Regulations:

TSCA: CAS# 1310-58-3 and CAS# 10043-35-3 are listed on the TSCA Inventory.

Health and Safety Reporting List: Not listed.

Chemical Test Rules: Not listed.

Section 12b: Not listed.

TSCA Significant New Use Rule: Not listed.

CERCLA Hazardous Substances: CAS# 1310-58-3: final RQ = 1000 pounds (454 kg)

SARA Section 302: Does not have a TPQ

SARA Codes: CAS# 1310-58-3: acute, reactive; CAS# 10043-35-3: acute

Section 313: Buffer solution is not subject to SARA Title III Section 313 and 40 CFR 373 reporting requirements.

Clean Air Act: Not listed as a hazardous air pollutant (HAP). Not a Class 1 Ozone Depleter. Not a Class 2 Ozone Depleter.

Clean Water Act: CAS# 1310-58-3 is listed as a Hazardous Substance. Not a Priority Pollutant. Not a Toxic Pollutant.

OSHA: Not considered highly hazardous by OSHA.

US State Regulations:

CAS# 1310-58-3 is on the following state right-to-know lists: California, Florida, Massachusetts, New Jersey, and Pennsylvania

Canada:

DSL/NDSL: Not listed on Canada's DSL list.

WHMIS: This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and this MSDS contains all the information required by those regulations.

Ingredient Disclosure List: Not listed on Canada's Ingredient Disclosure List.

DSCL (EEC):

Hazard Symbols: Xi

Risk Phrases: R36/36/38 – Irritating to eyes, respiratory system, and skin.

Safety Phrases: S26/28 – In case of contact with eyes or skin, rinse with plenty of water and get medical assistance.

WGK (Water Danger/protection): No information available.

16. OTHER INFORMATION

Originally Prepared: 7/17/2009

Last Revised: 12/12/2011 – Converted to GHS format.

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