

OXFORD LAB FINE CHEM LLP

ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

MATERIAL SAFETY DATA SHEET

BUFFER SOLUTION pH 9.2

MSDS CAS: -

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product

Product Name: BUFFER SOLUTION pH 9.2

CAS#: - Not available.

Synonym: Not available.

Chemical Name: Not available.

Chemical Formula: Not available.

Brand: OXFORD

Details Of The Supplier Of The Safety Data Sheet:

Company identification: OXFORD LAB FINE CHEM LLP

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Section 2: Composition and Information on Ingredients

Composition:

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

Section 3: Hazards Identification

Emergency Overview

DANGER! CORROSIVE. HARMFUL IF SWALLOWED OR INHALED. CAUSES BURNS TO ANY AREA OF CONTACT.(tm)

SAF-T-DATA Ratings (Provided here for your convenience)

Health Rating: 3 - Severe

Flammability Rating: 0 - None

Reactivity Rating: 1 - Slight

Contact Rating: 3 - Severe (Corrosive)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

Storage Color Code: White (Corrosive)

Potential Health Effects

The health effects from exposure to diluted forms of this chemical are not well documented. They are expected to be less severe than those for concentrated forms which are referenced in the descriptions below.

Inhalation:

Respiratory tract irritant, may cause serious burns on acute contact. Severe injury is usually avoided by the self-limiting coughing and sneezing symptoms.

Ingestion:

Toxic! Corrosive to mucous membranes and may cause perforation of the esophagus and stomach. Abdominal pain, nausea, vomiting, general gastro-intestinal upset can be expected.

Skin Contact:

Irritant, possibly corrosive if contact is prolonged. Soreness, redness, destruction of skin may result.

Eye Contact:

Irritant, possibly corrosive to eye tissues. Tearing, redness, pain, impaired vision are symptoms.

Chronic Exposure:

Development of a defatting dermatitis on prolonged contact with potassium hydroxide has been reported. Continued irritation may lead to increased susceptibility to respiratory illness.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin disorders or eye problems, or impaired kidney or respiratory function may be more susceptible to the effects of the substance.

Section 4: First Aid Measures

First aid procedures given apply to concentrated solutions. Exposures to dilute solutions may not require these extensive first aid procedures.

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

Ingestion: If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately.

Wash clothing before reuse. Thoroughly clean shoes before reuse.

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

Section 5: Fire and Explosion Data

Fire: Not considered to be a fire hazard.

Explosion: Sealed containers may rupture when heated.

Fire Extinguishing

Media: Use any means suitable for extinguishing surrounding fire.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Section 6: Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

Section 7: Handling and Storage

Keep in a tightly closed container. Store in a cool, dry, ventilated area. Protect against physical damage. Separate from acids and alkalis. Protect from freezing. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

Section 8: Exposure Controls/Personal Protection

Airborne Exposure Limits:

For Potassium Hydroxide [1310-58-3]:

- ACGIH Threshold Limit value (TLV):

2 mg/m³ Ceiling

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the

maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest.. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator.

WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Section 9: Physical and Chemical Properties

Appearance	: Clear, colorless liquid.
Odor	: Odorless.
Solubility	: Complete (100%)
Specific Gravity	: No information found.
pH	: 10
% Volatiles by volume @ 21C (70F):	ca. 99 (as water)
Boiling Point	: ca. 100C (ca. 212F)
Melting Point	: ca. 0C (ca. 32F)
Vapor Density (Air=1)	: Essentially the same as water.
Vapor Pressure (mm Hg)	: Essentially the same as water.
Evaporation Rate (BuAc=1)	: Essentially the same as water.

Section 10: Stability and Reactivity Data

Stability	: Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products:	Potassium oxide at very high temperatures.
Hazardous Polymerization	: Will not occur.
Incompatibilities: Acids.	
Conditions to Avoid	: Incompatibles.

Section 11: Toxicological Information

For potassium hydroxide: Oral rat LD50: 273 mg/kg; Investigated as a mutagen. Skin Irritation Data (std Draize, 50 mg/24 H): Human, Severe; Rabbit, Severe. Eye Irritation Data (Rabbit, non-std test, 1 mg/24 H, rinse): Moderate.

-----\Cancer Lists\-----
 ---NTP Carcinogen---

Enrollment in local colleges, 2005

College	New students	Graduating students	Change
	<i>Undergraduate</i>		
Cedar University	110	103	+7

Elm College	223	214	+9
Maple Academy	197	120	+77
Pine College	134	121	+13
Oak Institute	202	210	-8
	<i>Graduate</i>		
Cedar University	24	20	+4
Elm College	43	53	-10
Maple Academy	3	11	-8
Pine College	9	4	+5
Oak Institute	53	52	+1
Total	998	908	90

Source: Fictitious data, for illustration purposes only

Section 12: Ecological Information

Environmental Fate: No information found.

Environmental Toxicity: Potassium Hydroxide: TLm: 80 ppm/Mosquito fish/ 24 hr./ Fresh water

Section 13: Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste Facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

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Chemical Weapons Convention: No TSCA12(b): No CDTA: No

SARA311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No

Reactivity: No (Mixture / Liquid)

Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.

Disclaimer

The information contained herein in good faith but makes no representations as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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