SAFETY DATA SHEET

Revision Date 12-Oct-2015 **Version** 1

1. IDENTIFICATION

Product Name Buffer Solution, pH 9.00

Product Code 2532

Recommended Use For laboratory, scientific, R&D or manufacturing use.

Company E K Industries, Inc.
1403 Herkimer St.
Joliet, IL 60432
Tel. (800) 283-4244

Emergency Telephone Call CHEMTREC 1-800-424-9300 (EKI CCN 7453)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Reproductive toxicity	Category 1B

Label elements

Signal word
Danger

Hazard statements
May damage fertility or the unborn child.



Precautionary Statements - Prevention
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention.

Precautionary Statements - Storage
Store locked up.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Water	7732-18-5	>99
Potassium chloride	7447-40-7	<0.5
Boric Acid	10043-35-3	<0.5
Sodium hydroxide	1310-73-2	<0.5

4. FIRST AID MEASURES

Description of first aid measures

Eye contact Flush eyes with plenty of water, removing contact lenses if present. Get medical attention if irritation develops.

Skin contact Wash thoroughly with soap and water while removing contaminated garments. Get medical attention if irritation develops.

Inhalation Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion Rinse mouth and drink several glasses of water. Contact a physician or poison control center if symptoms develop.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Specific hazards arising from the chemical
No information available.

Hazardous combustion products
Hydrogen chloride. Oxides of boron. Oxides of potassium. Carbon oxides. Sodium oxides.

Protective equipment and precautions for firefighters
Firefighters should wear self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

NFPA **Health hazards** 1 **Flammability** 0 **Instability** 0 **Physical and Chemical Properties** -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas.

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Absorb spill with inert material, scoop up and containerize for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling Use personal protective equipment as required
Handle in accordance with good industrial hygiene and safety practice.

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Strong oxidizing agents. Acids. Strong reducing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Boric Acid 10043-35-3	STEL: 6 mg/m³ inhalable fraction TWA: 2 mg/m³ inhalable fraction	-	-
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m³	TWA: 2 mg/m³ (vacated) Ceiling: 2 mg/m³	IDLH: 10 mg/m³ Ceiling: 2 mg/m³

Appropriate engineering controls

Engineering Controls Emergency showers, eyewash stations, ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid
Appearance Clear, colorless
Odor Odorless
Odor threshold No information available

pH 9.0
Melting point / freezing point No information available
Boiling point / boiling range No information available
Flash point No information available
Evaporation rate No information available
Flammability (solid, gas) No information available
Flammability Limit in Air
Upper flammability limit: No information available
Lower flammability limit: No information available
Vapor pressure No information available
Vapor density No information available
Relative density No information available
Water solubility Miscible with water

Solubility in other solvents No information available
Partition coefficient No information available
Autoignition temperature No information available
Decomposition temperature No information available
Kinematic viscosity No information available

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Possibility of Hazardous Reactions None under normal processing.

Conditions to avoid Extremes of temperature and direct sunlight.

Incompatible materials Strong oxidizing agents. Acids. Strong reducing agents.

Hazardous Decomposition Products Carbon oxides. Hydrogen chloride. Sodium oxide. Oxides of potassium. Boron oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation No data available.

Eye contact No data available.

Skin contact No data available.

Ingestion No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Potassium chloride 7447-40-7	= 2600 mg/kg (Rat)	-	-
Boric Acid 10043-35-3	= 2660 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 0.16 mg/L (Rat) 4 h
Sodium hydroxide 1310-73-2	-	= 1350 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation May cause irritation.
Corrosivity No information available.
Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical Name	ACGIH	IARC	NTP	OSHA
Boric Acid 10043-35-3	-	-	-	X

Legend
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity Contains a known or suspected reproductive toxin

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea

Potassium chloride 7447-40-7	2500: 72 h Desmodesmus subspicatus mg/L EC50	750 - 1020: 96 h Pimephales promelas mg/L LC50 static 1060: 96 h Lepomis macrochirus mg/L LC50 static	825: 48 h Daphnia magna mg/L EC50 83: 48 h Daphnia magna mg/L EC50 Static
Boric Acid 10043-35-3	-	1020: 72 h Carassius auratus mg/L LC50 flow-through	115 - 153: 48 h Daphnia magna mg/L EC50
Sodium hydroxide 1310-73-2	-	45.4: 96 h Oncorhynchus mykiss mg/L LC50 static	-

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Chemical Name	Partition coefficient
Boric Acid 10043-35-3	-0.757

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container. Emptied containers may contain residue. Continue to follow label warnings after container is emptied.

Chemical Name	California Hazardous Waste Status
Boric Acid 10043-35-3	Toxic
Sodium hydroxide 1310-73-2	Toxic Corrosive

14. TRANSPORT INFORMATION

Transportation information is provided as a general reference only and may not be applicable in all situations. This information applies to non-bulk shipments only. Per 49 CFR §173.22, it is the shipper's responsibility to ensure that all materials are properly packaged, classified and labeled prior to shipment.

DOT Not regulated

IATA Not regulated

15. REGULATORY INFORMATION

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No

Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide 1310-73-2	1000 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hydroxide 1310-73-2	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Boric Acid 10043-35-3	X	-	-
Sodium hydroxide 1310-73-2	X	X	X

16. OTHER INFORMATION

Prepared By	EKI Regulatory Affairs (Email: reg@eki-chem.com)
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Disclaimer

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End of Safety Data Sheet