MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	**BUFFER SOLUTION, pH 7.00**
Catalog #	681
Version #	02
Revision date	10-Aug-2009
CAS #	Mixture
Manufacturer information	GFS Chemicals, Inc. P.O. Box 245 Powell, OH 43065 US www.gfschemicals.com Fax 740-881-5989 Phone 740-881-5501 Toll Free 800-858-9682 Emergency Assistance Chemtrec 800-424-8300

2. Hazards Identification

Emergency overview	May irritate eyes.
OSHA regulatory status	This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Not applicable.
Eyes	Contact may cause eye irritation.
Skin	Health injuries are not known or expected under normal use.
Inhalation	Health injuries are not known or expected under normal use.
Ingestion	Health injuries are not known or expected under normal use.
Potential environmental effects	Not expected to be harmful to aquatic organisms.

3. Composition / Information on Ingredients

Non-hazardous components	CAS #	Percent
WATER	7732-18-5	90 - 100
POTASSIUM PHOSPHATE, MONOBASIC	7778-77-0	0.1 - 1
SODIUM HYDROXIDE	1310-73-2	0 - 0.1

Composition comments

US OSHA Table Z-1-A: Ceiling Limit Value (mg/m3)

SODIUM HYDROXIDE	1310-73-2	MGM3 - 2

4. First Aid Measures

First aid procedures

Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
General advice	If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Flammable properties	No unusual fire or explosion hazards noted. The product is not flammable.

Extinguishing media

Suitable extinguishing media	Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO_2). Use extinguishing agent suitable for type of surrounding fire.

Protection of firefighters

Protective equipment and precautions for firefighters	In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out.
Specific methods	In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for containment	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.
Methods for cleaning up	Flush contaminated area with plenty of water. Following product recovery, flush area with water. Never return spills in original containers for re-use.

7. Handling and Storage

Handling	Avoid release to the environment. Handle and open container with care.
Storage	Use care in handling/storage. Keep containers tightly closed.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components	CAS #	Type	Value	Form
SODIUM HYDROXIDE	1310-73-2	TWA	2 mg/m3	

U.S. - OSHA

Components	CAS #	Type	Value	Form
SODIUM HYDROXIDE	1310-73-2	Ceiling	2 mg/m3	
		PEL	2 mg/m3	

Personal protective equipment

Respiratory protection	No personal respiratory protective equipment normally required.
Hand protection	Not normally needed.
Eye / face protection	Safety glasses.
Skin protection	No special protective equipment required.
General hygeine considerations	Handle in accordance with good industrial hygiene and safety practice.
General	Not normally needed.

9. Physical & Chemical Properties

Appearance	Clear.
Color	Colorless.
Odor	Odorless.
Odor threshold	Not available.
Physical state	Liquid.
Form	Liquid.
pH	Not available.
Melting point	32 °F (0.32 °C) estimated
Freezing point	Not available.

Boiling point	230 °F (110 °C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	1.0012 estimated
Relative density	1 g/cm3
Solubility (water)	Not miscible.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	0.0037 % estimated
Percent volatile	99.2007 % estimated

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Incompatible materials	None known.
Hazardous decomposition products	No hazardous decomposition products are known.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Acute effects

Acute Oral: LD 50

POTASSIUM PHOSPHATE, MONOBASIC	7778-77-0	Mouse 1700 mg/kg

Acute Toxicity other routes: LD 50

SODIUM HYDROXIDE	1310-73-2	Mouse 40 mg/kg Intraperitoneal

Toxicology data for the preparation

Acute LC50: 11000 mg/l, Mouse, Inhalation, estimated
Acute LC50: 17568 mg/l, Rat, Inhalation, estimated
Acute LD50: 40000 mg/kg, Mouse, Other, estimated

Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Further information	This product has no known adverse effect on human health.

12. Ecological Information

Ecotoxicity	Not expected to be harmful to aquatic organisms.

Invertebrate Toxicity: EC 50

SODIUM HYDROXIDE	1310-73-2	Water flea (Ceriodaphnia dubia) 34.59 - 47.13 mg/l 48 h Not reported Intoxication

Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions	This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.

Waste from residues / unused products Not applicable.

14. Transport Information

DOT

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

SODIUM HYDROXIDE 1310-73-2 Listed.

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings Health: 0
Flammability: 0
Physical hazard: 1

NFPA ratings Health: 0
Flammability: 0
Instability: 1

Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
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This data sheet contains changes from the previous version in section(s):	This document has undergone significant changes and should be reviewed in its entirety.