

# MATERIAL SAFETY DATA SHEET

Calcium Buffer Solution

## SECTION 1 . Product and Company Identification

Product Name and Synonym: Calcium Buffer Solution

Product Code: 205-14

Material Uses:

Manufacturer:

OFI Testing Equipment, Inc.  
11302 Steeplecrest Drive  
Houston, TX 77065 USA  
Phone: (713) 880-9885  
Fax: (713) 880-9886

Entry Date : 5/6/2010

Print Date: 7/30/2010

24 Hour Emergency Assistance : Chemtrec 800-424-9300  
Canutec 613-996-6666

Health:	3			
Flammability:	0			
Reactivity:	1			
Hazard Rating:				
Least	Slight	Moderate	High	Extreme
0	1	2	3	4
NA = Not Applicable		NE = Not Established		

## SECTION 2 HAZARD IDENTIFICATION

Causes severe irritation and burns. Harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

Emergency Overview:Poison! Danger! Corrosive. May be fatal if swallowed. Harmful if inhaled. Causes burns to any area of contact. Reacts with water, acids and other materials.

Inhalation:Severe irritant. Effects from inhalation of mist vary from mild irritation to serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may include sneezing, sore throat or runny nose. Severe pneumonitis may occur

Ingestion:Corrosive! Symptoms may include severe burns of mouth, throat, and stomach. Severe Scarring of tissue and death may result. Symptoms may include bleeding, vomiting, diarrhea, fall in blood pressure. Damage may appear days after exposure.

Skin:Corrosive! Contact with skin can cause irritation or severe burns and scarring with greater exposures.

Eye Contact:Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that

Chronic Exposure:May result in permanent impairment of vision, even blindness.

Aggravated by Exposure:Prolonged contact with dilute solutions or dust has a destructive effect upon tissue.

Persons with pre-existing skin disorders or eye disease may be more susceptible to the Effects of this substance.

## SECTION 3 MIXTURE COMPONENTS

Calcium Buffer Solution

SARA 313	Component	CAS Number	Percent Comp.	Dimension	Exposure Limits
<input checked="" type="checkbox"/>	Sodium Hydroxide	CAS# 1310-73-2	15 - 17%	W/W	OSHA PEL 2 mg/m <sup>3</sup> ACGIH 2mg/m <sup>3</sup>
<input type="checkbox"/>	Water, Deionized ASTM Type II	CAS# 7732-18-5	Balance	W/W	None Established

**SECTION 4 FIRST AID MEASURES**

Causes severe irritation and burns. Harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

FIRST AID: CALL A PHYSICIAN. SKIN: In case of contact, immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: Give several glasses of milk or water. Vomiting may occur spontaneously, but DO NOT INDUCE! Never give anything by mouth to an unconscious person.

**SECTION 5 FIRE FIGHTING MEASURES**

Fire Extinguisher Type: Water spray, Carbon dioxide, dry chemical, powder, foam.

Fire / Explosion Hazards: None

Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

Absorb spill with inert material, then place in a chemical waste container. Neutralize with a weak acid.

Ventilate area of Leak or Spill. Keep Unnecessary and Unprotected People away from the area of Spill. Wear Appropriate Personal Protective Equipment as Specified in Section 8. Contain and Recover Liquid when Possible. Do not Flush Caustic Residues to the Sewer. Residues from Spills can be Diluted with Water, Neutralized with Dilute Acid such as Acetic, Hydrochloric or Sulfuric. Absorb Neutralized Caustic Residue on Clay, Vermiculite, or other Inert Substance and Package in a Suitable Container for Disposal. US Regulations (CERCLA) Require Reporting Spills and Releases to Soil, Water and Air in Excess of Reportable Quantities.

**SECTION 7 HANDLING AND STORAGE**

Keep in tightly closed container. Store in a cool, dry, well-ventilated place away from incompatible materials. Wash thoroughly after handling. Store above 60 deg F (16°C) to prevent freezing. Containers of this product may be hazardous when empty.

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

Calcium Buffer Solution

Respiratory Protection: NIOSH/MSHA-approved respirator  
Ventilation  
Local Exhaust   
Mechanical   
Protective Gloves: NIOSH Approved Gloves  
Eye Protection: Splash Goggles or full face shield.  
Other Protective Equipment: Wear appropriate clothing to prevent skin exposure

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Melting Point:	Information not available	Percent Volatile by Volume:	83-85%
Boiling Point:	Information not available	Evaporation Rate	Information not available
Vapor Pressure:	Information not available	Evaporation Standard	
Vapor Density:	Information not available	Auto Ignition Temp	Not applicable
Solubility in Water:	Soluble	Lower Flamm. Limit in Air	Not applicable
Appearance /Odors:	Clear odorless liquid	Upper Flamm. Limit in Air	Not applicable
Flash Point:	Not applicable		
Specific Gravity:	~ 1.22		

**SECTION 10 STABILITY AND REACTIVITY INFORMATION**

Stability: Stable  
Conditions to Avoid: Avoid contact with incompatible materials.  
Materials to Avoid: Acids, flammable liquids, organic halogens, metals, nitrocompounds  
Hazardous Decomposition Products: sodium oxide, Reaction w/ metals may release H2 Gas  
Hazardous polymerization: Will Not Occur  
Conditions to Avoid: None known

**SECTION 11 Toxicological Information**

NTP Carcinogen - Known: No, IARC Category- None

**SECTION 12 Ecological Information**

No Information Found.

**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

## Calcium Buffer Solution

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: Sodium Hydroxide Solution, 8, UN1824, PG II

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

### SECTION 15 Regulatory Information

Chemical Inventory Status –  
Part 1:Ingredient  
Sodium Hydroxide (1310-73-2)

TSCA Yes  
EC Yes  
Japan yes  
Australia Yes

Chemical Inventory Status –  
Part 2:Ingredient  
Sodium Hydroxide (1310-73-2)

Korea Yes  
DSL Yes  
NDSL No  
Phil. Yes

Federal, State & International Regulations –  
Part 1: Ingredient.  
Sodium Hydroxide (1310-73-2)

RQ No  
TPQ NO  
List No  
Chemical Catg No

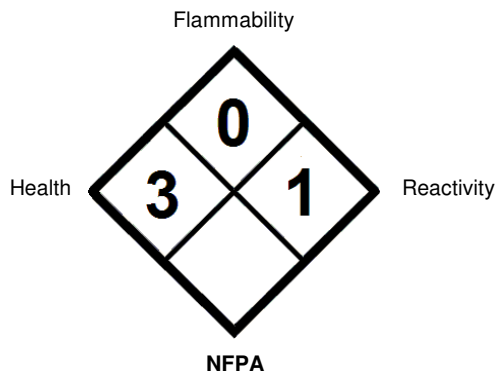
Federal, State &  
International Regulations –  
Part 2:Ingredient  
Hydrogen Chloride (7647-01-0)  
Water (7732-18-5)  
CERCLA 1000  
261.33 No  
8(d) No

Chemical Weapons Convention:No  
TSCA 12 (b):No  
CDTA:NO Mixture/Liquid)  
SARA 311/312: Acute: Yes  
Chronic: Yes  
Fire: NO  
Pressure: No  
Reactivity: YES  
Australian Hazchem Code: None  
Poison Schedule: None allocated

### SECTION 16 Additional Information

Conditions aggravated/target organs: Corrosive! Persons with pre-existing skin and eye disorders will be more susceptible. Acute: Skin and eye irritation or burns. Chronic: Dermatitis, eye damage.

Calcium Buffer Solution



Revisions

7/30/2010	0.1	updated msds to 16 section from 10 section msds. STN
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