

**AGREEMENT FOR THE PURCHASE OF GOODS AND SERVICES**

THIS AGREEMENT FOR THE PURCHASE OF GOODS AND SERVICES ("Agreement") is made \_\_\_\_\_, 2015, between BRENNTAG PACIFIC, INC. ("Contractor"), whose address is 10747 Patterson Place, Santa Fe Springs, CA 90670 and telephone number is 562-903-9626 and the City of Stockton, a municipal corporation ("City").

In consideration of the mutual promises set forth in this Agreement, the parties agree as follows:

1. Goods to be provided and services to be performed. Contractor shall provide the goods and perform the services as set forth on the attached Exhibit A incorporated herein by reference Contractor shall begin providing the goods/performing the services by July 1, 2015 and complete providing the goods/performing the services by June 30, 2016; provided, however, the parties may agree to change the beginning or ending date(s).

2. Compensation. For the goods and services under this Agreement, City shall pay Contractor the sum of \$0.2035 per dry pound of 25% Sodium Hydroxide, and \$0.1970 per dry pound for 50% Sodium Hydroxide.

3. Method of Payment. City shall pay Contractor within 30 days from the date Contractor's invoices are approved by the City Manager. Contractor shall submit monthly invoices.

4. Maintenance. Contractor shall maintain the goods as set forth in Exhibit A at a cost as set forth in Exhibit A. Contractor shall respond to calls for required maintenance from City personnel within 24 hours of the call; required maintenance occurs when the self check system fails to perform any of its functions. If Contractor is unable to resolve routine maintenance issues by phone within 48 hours, Contractor shall provide to City Operations personnel a resolution report indicating how and when the Contractor intends to resolve the issue. Within the period of the maintenance agreement, Contractor shall implement all software and firmware upgrades to the goods identified in Exhibit A at no cost to City. If software and firmware upgrades require a hardware upgrade, Contractor shall provide the upgraded hardware at no cost to the City. City personnel shall review and approve any upgrades prior to their installation.

5. Warranty. Contractor warrants that for one year the goods installed shall be free of defects in materials and workmanship. The one year period shall begin upon the date the City provides in writing to Contractor acceptance of the goods. The warranty under this section shall provide coverage equal to or greater than those warranties that are customary in the industry and, at a minimum, include all parts and labor,

6. Indemnification. Contractor shall indemnify, save and hold harmless from and defend the City, members of the City Council and employees, agents and volunteers, against any and all claims, costs, demands, causes of action, suits, losses, and expense, including attorneys fees, arising from or out of acts or omissions of Contractor, its officials, employees,

agents or sub-contractors, in connection with the goods and services that the Contractor is to provide/perform under this Agreement, except where caused by the active or sole negligence of City, or City's willful misconduct.

7. Insurance. During the term of this Agreement, Contractor shall maintain in full force and effect at its own cost and expense the insurance coverage set forth on the attached Exhibit B and shall otherwise comply with the provisions of Exhibit B.

8. Business License. Prior to its execution of this Agreement, Contractor shall obtain a City business license.

9. Audit. City reserves the right to periodically audit all charges for good and services provided by Contractor.

10. Ownership of Goods. All goods accepted by the City shall be the property of the City.

11. Changes to the Agreement. This Agreement may not be modified except in writing by both parties.

12. Applicable Law. This Agreement shall be governed by the laws of the State of California and venue for any action brought in state court shall be in the Superior Court, County of San Joaquin, Stockton Branch or, for actions brought in federal court, the United States District Court for the Eastern District of California, Sacramento Division.

13. Non-Assignability. Contractor shall not assign or transfer this Agreement or any interest or obligation in this Agreement without the prior written consent of the City and then only upon such terms and conditions as City may set forth in writing.

14. Notices. All notices herein required shall be in writing and shall be sent certified or registered mail, postage prepaid, addressed as follows:

To Contractor: Brenntag Pacific, Inc	To City:	City Manager
Attn: _____		City of Stockton
10747 Patterson Place		425 N. El Dorado St.
Santa Fe Springs, CA 90670		Stockton, CA 95202

15. Conformance to Applicable Laws. Contractor shall comply with all applicable Federal, State and Municipal laws, rules and ordinances. Contractor shall not discriminate in the employment of persons or in providing services under this Agreement on the basis of any legally protected classification including race, color, national origin, sex or religion of such person.

16. Miscellaneous Provisions.

a. City may terminate this Agreement at any time by mailing notice to Contractor at the address first stated above. Contractor shall be paid for that portion of goods provided / services provided when notice is received.

b. Contractor shall not assign or transfer this Agreement.

c. In the performance of this Agreement, Contractor, its employees and agents shall have the status of an independent contractor and not as an employee of the City for any purpose.

d. If either City or Contractor waives a breach of this Agreement, such waiver shall not constitute a waiver of other or succeeding breaches of this Agreement.

e. This Agreement constitutes the entire understanding of the parties.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the date and year first above written.

**CITY OF STOCKTON**

**CONTRACTOR**

\_\_\_\_\_  
City Manager

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Print name

ATTEST:

Title: \_\_\_\_\_

\_\_\_\_\_  
City Clerk

*[If Contractor is a corporation, signatures must comply with Corporations Code §313]*

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Print name

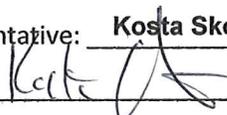
Title: \_\_\_\_\_

**STANDARD AGREEMENT, PAGE 1 OF 2  
BAY AREA CHEMICAL CONSORTIUM  
BID NO. 13-2015  
SUPPLY AND DELIVERY OF SODIUM HYDROXIDE**

Bay Area Chemical Consortium (BACC)  
c/o Dublin San Ramon Services District  
Regional Wastewater Treatment Facility  
7399 Johnson Drive  
Pleasanton, CA 94588

Dear Sirs:

I hereby agree to furnish sodium hydroxide identified in the attached bid forms, as solicited by the Bay Area Chemical Consortium (BACC), to one or more of the participating BACC Agencies.

Company: Brenntag Pacific, Inc.  
Address: 10747 Patterson Place  
City, State, ZIP: Santa Fe Springs, CA 90670  
Phone: (562) 903-9626  
Email: Ltua@brenntag.com  
Authorized Representative: Kosta Skourtis  
Signature:   
Date: April 03, 2015

**WE ACKNOWLEDGE RECEIVING ADDENDUM/ADDENDA NUMBER \_\_\_\_\_ THROUGH \_\_\_\_\_.**

SPECIFIC DEVIATIONS (if applicable, attach additional sheets if necessary):

**STANDARD AGREEMENT, PAGE 2 OF 2****BIDDER INFORMATION**

1. Legal Name of Bidder:  
**Brenntag Pacific, Inc.**
- 
2. Bidder's Street Address:  
**10747 Patterson Place Santa Fe Springs, CA 90670**
- 
3. Mailing Address:  
**same**
- 
4. Business Telephone: **562 903-9626** Fax Number: **562 944-7484**
5. Type of Supplier:  
 Sole Proprietor                       Partnership                       Corporation  
 If Corporation, indicate State where incorporated: **Delaware**
6. Business License Number issued by the City where the Supplier's principal place of business is located.  
 Number: **0580-10747-0000** Issuing City: **Santa Fe Springs**
7. Supplier Federal Tax Identification Number: **20-0552611**
8. Emergency Contact: Name: **Don Doodokyan**  
 Phone Number: **415 713-9683**
9. Order Contact: Name: **Brenntag Customer Service / Denise Valdivia**  
 Address: **860 Wharf Street, Richmond, CA 94804**  
 Phone Number: **510 970-7540** Fax Number: **510 235-4182**  
 Email: **dvaldivia@brenntag.com**
- 
10. References:
- | <u>Company/Agency Name</u>            | <u>Contact Name</u> | <u>Phone Number</u>   |
|---------------------------------------|---------------------|-----------------------|
| 1) <u>Dublin San Ramon</u>            | <u>Louanne Ivy</u>  | <u>(925) 875-2398</u> |
| 2) <u>Santa Clara Valley Water</u>    | <u>Don Cook</u>     | <u>(408) 265-2607</u> |
| 3) <u>Vallejo Sanitation District</u> | <u>Dan Ferguson</u> | <u>(707) 644-8949</u> |
11. Chemical Manufacturer's name and address (if different from Bidder):  
**Brenntag Pacific, Inc.**
- 
- 
-

**Non-Collusion Affidavit  
To Be Executed By Bidder and Submitted With Bid**

State of California )  
 ) ss.  
County of Los Angeles )

Kosta Skourtis, being first duly sworn, deposes and says that he ~~or she~~ is  
(Contractor's Authorized Representative)

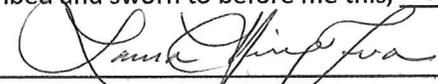
The Vice President of Brenntag Pacific, Inc. the party making the  
(Title of Representative) (Contractor's Name)

Foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bid, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

I declare under penalty of perjury under the laws of the state of California that the foregoing is true and correct.

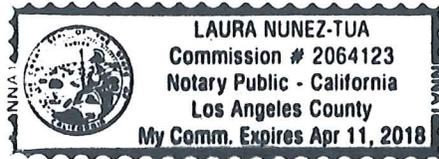
  
Signature of: President, Secretary,  
Manager, Owner, or Representative

Subscribed and sworn to before me this, 03 Day of April, 20 15

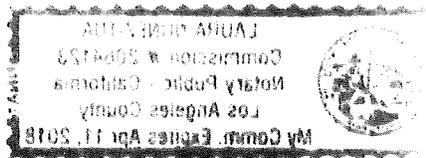
  
Signature of Notary Public In and For

The County of Los Angeles

State of California



**All Signatures Must Be Witnessed By Notary**



BAY AREA CHEMICAL CONSORTIUM  
BID FORM FOR BID NO. 13-2015, PAGE 1 OF 2

Sealed bids must be enclosed in an envelope clearly marked:

**"BID FOR SODIUM HYDROXIDE  
BACC BID NO. 13-2015"**

And delivered to:

Louanne Ivy  
Administrative Analyst – Operations  
Dublin San Ramon Services District  
Regional Wastewater Treatment Facility  
7399 Johnson Drive  
Pleasanton, CA 94588

No later than 9:00 A.M. PDT  
Tuesday, April 14, 2015

Business Name: Brenntag Pacific, Inc.

Business Address  
10747 Patterson Place  
Santa Fe Springs, CA 90670

Telephone Number: (562) 903-9626

Facsimile Number: (562) 944-7484

Email Address: Ltua@brenntag.com

Authorized Representative (Please Print):  
Kosta Skourtis

Date: \_\_\_\_\_

**I. All costs except California State sales tax for the purchase of sodium hydroxide must be included in the amount shown below on this Bid Form, including any and all mill assessments, fees, excise taxes, transportation charges, etc. Any exceptions to the bid must be noted under Specific Deviations on the Standard Agreement. Bidders shall submit bids in \$/dry lb.**

**BACC Agencies: North Bay Locations**  
**City of Pittsburg, Contra Costa Water District, and West County Wastewater District.**

Unit Price for 30% Sodium Hydroxide: \$ 2.035 /dry lb.  
Unit Price for 50% Sodium Hydroxide: \$ 1.970 /dry lb.

**BACC Agencies: East Bay Locations**  
**Alameda County Water District and Union Sanitary District.**

Unit Price for 25% Sodium Hydroxide: \$ 2.035 /dry lb.  
Unit Price for 50% Sodium Hydroxide: \$ 1.970 /dry lb.  
**Does the above bid price include Union Sanitary District? YES or NO (circle)**

**OPTIONAL BID ITEM: Union Sanitary District – Delivery to various Sewer Manholes**

Special bid price for Union Sanitary District (if different than above): \$ 0.95 /dry lb.

**BACC Agencies: South Bay Locations**  
**City of Sunnyvale and Santa Clara Valley Water District**

Unit Price for 25% Sodium Hydroxide: \$ 2.450 /dry lb.  
Unit Price for 50% Sodium Hydroxide: \$ 1.970 /dry lb.

**BAY AREA CHEMICAL CONSORTIUM  
BID FORM FOR BID NO. 13-2015, PAGE 2 OF 2**

**BACC Agencies:**            **Tri-Valley Locations**

**Zone 7 Water Agency**

Unit Price for **25%** Sodium Hydroxide:

\$ 0.2075 /dry lb.

Unit Price for **50%** Sodium Hydroxide:

\$ 0.1970 /dry lb.

**BACC Agencies:**            **Marin-Sonoma-Napa Locations**

**Marin Municipal Water District, Napa Sanitation District and North Marin Water District**

Unit Price for **25%** Sodium Hydroxide:

\$ 0.2075 /dry lb.

Unit Price for **50%** Sodium Hydroxide:

\$ 0.1970 /dry lb.

**BACC Agencies:**            **Central Valley Locations**

**City of Fresno and City of Stockton**

Unit Price for **25%** Sodium Hydroxide:

\$ 0.2035 /dry lb.

Unit Price for **50%** Sodium Hydroxide:

\$ 0.1970 /dry lb.

**BACC Agencies:**            **Sacramento Area Locations**

**Carmichael Water District, City of Roseville, El Dorado Irrigation District, Placer County Water Agency, and Rancho Murieta Community Services District**

Unit Price for **25%** Sodium Hydroxide:

\$ 0.2075 /dry lb.

Unit Price for **30%** Sodium Hydroxide:

\$ 0.2035 /dry lb.

Unit Price for **50%** Sodium Hydroxide:

\$ 0.1970 /dry lb.

**II. Bidders must submit all of the following, attached to this Bid Form:**

- a. An affidavit of compliance to the appropriate American Water Works Association (AWWA) and/or National Sanitation Foundation (NSF) standard is required for all chemicals and polymers being provided for potable water treatment. Bidders must include a statement by the chemical manufacturer, signed by an authorized representative on letterhead stationery, attesting to the affidavit's validity. In lieu of submitting an affidavit of compliance with AWWA/NSF standards and a letter attesting to the affidavit's validity, a current printout from NSF.org is acceptable.
- b. A representative analysis of the chemical to be supplied, as prepared by a reputable outside laboratory or Bidder's in-house laboratory if ISO certified.
- c. Product Bulletin and Typical Properties.
- d. Safety Data Sheet (SDS).
- e. If applicable, the name, address, and contact information for the third party hauling company as well as an affidavit signed by the Bidder that the third party hauler can and will deliver the chemical to each and every participating BACC Agency.

## Bay Area Chemical Consortium

### INFORMATION REQUIRED OF SUPPLIER

- **Sales Office**

Brenntag Pacific, Inc.  
860 Wharf Street  
Richmond, CA 94804  
(510) 970-7540 Fax (510) 235-4182

- **Normal Business Hours:** 7:30 a.m. – 5:30 p.m.

- **Contact Person(s) and email address:**

Don Doodokyan Account Manager  
[ddoodokyan@brenntag.com](mailto:ddoodokyan@brenntag.com)  
(510) 970-7540 Office  
(415) 713-9683 Mobile

- **Ordering Information:**

Telephone Number(s): (510) 570-7540  
After hours: (510) 570-7540  
Don Doodokyan: (415) 713-9683

- **Chemical Emergency Assistance (24 hours/7 days a week)**

Telephone Numbers(s): 800-424-9300

- **MSDS:**

Attached

- **Current NSF 60 certification for the chemical works of origin for product:**

Attached

*Brenntag Pacific, Inc. Regional Headquarters  
10747 Patterson Place, Santa Fe Springs, CA 90670 (562) 903-9626*



The Public Health and Safety Organization

## NSF Product and Service Listings

These NSF Official Listings are current as of **Wednesday, April 01, 2015** at 12:15 a.m. Eastern Time. Please contact NSF International to confirm the status of any Listing, report errors, or make suggestions.

Alert: NSF is concerned about fraudulent downloading and manipulation of website text. Always confirm this information by clicking on the below link for the most accurate information: <http://info.nsf.org/Certified/PwsChemicals/Listings.asp?CompanyName=Brenntag+Pacific%2C+Inc%2E&ChemicalName=Sodium+Hydroxide&PlantState=California+CA&>

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### NSF/ANSI 60 Drinking Water Treatment Chemicals - Health Effects

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#### Brenntag Pacific, Inc.

10747 Patterson Place

Santa Fe Springs, CA 90670

United States

323-562-9500

**Facility :** Fresno, CA

#### Sodium Hydroxide

**Trade Designation**

Caustic Soda Solution, 25%

**Product Function**

Corrosion & Scale Control  
pH Adjustment

**Max Use**

200mg/L

Caustic Soda Solution, 30%	Corrosion & Scale Control pH Adjustment	165mg/L
Caustic Soda Solution, 50%	Corrosion & Scale Control pH Adjustment	100mg/L
Sodium Hydroxide Solution, 25%	Corrosion & Scale Control pH Adjustment	200mg/L
Sodium Hydroxide Solution, 30%	Corrosion & Scale Control pH Adjustment	165mg/L
Sodium Hydroxide Solution, 50%	Corrosion & Scale Control pH Adjustment	100mg/L
Sodium Hydroxide, 25%	Corrosion & Scale Control pH Adjustment	200mg/L
Sodium Hydroxide, 30%	Corrosion & Scale Control pH Adjustment	165mg/L
Sodium Hydroxide, 50%	Corrosion & Scale Control pH Adjustment	100mg/L

**Facility :** Richmond, CA**Sodium Hydroxide****Trade Designation**

<b>Trade Designation</b>	<b>Product Function</b>	<b>Max Use</b>
Caustic Soda Solution, 50%	Corrosion & Scale Control pH Adjustment	100mg/L
Sodium Hydroxide Solution, 50%	Corrosion & Scale Control pH Adjustment	100mg/L
Sodium Hydroxide, 50%	Corrosion & Scale Control pH Adjustment	100mg/L

**Facility :** South Gate, CA**Sodium Hydroxide****Trade Designation**

<b>Trade Designation</b>	<b>Product Function</b>	<b>Max Use</b>
Sodium Hydroxide Solution, 20%	Corrosion & Scale Control pH Adjustment	250mg/L

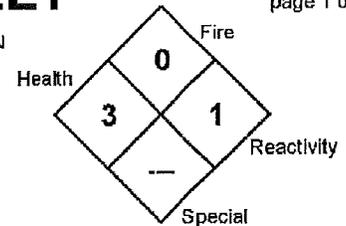
Sodium Hydroxide Solution, 25%	Corrosion & Scale Control pH Adjustment	200mg/L
Sodium Hydroxide Solution, 30%	Corrosion & Scale Control pH Adjustment	167mg/L
Sodium Hydroxide Solution, 50%	Corrosion & Scale Control pH Adjustment	100mg/L
Sodium Hydroxide, 20%	Corrosion & Scale Control pH Adjustment	250mg/L
Sodium Hydroxide, 25%	Corrosion & Scale Control pH Adjustment	200mg/L
Sodium Hydroxide, 30%	Corrosion & Scale Control pH Adjustment	167mg/L
Sodium Hydroxide, 50%	Corrosion & Scale Control pH Adjustment	100mg/L

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Number of matching Manufacturers is 1

Number of matching Products is 20

Processing time was 1 seconds

**MATERIAL SAFETY DATA SHEET****BRENNTAG**NFPA 704 DESIGNATION  
HAZARD RATING4=Extreme  
3=High  
2=Moderate  
1=Slight  
0=Insignificant

Brenntag MSDS #:	BPI-00182
MSDS Revision/Issue Date:	07/31/07
Supersedes Revision Date:	New

**1. CHEMICAL PRODUCT IDENTIFICATION & COMPANY IDENTIFICATION****PRODUCT IDENTIFIER:** Sodium Hydroxide 50% Solution (All Grades)**GENERAL USE:** Used in industry to neutralize acids; to precipitate alkaloids; in metal finishing; in cleaners; and to precipitate most metals (as hydroxides) from aqueous solutions.**PRODUCT DESCRIPTION:** An aqueous solution of Sodium Hydroxide. Synonyms for Sodium Hydroxide include: caustic soda, lye soda, sodium hydrate and white caustic.**INFORMATION PROVIDED BY:** Brenntag Pacific, Inc.  
5700 N.W. Front Avenue  
Portland, OR 97210

For MSDS call: PHONE: 503-242-0200

**EMERGENCY PHONE NUMBERS****BRENNTAG:** 503-699-7055  
**CHEMTREC:** 800-424-9300  
**CANUTEC:** 613-996-6666**2. COMPOSITION & INFORMATION ON INGREDIENTS**

COMPONENT	CAS #	OSHA HAZARD	WT %	ACGIH		OSHA	
				TLV <sub>(TWA)</sub>	STEL	PEL <sub>(TWA)</sub>	STEL
Sodium Hydroxide	1310-73-2	Corrosive; Lung Toxin	50 ± 1	None	None	2 mg/m <sup>3</sup>	None
				Ceiling: 2 mg/m <sup>3</sup>			

NDA = No Data Available

N/A = Not Applicable

**3. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW:** A clear to slightly turbid, colorless liquid having no characteristic odor. The mists and liquid are corrosive to all tissues contacted. Inhalation of mists may cause permanent lung damage. This material reacts with water to release a large amount of heat and can react violently with acids and other substances. **The NIOSH I.D.L.H. for Sodium Hydroxide is: 10 mg/m<sup>3</sup>.****POTENTIAL HEALTH EFFECTS****INHALATION:** Inhalation of mists or an aerosol can cause severe irritation or burns to the nose, mouth, throat, mucous membranes and lungs. Symptoms of exposure can include coughing, sneezing, choking, shortness of breath, chest pain and impairment of lung function. Inhalation of a high mist concentration may result in permanent lung damage.**EYE CONTACT:** Exposure to the mists or liquid can cause severe eye irritation and/or burns. Symptoms of exposure can include tearing, redness, swelling, pain and possible mucous discharge. Exposure may cause corneal damage and/or visual impairment even when prompt treatment is provided.**SKIN CONTACT:** Exposure to the mists or liquid can cause severe skin irritation and/or burns. Symptoms of exposure may include redness, swelling, pain and possible ulceration. Prolonged skin exposure to this material may cause destruction of the dermis with impairment of the skin, at site of contact, to regenerate. No published data indicates this material is absorbed through the skin.**INGESTION:** Ingestion can cause severe irritation and/or burns to the entire gastrointestinal tract, including the stomach and intestines characterized by nausea, vomiting, abdominal pain, bleeding, tissue ulceration and possible diarrhea.**CHRONIC:** The chronic health effects of exposure to this material are expected to be the same as for acute exposure.

Friday, April 01, 2011

PRODUCT IDENTIFIER: **Sodium Hydroxide 50% Solution (All Grades)**

page 2 of 6

**4. FIRST AID MEASURES**

- INHALATION:** If inhaled, immediately move to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; use the Holger Nielsen method (back pressure-arm lift) or proper respiratory device. If breathing is difficult, give oxygen. Call a physician.
- EYE CONTACT:** In case of contact, immediately flush eyes with plenty of clean running water for at least 15 minutes, lifting the upper and lower lids occasionally. Remove contact lenses, if worn. Get medical attention immediately.
- SKIN CONTACT:** In case of contact, immediately flush skin with plenty of clean running water for at least 15 minutes, while removing contaminated clothing and shoes. If burn or irritation occurs, call a physician.
- INGESTION:** If swallowed, DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give plenty of water to drink. Never give anything by mouth to an unconscious person.
- NOTE TO PHYSICIANS:** Sodium Hydroxide has a relatively low oral toxicity, but it can be corrosive to the eyes, skin and mucous membranes. If ingested, consideration should be given to careful endoscopy as stomach or esophageal burns, perforations or strictures may occur. Careful gastric lavage with an endotracheal tube in place should be considered. Treat exposure symptomatically.

**5. FIRE FIGHTING MEASURES**

- Flashpoint and Method:** This material does not flash.
- Flammable Limits (in air, % by volume)**    **Lower:** Not applicable                      **Upper:** Not applicable
- Autoignition Temperature:** Not applicable
- GENERAL HAZARD:** The Uniform Fire Code physical hazard classification for this material is: **Water Reactive, Class I**. Direct contact with water causes an exothermic reaction (generation of heat). The Uniform Fire Code health hazard classification for this material is: **Corrosive (Alkaline)**. This material may generate flammable / explosive Hydrogen gas on contact with some soft metals (i.e. Aluminum). This material may produce hazardous decomposition products.
- FIRE FIGHTING INSTRUCTIONS:**                      **EXTINGUISHING MEDIA:** Foam, CO<sub>2</sub> or dry chemicals.  
If water must be used and it can contact this material, it is best to use a water flood technique.
- FIRE FIGHTING EQUIPMENT:**                      Fire fighters should wear full protective equipment, including self-contained breathing apparatus.
- HAZARDOUS COMBUSTION PRODUCTS:** When heated to dryness and decomposition, it emits toxic sodium oxide.

**6. ACCIDENTAL RELEASE MEASURES**

- LAND SPILL:** Wearing recommended protective equipment and clothing, dike the spill and pick up the bulk of liquid using pumps or a vacuum truck, or absorb the liquid in sand or a commercial absorbent. Place in approved containers for recovery, disposal, or satellite accumulation. Neutralize the alkalinity, of the remaining liquid, using a dilute acid solution appropriate for neutralizing alkaline liquids. Liberally cover the spill area with sodium bicarbonate. Flush the spill area with water; collect the rinsates for disposal or sewer, as appropriate.
- WATER SPILL:** Wear recommended protective equipment and clothing if contact with hazardous material can occur. Stop or divert water flow. Dike contaminated water and remove for disposal and/or treatment. As appropriate, notify all downstream users of possible contamination.

Friday, April 01, 2011

PRODUCT IDENTIFIER: **Sodium Hydroxide 50% Solution (All Grades)**

page 3 of 6

**7. HANDLING AND STORAGE****STORAGE TEMPERATURE:** Ambient**STORAGE PRESSURE:** Ambient

**GENERAL:** Store in a cool, dry, well-ventilated area away from incompatible materials and products. Do not get this material in eyes, on skin or on clothing. Wear recommended personnel protective equipment. Do not breathe mists or aerosols. Use only with adequate ventilation. Do not take internally. Keep the container tightly closed when not in use. Wash thoroughly after handling.

This material is corrosive to Aluminum, Magnesium, Tin, Zinc and alloys containing these metals, and it will react violently with these metals in powder form.

Considerable heat is generated when this material is mixed with water. Never add water to this material. Always add this material slowly, with constant stirring, to the surface of cool (40 – 50° F.) water. If this material is added too rapidly, or without stirring, and becomes concentrated at the bottom of the mixing vessel, excessive heat may be generated, resulting in dangerous boiling and spattering, and a possible immediate and violent eruption of a highly caustic solution.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**CONTROL MEASURES:** Use a local or general, mechanical exhaust ventilation system capable of maintaining emissions, in the work area, below the OSHA-PEL or ACGIH Ceiling level.

**RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT**

**RESPIRATOR:** For exposure above the OSHA-PEL or ACGIH-TLV, wear a NIOSH-approved full facepiece or half mask air-purifying cartridge respirator equipped with a good particulate filter cartridge or supplied air. For exposure to Sodium Hydroxide above 10 mg/m<sup>3</sup>, wear a supplied air respirator or a self-contained breathing apparatus (SCBA) operated in the positive pressure mode.

**EYES:** Wear chemical goggles (recommended by ANSI Z87.1-1979), unless a full facepiece respirator is worn.

**GLOVES:** Wear Neoprene, Nitrile, Butyl Rubber or Natural Rubber gloves.

**CLOTHING & EQUIPMENT:** Wear a Neoprene, Nitrile, Butyl Rubber or Natural Rubber apron, or full protective clothing when handling this material. An eye wash station and safety shower should be available in the work area.

**FOOTWEAR:** Wear Neoprene, Nitrile, Butyl Rubber or Natural Rubber boots.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Clear to slightly turbid, colorless	<b>Bulk Density (pounds/ft<sup>3</sup>):</b>	Not applicable
<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	13 mm Hg @ 60° F.
<b>Odor:</b>	No characteristic	<b>Vapor Density (air=1):</b>	No data available
<b>Odor Threshold:</b>	No data available	<b>Evaporation Rate (n-Butyl Acetate=1):</b>	No data available
<b>Molecular Formula:</b>	NaOH (in water)	<b>VOC Content:</b>	Nil
<b>Molecular Weight:</b>	40.00 (in water)	<b>% Volatile:</b>	49 – 51
<b>Boiling Point:</b>	Approximately 142.2° C. (288° F.)	<b>Solubility in H<sub>2</sub>O:</b>	Complete
<b>Freezing/Melting Point:</b>	Approximately 12.2° C. (54° F.)	<b>Octanol/Water Partition Coefficient:</b>	No data available
<b>Specific Gravity:</b>	Approximately 1.525 @ 20° C.	<b>pH (as is):</b>	14.0
<b>Density (pounds/gallon):</b>	Approximately 12.72	<b>pH (1% solution):</b>	13.0 to 14.0

**10. STABILITY AND REACTIVITY**

**GENERAL:** This product is stable and hazardous polymerization will not occur.

**CONDITIONS TO AVOID:** Avoid contact with small amounts of water.

**INCOMPATIBLE MATERIAL:** Acids and acidic salts, chlorinated or fluorinated hydrocarbons, Acetaldehyde, Acrolein, Chlorine trifluoride, Hydroquinone, Maleic anhydride, Phosphorus pentoxide, Tetrahydrofuran, Aluminum, Magnesium, Tin, Zinc and alloys of these metals.

**HAZARDOUS DECOMPOSITION PRODUCTS:** When heated to decomposition, it emits toxic oxides of sodium.

**SENSITIVITY TO MECHANICAL IMPACT:** This material is not sensitive to mechanical impact.

**SENSITIVITY TO STATIC DISCHARGE:** This material is not sensitive to static discharge.

Friday, April 01, 2011

PRODUCT IDENTIFIER: **Sodium Hydroxide 50% Solution (All Grades)**

page 4 of 6

**11. TOXICOLOGICAL INFORMATION**

**Components:** Sodium Hydroxide  
**Eye Contact:** Rabbit: 50 ug/24 hours; Severe  
**Skin Contact:** Rabbit: 500 mg/24 hours; Severe  
**Oral Rat LD<sub>50</sub>:** No data available (Oral Rabbit LD<sub>50</sub>: 500 mg/kg)  
**Dermal Rabbit LD<sub>50</sub>:** 1,350 mg/kg  
**Inhalation Rat LC<sub>50</sub>:** No data available  
**Human Data:** No data available  
**Other Toxicological Data:** Intraperitoneal Mouse LD<sub>50</sub>: 40 mg/kg  
**Carcinogenicity:** No data available  
**Teratogenicity:** No data available  
**Mutagenicity:** Hamster Cytogenetic Analysis; Lung: 10 mmol/Liter  
**Synergistic Products:** None reported  
**Target Organs:** Eyes, Skin, Mucous membranes & Lungs

**Medical Conditions**  
**Aggravated By Exposure:** Skin or Respiratory disorders

**12. ECOLOGICAL INFORMATION****ENVIRONMENTAL FATE:**

This material is completely soluble in water and will significantly affect the pH of water. No specific environmental fate information is available.

**ENVIRONMENTAL CONSIDERATIONS:**

The aquatic toxicity for this material has not been determined. The aquatic toxicity for pure Sodium Hydroxide is: Cyprinus carpio LC<sub>100</sub> = 180 ppm/24 hours at 25° C.

**13. DISPOSAL CONSIDERATIONS**

**RCRA 40 CFR 261 CLASSIFICATION:** Corrosive Waste

**U.S. EPA WASTE NUMBER/DESCRIPTION:** D002

If this product is disposed of as shipped, it meets the criteria of a hazardous waste as defined under 40 CFR 261 due to its corrosivity. If this product becomes a waste, it will be a hazardous waste, which is subject to the Land Disposal Restrictions under 40 CFR 268 and must be managed accordingly. As a hazardous liquid waste, it must be disposed of in accordance with local, state, and federal regulations in a permitted hazardous waste treatment, storage, and disposal facility.

**14. TRANSPORTATION INFORMATION**

**DOT PROPER SHIPPING NAME:** Sodium hydroxide solution

**Hazard Class:** 8

**UN Number:** UN1824

**Packing Group:** II

**Primary Label:** Corrosive

**Subsidiary Label(s):** None Required

**Primary/Subsidiary Placards:** Corrosive

**DOT Reportable Quantity (RQ):** 1,000 pounds (NaOH)

**RQ for Product:** 2,000 pounds (157.2 gallons)

**Marine Pollutant:** No

**2004 North American Emergency Response Guidebook No.:** 154

**TDG PROPER SHIPPING NAME:** SODIUM HYDROXIDE SOLUTION

**Hazard Class:** 8

**UN Number:** UN1824

**Packing Group:** II

**Primary Label:** Corrosive

**Subsidiary Label(s):** None Required

**Primary/Subsidiary Placards:** Corrosive

**TDG Reportable Quantity (RQ): \*** At least 5kg or 5 liters.

**TDG Schedule XII:** Not listed

**Regulated Limit (RL): ##** 50 kg (NaOH)

**RL for Product:** 100 kg (65.6 liters)

**Other Shipping Information:** None

# Canadian Transportation of Dangerous Goods Regulations (TDGR), Part IX, Table I, Quantities or levels for Immediate Reporting: releases of reportable quantities, RQ, that meet the definition of a "dangerous occurrence" (a threat to life, health, property, or the environment) must be reported to the appropriate authorities as outlined in TDGR 9.13(1) and 9.14(1).

## Reporting to Environment Canada is required for any releases exceeding the regulated limits, RL, of 9.2 materials (primary or secondary). The regulated limits are found in Schedule XIII of the TDGR.

Friday, April 01, 2011

PRODUCT IDENTIFIER: **Sodium Hydroxide 50% Solution (All Grades)**

page 5 of 6

**15. REGULATORY INFORMATION**

**COMPONENTS:** Sodium Hydroxide  
**OSHA Target Organs:** Eyes, Skin, Mucous membranes & Lungs

**Carcinogenic Potential:**

**Regulated by OSHA:** No  
**Listed on NTP Report:** No  
**Listed by IARC:** No  
**IARC Group:** Not applicable  
**ACGIH Appendix A:** Not listed  
**A1 Confirmed Human:** Not applicable  
**A2 Suspected Human:** Not applicable

**U.S. EPA Requirements****Release Reporting****CERCLA (40 CFR 302)**

**Listed Substance:** Yes  
**Reportable Quantity:** 1,000 pounds  
**Category:** C  
**RCRA Waste No.:** None listed  
**Unlisted Substance:** Not applicable  
**Reportable Quantity:** Not applicable  
**Characteristic:** Not applicable  
**RCRA Waste No.:** Not applicable

**SARA TITLE III****Section 302 & 303 (40 CFR 355):**

**Listed Substance:** Not listed  
**Reportable Quantity:** Not applicable  
**Planning Threshold:** Not applicable

**Section 311 & 312 (40 CFR 370):**

**Hazard Categories (product):** Fire: N Sudden Release of Pressure: N Reactive: N Acute Health: Y Chronic Health: N  
**Planning threshold:** 10,000 pounds

**Section 313 (40 CFR 372):**

**Listed Toxic Chemical:** Not listed  
**Reporting Threshold:** Not applicable

**U.S. TSCA Status**

**Listed (40 CFR 710):** Yes

**State Regulations****State of California: Safe Drinking Water and Toxins Enforcement Act, 1986 (Proposition 65):**

**Carcinogen:** No  
**Reproductive Toxin:** No

**Other Regulations**

**State Right To Know Laws:** MA, NJ, PA, CA

**Canadian Regulations****Product Information:**

**Controlled Product:** Yes  
**WHMIS Hazard Symbols:** Corrosive Material  
**WHMIS Class & Division:** E

**Ingredient Information:**

**IDL Substance:** Yes  
**DSL or NDSL Lists:** DSL

Friday, April 01, 2011

PRODUCT IDENTIFIER: **Sodium Hydroxide 50% Solution (All Grades)**

page 6 of 6

**16. OTHER INFORMATION**

EPA Registration number: Not applicable

Approved Product Uses: Not applicable

**Special Notes:**

This product does not contain any material, which the State of California has found to cause cancer and/or birth defects or other reproductive harm.

**NOTE:** Deadly carbon monoxide gas can form when this material contacts food soil containing sugars. After cleaning operations are completed, thoroughly ventilate enclosed areas before entering. Always monitor oxygen and carbon monoxide levels when personnel are in enclosed areas. For proper tank entry procedures, see ANSI Z117.1-1977.

**Special Instructions:**

When making solutions, always add this material to cool (40 – 50° F.) water with adequate mixing to prevent overheating and possible spattering of a highly alkaline solution.

Do not allow this product to contact Aluminum, Magnesium, Tin or Zinc surfaces as this causes corrosion of the metal and generation of flammable / explosive Hydrogen gas.

**MSDS Revision Information:** Information Revised This Issue Date: **New product MSDS.**

Form Revision made 2/03/06

MSDS Distributed by: Brenntag Pacific, Inc.

NW Environmental Department

Phone: 503-242-0200 FAX: 503-412-3390

Prepared By: Edward Doheny

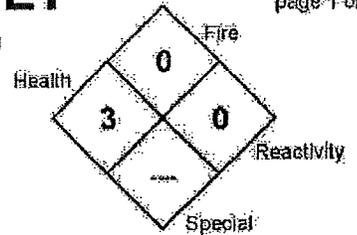
Date Prepared: July 31, 2007

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# MATERIAL SAFETY DATA SHEET Attachment D

## BRENNTAG

NFPA 704 DESIGNATION  
HAZARD RATING



4=Extreme  
3=High  
2=Moderate  
1=Slight  
0=Insignificant

Brenntag MSDS #:	BPI-19793
MSDS Revision/Issue Date:	04/26/12
Supersedes Revision Date:	03/28/06

### 1. CHEMICAL PRODUCT IDENTIFICATION & COMPANY IDENTIFICATION

<b>PRODUCT IDENTIFIER:</b> Caustic Soda Liquid 30% (All Grades)	
<b>GENERAL USE:</b>	Used in industry to neutralize acids; to precipitate alkaloids; in metal finishing; in cleaners; and to precipitate most metals (as hydroxides) from aqueous solutions.
<b>PRODUCT DESCRIPTION:</b>	An aqueous solution of Sodium Hydroxide. Synonyms for Sodium Hydroxide include: caustic soda; lye; soda lye; sodium hydrate, and white caustic.
<b>INFORMATION PROVIDED BY:</b>	<b>EMERGENCY PHONE NUMBERS</b>
Brenntag Pacific, Inc; 10747 Patterson Place Santa Fe Springs, CA 90670	<b>CHEMTREC: 800-424-9300</b>
For MSDS call: PHONE: 562-903-9626	

### 2. COMPOSITION & INFORMATION ON INGREDIENTS

COMPONENT	CAS #	OSHA HAZARD	WT %	ACGIH		OSHA	
				TLV (TWA)	STEL	PEL (TWA)	STEL
Sodium Hydroxide	1310-73-2	Corrosive; Lung Toxin	30 Minimum	None	None	2 mg/m <sup>3</sup>	None
					Ceiling: 2 mg/m <sup>3</sup>		

NDA = No Data Available, N/A = Not Applicable

### 3. HAZARDS IDENTIFICATION

<b>EMERGENCY OVERVIEW:</b>	A clear, to slightly hazy, colorless liquid having no characteristic odor. The liquid and mists are corrosive to all tissues contacted. Inhalation of mist can cause permanent lung damage. This product may react violently with acids and other substances. The NIOSH I.D.L.H. for Sodium Hydroxide is: 10 mg/m <sup>3</sup> .
<b>POTENTIAL HEALTH EFFECTS</b>	
<b>INHALATION:</b>	Inhalation of mists may be severely irritating or corrosive to the nose, mouth, throat, mucous membranes and lungs. Exposure may cause burns to the respiratory tract with the production of lung edema, which can result in shortness of breath, sneezing, coughing, choking, chest pain and impairment of lung function. Inhalation of high mist concentrations may result in permanent lung damage.
<b>EYE CONTACT:</b>	Exposure to the liquid or mists can cause severe eye irritation and/or burns. Symptoms of exposure may include tearing, redness, swelling, pain and possible mucous discharge. Corneal damage with impairment of vision may result from direct contact with the liquid.
<b>SKIN CONTACT:</b>	Exposure to the liquid or mists can cause severe skin irritation and/or burns. Symptoms of exposure may include redness, swelling, pain and scab formation. Prolonged skin exposure to the liquid or mist may cause destruction of the dermis with impairment of the skin, at site of contact, to regenerate. No published data indicates this product is absorbed through the intact skin.
<b>INGESTION:</b>	Ingestion can cause severe irritation and/or burns to the entire gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding and/or tissue ulceration.
<b>CHRONIC:</b>	The chronic health effects of exposure to the liquid or mists are expected to be the same as for acute exposure.

**4. FIRST AID MEASURES**

- INHALATION:** If inhaled, immediately move to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method. If victim ingested or inhaled the substance, use the Holger-Nielsen method (back pressure-arm lift) or proper respiratory device. If breathing is difficult, give oxygen. Call a physician.
- EYE CONTACT:** In case of contact, immediately flush eyes with plenty of clean running water for at least 15 minutes, lifting the upper and lower lids occasionally. Remove contact lenses, if worn. Get medical attention immediately.
- SKIN CONTACT:** In case of contact, immediately flush skin with plenty of clean running water for at least 15 minutes, while removing contaminated clothing and shoes. If burn or irritation occurs, call a physician.
- INGESTION:** If swallowed, DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give plenty of water to drink. Never give anything by mouth to an unconscious person.

**NOTE TO PHYSICIANS:** Sodium Hydroxide solutions have a relatively low oral toxicity, but can be corrosive to the eyes, skin and mucous membranes. If ingested, consideration should be given to careful endoscopy as stomach or esophageal burns, perforations or strictures may occur. Careful gastric lavage with an endotracheal tube in place should be considered. Treat exposure symptomatically.

**5. FIRE FIGHTING MEASURES**

**Flashpoint and Method:** This product does not flash.

**Flammable Limits (in air, % by volume):** Lower: Not applicable Upper: Not applicable

**Autoignition Temperature:** Not applicable

**GENERAL HAZARD:** This product is a non-combustible, highly alkaline, aqueous solution. The Uniform Fire Code health hazard classification for this product is: **Corrosive (Alkaline)**. Diluted solutions of this product may be corrosive and may generate flammable / explosive Hydrogen gas on contact with some soft metals (i.e. Aluminum). It may produce hazardous mists or hazardous decomposition products.

**FIRE FIGHTING INSTRUCTIONS:** **EXTINGUISHING MEDIA:** Water, foam, CO<sub>2</sub> or dry chemicals.  
Use the extinguishing media that is appropriate for the surrounding fire. Use a water spray or fog to cool the containers exposed to the heat of a fire.

**FIRE FIGHTING EQUIPMENT:** Fire fighters should wear full protective equipment, including self-contained breathing apparatus.

**HAZARDOUS COMBUSTION PRODUCTS:** When heated to dryness and decomposition, it emits toxic sodium oxide.

**6. ACCIDENTAL RELEASE MEASURES**

**LAND SPIEL:** Wearing recommended protective equipment and clothing, dike the spill and pick up the bulk of the liquid using pumps or a vacuum truck, or absorb the liquid in sand or a commercial absorbent. Place in approved containers for recovery, disposal, or satellite accumulation. Neutralize the alkalinity of the remaining liquid, using a dilute acid solution appropriate for neutralizing alkaline liquids. Liberally cover the spill area with sodium bicarbonate. Flush the spill area with water, collect the rinsates for disposal or sewer, as appropriate.

**WATER SPILL:** Wear recommended protective equipment and clothing if contact with hazardous material can occur. Stop or divert water flow. Dike contaminated water and remove for disposal and/or treatment. As appropriate, notify all downstream users of possible contamination.

**7. HANDLING AND STORAGE****STORAGE TEMPERATURE:** Ambient**STORAGE PRESSURE:** Ambient

**GENERAL:** Store in a cool, dry, well-ventilated area, away from incompatible materials and products. Do not get this product in eyes, on skin, or on clothing. Wear recommended personal protective equipment when handling this product. Do not breathe mists. Use with adequate ventilation. Do not take internally. Keep the containers tightly closed when not in use. Wash thoroughly after handling this product.

This product is corrosive to Tin, Aluminum, Magnesium, Zinc and alloys containing these metals, and can react violently with these metals in powder form. Never add water to this product. Always add this product, with constant stirring, slowly to the surface of cool to lukewarm (50 - 80°F) water.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**CONTROL MEASURES:** Use a local or general mechanical exhaust ventilation system capable of maintaining emissions, in the work area, below the OSHA-PEL, ACGIH-TLV or those levels that may cause irritation.

**RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT**

**RESPIRATOR:** For exposure above the OSHA-PEL, ACGIH-TLV or those levels that may cause irritation, wear a NIOSH-approved full facepiece or half mask air-purifying cartridge respirator equipped with a good mist/particulate filter cartridge or supplied air. For exposure to Sodium Hydroxide above 10 mg/m<sup>3</sup>, wear a supplied air respirator or a self-contained breathing apparatus (SCBA) operated in the positive pressure mode.

**EYES:** Wear chemical goggles (recommended by ANSI Z87.1-1979), unless a full facepiece respirator is worn.

**GLOVES:** Wear Neoprene, Nitrile or Natural Rubber gloves.

**CLOTHING & EQUIPMENT:** Wear a Neoprene, Nitrile or Natural Rubber apron or full protective clothing when handling this product. An eye wash station and safety shower should be available in the work area.

**FOOTWEAR:** Wear Neoprene, Nitrile or Natural Rubber boots.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Clear to slightly hazy, colorless	<b>Bulk Density (pounds/m<sup>3</sup>):</b>	Not applicable
<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	No data available.
<b>Odor:</b>	No characteristic	<b>Vapor Density (air=1):</b>	No data available
<b>Odor Threshold:</b>	No data available	<b>Evaporation Rate (n-Butyl Acetate=1):</b>	No data available
<b>Molecular Formula:</b>	NaOH (in water)	<b>VOC Content:</b>	Nil
<b>Molecular Weight:</b>	40.00 (in water)	<b>% Volatile:</b>	Approximately 70
<b>Boiling Point:</b>	Approximately 115° C. (239°F.)	<b>Solubility in H<sub>2</sub>O:</b>	Complete
<b>Freezing/Melting Point:</b>	Approximately 1° C. (33.8° F.)	<b>Octanol/Water Partition Coefficient:</b>	No data available
<b>Specific Gravity:</b>	Approximately 1.333 @ 15° C.	<b>pH (as is):</b>	Greater than 13.5
<b>Density (pounds/gallon):</b>	Approximately 11.12	<b>pH (1% solution):</b>	Greater than 13.0

**10. STABILITY AND REACTIVITY**

**GENERAL:** This product is stable and hazardous polymerization will not occur.

**CONDITIONS TO AVOID:** None known.

**INCOMPATIBLE MATERIAL:** Chlorinated and fluorinated hydrocarbons; Acetaldehyde, Acrolein, Chlorine trifluoride, Hydroquinone, Maleic anhydride, Phosphorous pentoxide, Tetrahydrofuran, Aluminum, Magnesium, Tin, Zinc, alloys of these metals and all acids or acidic materials.

**HAZARDOUS DECOMPOSITION PRODUCTS:** When heated to dryness and decomposition, it emits toxic oxides of sodium.

**SENSITIVITY TO MECHANICAL IMPACT:** This product is not sensitive to mechanical impact.

**SENSITIVITY TO STATIC DISCHARGE:** This product is not sensitive to static discharge.

**11. TOXICOLOGICAL INFORMATION**

<b>Components:</b>	<b>Sodium Hydroxide</b>
<b>Eye Contact:</b>	Rabbit: 50 ug/24 hours; Severe
<b>Skin Contact:</b>	Rabbit: 500 mg/24 hours; Severe
<b>Oral Rat LD<sub>50</sub>:</b>	No data available (Oral Rabbit LD <sub>50</sub> : 500 mg/kg)
<b>Dermal Rabbit LD<sub>50</sub>:</b>	1,350 mg/kg
<b>Inhalation Rat LC<sub>50</sub>:</b>	No data available
<b>Human Data:</b>	No data available
<b>Other Toxicological Data:</b>	Intraperitoneal Mouse LD <sub>50</sub> : 40 mg/kg
<b>Carcinogenicity:</b>	No data available
<b>Teratogenicity:</b>	No data available
<b>Mutagenicity:</b>	Hamster Cytogenetic Analysis; Lung: 10 mmol/Liter
<b>Synergistic Products:</b>	None reported
<b>Target Organs:</b>	Eyes, Skin, Mucous membranes & Lungs
<b>Medical Conditions Aggravated By Exposure:</b>	Skin or Respiratory disorders

**12. ECOLOGICAL INFORMATION****ENVIRONMENTAL FATE:**

This product is completely soluble in water. No specific environmental fate information is available. This product will affect the pH of water significantly.

**ENVIRONMENTAL CONSIDERATIONS:**

The aquatic toxicity for this product has not been determined. However, the aquatic toxicity for pure Sodium Hydroxide is: TLM Mesquite fish = 125 ppm/96 hours (freshwater); TLM Bluegill = 99 mg/Liter/48 hours (tap water).

**13. DISPOSAL CONSIDERATIONS**

**RCRA 40 CFR 261 CLASSIFICATION:** Corrosive Waste

**U.S. EPA WASTE NUMBER/DESCRIPTION:** D002

If this product is disposed of as shipped, it meets the criteria of a hazardous waste as defined under 40 CFR 261 due to its corrosivity. If this product becomes a waste, it will be a hazardous waste, which is subject to the Land Disposal Restrictions under 40 CFR 268 and must be managed accordingly. As a hazardous liquid waste, it must be disposed of in accordance with local, state and federal regulations in a permitted hazardous waste treatment, storage and disposal facility by treatment.

**14. TRANSPORTATION INFORMATION**

<b>DOT PROPER SHIPPING NAME:</b>	<b>Sodium hydroxide solution</b>		
	<b>Hazard Class:</b> 8	<b>UN Number:</b> UN1824	<b>Packing Group:</b> II
	<b>Primary Label:</b> Corrosive	<b>Subsidiary Label(s):</b> None Required	
	<b>Primary/Subsidiary Placards:</b> Corrosive		
<b>DOT Reportable Quantity (RQ):</b>	1,000 pounds (NaOH)	<b>RQ for Product:</b>	3,333 pounds (301.4 gallons)
<b>Marine Pollutant:</b>	No		
<b>2008 North American Emergency Response Guidebook No.:</b>	154		
<b>TDG PROPER SHIPPING NAME:</b>	<b>SODIUM HYDROXIDE SOLUTION</b>		
	<b>Hazard Class:</b> 8	<b>UN Number:</b> UN1824	<b>Packing Group:</b> II
	<b>Primary Label:</b> Corrosive	<b>Subsidiary Label(s):</b> None Required	
	<b>Primary/Subsidiary Placards:</b> Corrosive		
<b>TDG Reportable Quantity (RQ):<sup>#</sup></b>	At least 5kg or 5 liters.		
<b>TDG Schedule XI:</b>	Not listed		
<b>Regulated Limit (RL):<sup>##</sup></b>	50 kg (NaOH)	<b>RL for Product:</b>	167 kg (128 liters)
<b>Other Shipping Information:</b>	None		

<sup>#</sup> Canadian Transportation of Dangerous Goods Regulations (TDGR), Part IX, Table I, Quantities or levels for Immediate Reporting: releases of reportable quantities, RQ, that meet the definition of a "dangerous occurrence" (a threat to life, health, property, or the environment) must be reported to the appropriate authorities as outlined in TDGR 9.13(1) and 9.14(1).

<sup>##</sup> Reporting to Environment Canada is required for any releases exceeding the regulated limits, RL, of 9.2 materials (primary or secondary). The regulated limits are found in Schedule XIII of the TDGR.

**15. REGULATORY INFORMATION**

**COMPONENTS:** Sodium Hydroxide  
**OSHA Target Organs:** Eyes, Skin, Mucous membranes & Lungs

**Carcinogenic Potential:**

**Regulated by OSHA:** No  
**Listed on NTP Report:** No  
**Listed by IARC:** No  
**IARC Group:** Not applicable  
**ACGIH Appendix A:** Not listed  
**A1 Confirmed Human:** Not applicable  
**A2 Suspected Human:** Not applicable

**U.S. EPA Requirements****Release Reporting** **CERCLA (40 CFR 302)**

**Listed Substance:** Yes  
**Reportable Quantity:** 1,000 pounds  
**Category:** C  
**RCRA Waste No.:** None listed  
**Unlisted Substance:** Not applicable  
**Reportable Quantity:** Not applicable  
**Characteristic:** Not applicable  
**RCRA Waste No.:** Not applicable

**SARA TITLE III****Section 302 & 303 (40 CFR 355):**

**Listed Substance:** Not listed  
**Reportable Quantity:** Not applicable  
**Planning Threshold:** Not applicable

**Section 311 & 312 (40 CFR 370):**

**Hazard Categories (product):** Fire: **N** Sudden Release of Pressure: **N** Reactive: **N** Acute Health: **Y** Chronic Health: **N**  
**Planning threshold:** 10,000 pounds

**Section 313 (40 CFR 372):**

**Listed Toxic Chemical:** Not listed  
**Reporting Threshold:** Not applicable

**U.S. TSCA Status**

**Listed (40 CFR 710):** Yes

**State Regulations****State of California - Safe Drinking Water and Toxins Enforcement Act, 1986 (Proposition 65):**

**Carcinogen:** No  
**Reproductive Toxin:** No

**Other Regulations**

**State Right To Know Laws:** MA, NJ, PA, CA

**Canadian Regulations****Product Information:**

**Controlled Product:** Yes  
**WHMIS Hazard Symbols:** Corrosive Material  
**WHMIS Class & Division:** E

**Ingredient Information:**

**IDL Substance:** Yes  
**DSL or NDSL Lists:** DSL

**16. OTHER INFORMATION**

EPA Registration number: Not applicable

Approved Product Uses: Not applicable

**Special Notes:**

This product is not formulated or manufactured to contain any material, which the State of California has found to cause cancer and/or birth defects or other reproductive harm.

**Note:** Deadly carbon monoxide gas can form when this product contacts food soil containing sugars. After cleaning operations are completed, thoroughly ventilate enclosed areas before entering. Always monitor oxygen and carbon monoxide levels when personnel are in enclosed areas. For proper tank entry procedures, see ANSI Z117.1-1977.

**Special Instructions:**

When making solutions, always add this product to cool water with adequate mixing to avoid uneven heating and to make a uniform solution.

Do not allow this product to contact Aluminum, Magnesium, Tin or Zinc surfaces as this causes corrosion of the metal and generation of flammable / explosive Hydrogen gas.

MSDS Revision Information: Information Revised This Issue Date: Updated contact and regulatory information.  
Form Revision made 2/19/09

MSDS Distributed by: Brenntag Pacific, Inc.

Prepared By: Edward Doheny

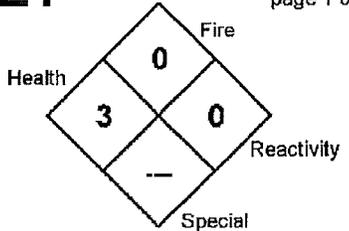
Date Prepared: April 26, 2012

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# MATERIAL SAFETY DATA SHEET Attachment D page 1 of 6

## BRENNTAG

NFPA 704 DESIGNATION  
HAZARD RATING



4=Extreme  
3=High  
2=Moderate  
1=Slight  
0=Insignificant

Brenntag MSDS #:	BPI-00188
MSDS Revision/Issue Date:	08/22/07
Supersedes Revision Date:	New

### 1. CHEMICAL PRODUCT IDENTIFICATION & COMPANY IDENTIFICATION

<b>PRODUCT IDENTIFIER:</b> Sodium Hydroxide 25% Solution (All Grades)	
<b>GENERAL USE:</b>	Used in industry to neutralize acids; to precipitate alkaloids; in metal finishing; in cleaners; and to precipitate most metals (as hydroxides) from aqueous solutions.
<b>PRODUCT DESCRIPTION:</b>	An aqueous solution of Sodium Hydroxide. Synonyms for Sodium Hydroxide include: caustic soda, lye, soda lye, sodium hydrate, and white caustic.
<b>INFORMATION PROVIDED BY:</b>	<b>Brenntag Pacific, Inc.</b> 5700 N.W. Front Avenue Portland, OR 97210
For MSDS call: <b>PHONE: 503-242-0200</b>	<b>EMERGENCY PHONE NUMBERS</b> <b>BRENNTAG: 503-699-7055</b> <b>CHEMTREC: 800-424-9300</b> <b>CANUTEC: 613-996-6666</b>

### 2. COMPOSITION & INFORMATION ON INGREDIENTS

COMPONENT	CAS #	OSHA HAZARD	WT %	ACGIH		OSHA	
				TLV <sub>(TWA)</sub>	STEL	PEL <sub>(TWA)</sub>	STEL
Sodium Hydroxide	1310-73-2	Corrosive; Lung Toxin	25 ± 2	None	None	2 mg/m <sup>3</sup>	None
				Ceiling: 2 mg/m <sup>3</sup>			
				<small>NDA = No Data Available    N/A = Not Applicable</small>			

### 3. HAZARDS IDENTIFICATION

<b>EMERGENCY OVERVIEW:</b>	A clear, to slightly turbid, colorless liquid having no characteristic odor. The liquid and mists are corrosive to all tissues contacted. Inhalation of mist can cause permanent lung damage. This product may react violently with acids and other substances. <b>The NIOSH I.D.L.H. for Sodium Hydroxide is: 10 mg/m<sup>3</sup>.</b>
<b>POTENTIAL HEALTH EFFECTS</b>	
<b>INHALATION:</b>	Inhalation of mists may be severely irritating or corrosive to the nose, mouth, throat, mucous membranes and lungs. Exposure may cause burns to the respiratory tract with the production of lung edema, which can result in shortness of breath, sneezing, coughing, choking, chest pain and impairment of lung function. Inhalation of high mist concentrations may result in permanent lung damage.
<b>EYE CONTACT:</b>	Exposure to the liquid or mists can cause severe eye irritation and/or burns. Symptoms of exposure may include tearing, redness, swelling, pain and possible mucous discharge. Corneal damage with impairment of vision may result from direct contact with liquid, unless treated promptly.
<b>SKIN CONTACT:</b>	Exposure to the liquid or mists can cause severe skin irritation and/or burns. Symptoms of exposure may include redness, swelling, pain and scab formation. Prolonged skin exposure to the liquid or mist may cause destruction of the dermis with impairment of the skin, at site of contact, to regenerate. No published data indicates this product is absorbed through the skin.
<b>INGESTION:</b>	Ingestion can cause severe irritation and/or burns to the entire gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding and/or tissue ulceration.
<b>CHRONIC:</b>	The chronic health effects of exposure to the liquid or mists are expected to be the same as for acute exposure.

**4. FIRST AID MEASURES**

- INHALATION:** If inhaled, immediately move to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; use the Holger Nielsen method (back pressure-arm lift) or proper respiratory device. If breathing is difficult, give oxygen. Call a physician.
- EYE CONTACT:** In case of contact, immediately flush eyes with plenty of clean running water for at least 15 minutes, lifting the upper and lower lids occasionally. Remove contact lenses, if worn. Get medical attention immediately.
- SKIN CONTACT:** In case of contact, immediately flush skin with plenty of clean running water for at least 15 minutes, while removing contaminated clothing and shoes. If burn or irritation occurs, call a physician.
- INGESTION:** If swallowed, DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give plenty of water to drink. Never give anything by mouth to an unconscious person.
- NOTE TO PHYSICIANS:** Sodium Hydroxide solutions have a low oral toxicity, but may be corrosive to the eyes, skin and mucous membranes. If ingested, consideration should be given to careful endoscopy as stomach or esophageal burns, perforations or strictures may occur. Careful gastric lavage with an endotracheal tube in place should be considered. Treat exposure symptomatically.

**5. FIRE FIGHTING MEASURES**

- Flashpoint and Method:** This product does not flash.
- Flammable Limits (in air, % by volume)**    **Lower:** Not applicable                      **Upper:** Not applicable
- Autoignition Temperature:** Not applicable
- GENERAL HAZARD:** This product is a non-combustible, highly alkaline, aqueous solution. The Uniform Fire Code health hazard classification for this product is: **Corrosive (Alkaline)**. Diluted solutions of this product may also be corrosive and may generate flammable / explosive Hydrogen gas on contact with some soft metals (i.e. Aluminum). It may produce hazardous mists or hazardous decomposition products.
- FIRE FIGHTING INSTRUCTIONS:**                      **EXTINGUISHING MEDIA:** Water, foam, CO<sub>2</sub> or dry chemicals.  
Use the extinguishing media that is appropriate for the surrounding fire. Use a water spray or fog to cool the containers exposed to the heat of a fire.
- FIRE FIGHTING EQUIPMENT:**                      Fire fighters should wear full protective equipment, including self-contained breathing apparatus.
- HAZARDOUS COMBUSTION PRODUCTS:** When heated to dryness and decomposition, it emits toxic sodium oxide.

**6. ACCIDENTAL RELEASE MEASURES**

- LAND SPILL:** Wearing recommended protective equipment and clothing, dike the spill and pick up the bulk of liquid using pumps or a vacuum truck, or absorb the liquid in sand or a commercial absorbent. Place in approved containers for recovery, disposal, or satellite accumulation. Neutralize the alkalinity, of the remaining liquid, using a dilute acid solution appropriate for neutralizing alkaline liquids. Liberally cover the spill area with sodium bicarbonate. Flush the spill area with water; collect the rinsates for disposal or sewer, as appropriate.
- WATER SPILL:** Wear recommended protective equipment and clothing if contact with hazardous material can occur. Stop or divert water flow. Dike contaminated water and remove for disposal and/or treatment. As appropriate, notify all downstream users of possible contamination.

**7. HANDLING AND STORAGE****STORAGE TEMPERATURE:** Ambient**STORAGE PRESSURE:** Ambient

**GENERAL:** Store in a cool, dry, well-ventilated area, away from incompatible materials and products. Do not get this product in eyes, on skin, or on clothing. Wear recommended personal protective equipment when handling this product. Do not breathe mists. Use with adequate ventilation. Do not take internally. Keep the containers tightly closed when not in use. Wash thoroughly after handling this product.

This product is corrosive to Tin, Aluminum, Magnesium, Zinc and alloys containing these metals, and can react violently with these metals in powder form. Never add water to this product. Always add this product, with constant stirring, slowly to the surface of cool to lukewarm (50 - 80° F.) water.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**CONTROL MEASURES:** Use a local or general, mechanical exhaust ventilation system capable of maintaining emissions, in the work area, below the OSHA-PEL or ACGIH-TLV.

**RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT**

**RESPIRATOR:** For exposure above the OSHA-PEL or ACGIH-TLV, wear a NIOSH-approved full facepiece or half mask air-purifying cartridge respirator equipped with a good mist / particulate filter cartridge or supplied air. For exposure to Sodium Hydroxide above 10 mg/m<sup>3</sup>, wear a supplied air respirator or a self-contained breathing apparatus (SCBA) operated in the positive pressure mode.

**EYES:** Wear chemical goggles (recommended by ANSI Z87.1-1979), unless a full facepiece respirator is worn.

**GLOVES:** Wear neoprene, nitrile or rubber gloves.

**CLOTHING & EQUIPMENT:** Wear a neoprene, nitrile or rubber apron or full protective clothing when handling this product. An eye wash station and safety shower should be available in the work area.

**FOOTWEAR:** Wear neoprene, nitrile or rubber boots.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Clear to slightly turbid, colorless	<b>Bulk Density (pounds/ft<sup>3</sup>):</b>	Not applicable
<b>Physical State:</b>	Liquid	<b>Vapor Pressure:</b>	About 93 mm Hg @ 60° C.
<b>Odor:</b>	No characteristic	<b>Vapor Density (air=1):</b>	No data available
<b>Odor Threshold:</b>	No data available	<b>Evaporation Rate (n-Butyl Acetate=1):</b>	No data available
<b>Molecular Formula:</b>	NaOH (in water)	<b>VOC Content:</b>	Nil
<b>Molecular Weight:</b>	40.00 (in water)	<b>% Volatile:</b>	Approximately 75
<b>Boiling Point:</b>	Approximately 110° C. (240.8° F.)	<b>Solubility in H<sub>2</sub>O:</b>	Complete
<b>Freezing/Melting Point:</b>	Approximately -5° C. (23° F.)	<b>Octanol/Water Partition Coefficient:</b>	No data available
<b>Specific Gravity:</b>	Approximately 1.2764 @ 20° C.	<b>pH (as is):</b>	Greater than 13.5
<b>Density (pounds/gallon):</b>	Approximately 10.64	<b>pH (1% solution):</b>	12.0 - 12.5

**10. STABILITY AND REACTIVITY**

**GENERAL:** This product is stable and hazardous polymerization will not occur.

**CONDITIONS TO AVOID:** None known.

**INCOMPATIBLE MATERIAL:** Chlorinated and fluorinated hydrocarbons, Acetaldehyde, Acrolein, Chlorine trifluoride, Hydroquinone, Maleic anhydride, Phosphorous pentoxide, Tetrahydrofuran, Aluminum, Magnesium, Tin, Zinc, alloys of these metals and all acids or acidic materials.

**HAZARDOUS DECOMPOSITION PRODUCTS:** When heated to dryness and decomposition, it emits toxic oxides of sodium.

**SENSITIVITY TO MECHANICAL IMPACT:** This product is not sensitive to mechanical impact.

**SENSITIVITY TO STATIC DISCHARGE:** This product is not sensitive to static discharge.

**11. TOXICOLOGICAL INFORMATION**

<b>Components:</b>	<b>Sodium Hydroxide</b>
<b>Eye Contact:</b>	Rabbit: 50 ug/24 hours; Severe
<b>Skin Contact:</b>	Rabbit: 500 mg/24 hours; Severe
<b>Oral Rat LD<sub>50</sub>:</b>	No data available (Oral Rabbit LD <sub>50</sub> : 500 mg/kg)
<b>Dermal Rabbit LD<sub>50</sub>:</b>	1,350 mg/kg
<b>Inhalation Rat LC<sub>50</sub>:</b>	No data available
<b>Human Data:</b>	No data available
<b>Other Toxicological Data:</b>	Intraperitoneal Mouse LD <sub>50</sub> : 40 mg/kg
<b>Carcinogenicity:</b>	No data available
<b>Teratogenicity:</b>	No data available
<b>Mutagenicity:</b>	Hamster Cytogenetic Analysis; Lung: 10 mmol/Liter
<b>Synergistic Products:</b>	None reported
<b>Target Organs:</b>	Eyes, Skin, Mucous membranes & Lungs
<b>Medical Conditions</b>	
<b>Aggravated By Exposure:</b>	Skin or Respiratory disorders

**12. ECOLOGICAL INFORMATION****ENVIRONMENTAL FATE:**

This product is completely soluble in water. No specific environmental fate information is available. This product will affect the pH of water significantly.

**ENVIRONMENTAL CONSIDERATIONS:**

The aquatic toxicity for this product has not been determined. However, the aquatic toxicity for pure Sodium Hydroxide is: TLM Mosquito fish = 125 ppm/96 hours (freshwater); TLM Bluegill = 99 mg/Liter/48 hours (tap water).

**13. DISPOSAL CONSIDERATIONS**

**RCRA 40 CFR 261 CLASSIFICATION:** Corrosive Waste

**U.S. EPA WASTE NUMBER/DESCRIPTION:** D002

If this product is disposed of as shipped, it meets the criteria of a hazardous waste as defined under 40 CFR 261 due to its corrosivity. If this product becomes a waste, it will be a hazardous waste, which is subject to the Land Disposal Restrictions under 40 CFR 268 and must be managed accordingly. As a hazardous liquid waste, it must be disposed of in accordance with local, state and federal regulations in a permitted hazardous waste treatment, storage and disposal facility by treatment.

**14. TRANSPORTATION INFORMATION**

**DOT PROPER SHIPPING NAME:** Sodium hydroxide solution

<b>Hazard Class:</b> 8	<b>UN Number:</b> UN1824	<b>Packing Group:</b> II
<b>Primary Label:</b> Corrosive	<b>Subsidiary Label(s):</b> None Required	
<b>Primary/Subsidiary Placards:</b> Corrosive		

**DOT Reportable Quantity (RQ):** 1,000 pounds (NaOH)      **RQ for Product:** 4,000 pounds (375.9 gallons)

**Marine Pollutant:** No

**2004 North American Emergency Response Guidebook No.:** 154

**TDG PROPER SHIPPING NAME:** SODIUM HYDROXIDE SOLUTION

<b>Hazard Class:</b> 8	<b>UN Number:</b> UN1824	<b>Packing Group:</b> II
<b>Primary Label:</b> Corrosive	<b>Subsidiary Label(s):</b> None Required	
<b>Primary/Subsidiary Placards:</b> Corrosive		

**TDG Reportable Quantity (RQ):<sup>#</sup>** At least 5kg or 5 liters.

**TDG Schedule XII:** Not listed

**Regulated Limit (RL):<sup>##</sup>** 50 kg (NaOH)      **RL for Product:** 200 kg (156.9 liters)

**Other Shipping Information:** None

<sup>#</sup> Canadian Transportation of Dangerous Goods Regulations (TDGR), Part IX, Table I, Quantities or levels for immediate reporting: releases of reportable quantities, RQ, that meet the definition of a "dangerous occurrence" (a threat to life, health, property, or the environment) must be reported to the appropriate authorities as outlined in TDGR 9.13(1) and 9.14(1).

<sup>##</sup> Reporting to Environment Canada is required for any releases exceeding the regulated limits, RL, of 9.2 materials (primary or secondary). The regulated limits are found in Schedule XIII of the TDGR.

**15. REGULATORY INFORMATION**

**COMPONENTS:** Sodium Hydroxide  
**OSHA Target Organs:** Eyes, Skin, Mucous membranes & Lungs

**Carcinogenic Potential:**

**Regulated by OSHA:** No  
**Listed on NTP Report:** No  
**Listed by IARC:** No  
 IARC Group: Not applicable  
**ACGIH Appendix A:** Not listed  
 A1 Confirmed Human: Not applicable  
 A2 Suspected Human: Not applicable

**U.S. EPA Requirements****Release Reporting****CERCLA (40 CFR 302)**

**Listed Substance:** Yes  
 Reportable Quantity: 1,000 pounds  
 Category: C  
 RCRA Waste No.: None listed  
**Unlisted Substance:** Not applicable  
 Reportable Quantity: Not applicable  
 Characteristic: Not applicable  
 RCRA Waste No.: Not applicable

**SARA TITLE III****Section 302 & 303 (40 CFR 355):**

**Listed Substance:** Not listed  
 Reportable Quantity: Not applicable  
 Planning Threshold: Not applicable

**Section 311 & 312 (40 CFR 370):**

Hazard Categories (product): **Fire: N Sudden Release of Pressure: N Reactive: N Acute Health: Y Chronic Health: N**  
 Planning threshold: 10,000 pounds

**Section 313 (40 CFR 372):**

**Listed Toxic Chemical:** Not listed  
 Reporting Threshold: Not applicable

**U.S. TSCA Status**

**Listed (40 CFR 710):** Yes

**State Regulations****State of California: Safe Drinking Water and Toxins Enforcement Act, 1986 (Proposition 65):**

Carcinogen: No  
 Reproductive Toxin: No

**Other Regulations**

**State Right To Know Laws:** MA, NJ, PA, CA

**Canadian Regulations****Product Information:**

Controlled Product: **Yes**  
 WHMIS Hazard Symbols: **Corrosive Material**  
 WHMIS Class & Division: **E**

**Ingredient Information:**

IDL Substance: Yes  
 DSL or NDSL Lists: DSL

**16. OTHER INFORMATION**

EPA Registration number: Not applicable

Approved Product Uses: Not applicable

**Special Notes:**

This product does not contain any material, which the State of California has found to cause cancer and/or birth defects or other reproductive harm.

**Note:** Deadly carbon monoxide gas can form when this product contacts food soil containing sugars. After cleaning operations are completed, thoroughly ventilate enclosed areas before entering. Always monitor oxygen and carbon monoxide levels when personnel are in enclosed areas. For proper tank entry procedures, see ANSI Z117.1-1977.

**Special instructions:**

When making solutions, always add this product to cool water with adequate mixing to make a uniform solution.

Do not allow this product to contact Aluminum, Magnesium or Zinc surfaces as this causes corrosion of the metal and generation of flammable / explosive Hydrogen gas.

**MSDS Revision Information:** Information Revised This Issue Date: **New product MSDS.**

Form Revision made 12/13/05

MSDS Distributed by: Brenntag Pacific, Inc.

NW Environmental Department

Phone: 503-242-0200 FAX: 503-412-3390

**Prepared By:** Edward Doheny

**Date Prepared:** August 22, 2007

This Material Safety Data Sheet is provided as an information resource only. It should not be taken as a warranty or representation for which Brenntag Pacific, Inc. assumes legal responsibility. While Brenntag Pacific, Inc. believes the information contained herein is accurate and compiled from sources believed to be reliable, it is the responsibility of the user to investigate and verify its validity. The buyer assumes all responsibility of using and handling the product in accordance with applicable federal, state, and local regulations.

**Exhibit B:**  
**Insurance Requirements**  
**(Chemical Vendor - Sodium Hydroxide)**

Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder and the results of that work by the Contractor, their agents, representatives, employees or subcontractors.

**MINIMUM SCOPE AND LIMIT OF INSURANCE**

Coverage shall be at least as broad as:

1. **Commercial General Liability (CGL):** Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal & advertising injury with limits no less than **\$3,000,000** per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
2. **Automobile Liability (AL):** ISO Form Number CA 00 01 covering any auto (Code 1) with combined single limits of liability of no less than **\$1,000,000** per accident for bodily injury and property damage, including **MCS90** endorsement form.
3. **Workers' Compensation:** as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than **\$1,000,000** per accident for bodily injury or disease.

If the contractor maintains higher limits than the minimums shown above, the City of Stockton requires and shall be entitled to coverage for the higher limits maintained by the contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the City of Stockton.

**Other Insurance Provisions**

The insurance policies are to contain, or be endorsed to contain, the following provisions:

- ***Additional Insured Status***  
The *City of Stockton, its Mayor, Council, officers, representatives, agents, employees and volunteers* are to be covered as additional insureds on the CGL and AL policy with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Contractor's insurance (**at**

least as broad as ISO Form CG 20 10 11 85 or if not available, through the addition of both CG 20 10 and CG 20 37 if a later edition is used).

- **Primary Coverage**

For any claims related to this contract, the Contractor's insurance coverage shall be primary insurance as respects the *City of Stockton, its Mayor, Council, officers, representatives, agents, employees and volunteers*. Any insurance or self-insurance maintained by the *City of Stockton, its Mayor, Council, officers, representatives, agents, employees and volunteers* shall be excess of the Contractor's insurance and shall not contribute with it. The City of Stockton does not accept primary endorsements limiting the Contractor's insurance coverage to sole negligence.

- **Notice of Cancellation**

Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the City of Stockton.

- **Waiver of Subrogation**

Contractor hereby grants to the City of Stockton a waiver of any right to subrogation which any insurer of said Contractor may acquire against the City of Stockton by virtue of the payment of any loss under such insurance. Contractor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the City of Stockton has received a waiver of subrogation endorsement from the insurer.

- **Deductibles and Self-Insured Retentions**

Any deductibles or self-insured retentions must be declared to and approved by the City of Stockton Risk Services. The City of Stockton may require the Contractor to purchase coverage with a lower deductible or retention or provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention.

- **Acceptability of Insurers**

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII if admitted to do business in the State of California; If not admitted to do business in the State of California, insurance is to be placed with insurers with a current A.M. Best's rating of no less than A+:X.

- **Claims Made Policies**

If any of the required policies provide claims-made coverage:

- The Retroactive Date must be shown, and must be before the date of the contract or the beginning of contract work.

- If Claims Made policy form is used, a three (3) year discovery and reporting tail period of coverage is required after completion of work.
- **Verification of Coverage**

Contractor shall furnish the City of Stockton with original certificates and amendatory endorsements required by this clause. All certificates and endorsements are to be received and approved by the City of Stockton Risk Services before work commences. Failure to obtain the required documents prior to the work beginning shall not waive the Contractor's obligation to provide them. The City of Stockton reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time, for any reason or no reason.
- **Special Risks or Circumstances**

The City of Stockton reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other circumstances.
- **Certificate holder address**

Proper address for mailing certificates, endorsements and notices shall be:

  - City of Stockton
  - Attention: Risk Services
  - 425 N. El Dorado Street
  - Stockton, CA 95202

City of Stockton Risk Services Phone: 209-937-5037

City of Stockton Risk Services Fax: 209-937-8558

- **Maintenance of Insurance**

If at any time during the life of the Contract or any extension, the Contractor fails to maintain the required insurance in full force and effect, all work under the Contract shall be discontinued immediately. Any failure to maintain the required insurance shall be sufficient cause for the CITY to terminate this Contract.
- **Subcontractors**

If the Contractor should subcontract all or any portion of the work to be performed in this contract, the Contractor shall cover the sub-contractor, and/or require each sub-contractor to adhere to all subparagraphs of these Insurance Requirements section. Similarly, any cancellation, lapse, reduction or change of sub-contractor's insurance shall have the same impact as described above.