

# Dyna Foam 800 XL



## Technical Dossier

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S H E P A R D   B R O S .   I N C .

# Dyna Foam 800 XL

## Alkaline Cleaner

### PRODUCT DESCRIPTION

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**DYNA FOAM 800 XL** is a heavy-duty highly alkaline detergent concentrate, specifically developed for cleaning heavily soiled equipment, walls and floors in meat smoking and production areas.

### PROPERTIES AND BENEFITS

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- Formulated for removing the heavy soils commonly found in food processing areas.
- Concentrate form allows for easy adaptation to any cleaning application.
- Exceptional wetting agent helps assure quick and thorough soil penetration.
- Removes grime, oil, and grease on floors in processing areas but is not harmful to motors.
- Non-corrosive to stainless steel.
- Rinses quickly and easily.

### DIRECTIONS

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- Recommended Use Rate: 2 to 6 fluid oz. /1 gal. of water.
- Consult your Shepard Bros. Inc. representative for specific use instructions and recommended dispensing equipment

### SAFE HANDLING

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A Safety Data Sheet containing detailed information regarding the properties and safe handling of **Dyna Foam 800 XL** is available on request and should be carefully reviewed prior to using this product.

(Rev. 04/17)

The technical information and use suggestions herein are presented in good faith and are believed to be reliable. They do not constitute a part of our terms and conditions of sale unless specifically incorporated in our Order Acknowledgement. Nothing herein shall be deemed to constitute a warranty, expressed or implied, that said information or data are correct, or that the product described is merchantable or fit for a particular purpose, or that said information, data or product can be used without infringing patents of a third party. The purchaser must determine individually, by preliminary tests or otherwise, the suitability of this product for the intended purpose.

Shepard Bros., Inc. ▪ 503 S. Cypress St. La Habra, CA 90631 ▪ (800) 645-3594 ▪ [www.shepardbros.com](http://www.shepardbros.com)

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Code:** DF800XL

**Product Name:** Dyna Foam 800 XL

**Company Name:** Shepard Bros., Inc.  
503 S. Cypress St.  
La Habra, CA 90631

**Phone Number:** +1 (562)697-1366

**Web site address:** www.shepardbros.com

**Emergency Contact:** CHEMTREC +1 (800)424-9300

**Product Category:** Foaming Alkaline Cleaner

## 2. HAZARDS IDENTIFICATION

**Acute Toxicity: Inhalation, Category 4**

**Acute Toxicity: Oral, Category 4**

**Skin Corrosion/Irritation, Category 1A**

**Serious Eye Damage/Eye Irritation, Category 2A**



**GHS Signal Word:** Danger

**GHS Hazard Phrases:**

H332 - Harmful if inhaled.  
H302 - Harmful if swallowed.  
H314 - Causes severe skin burns and eye damage.  
H319 - Causes serious eye irritation.

**GHS Precaution Phrases:**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 - Wash hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

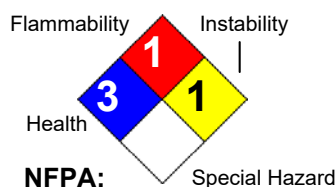
**GHS Response Phrases:**

P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. P363 - Wash contaminated clothing before reuse.  
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+313 - If eye irritation persists, get medical advice/attention.  
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P310 - Immediately call a POISON CENTER or doctor/physician.  
P321 - Specific treatment see Section 4 reference to supplemental first aid instruction - if immediate measures are required.

**GHS Storage and Disposal Phrases:**

P501 - Dispose of contents/containers in accordance with local/regional/national/international regulations.

## Hazard Rating System:



### Potential Health Effects (Acute and Chronic):

Chronic: Effects may be delayed.

#### Inhalation:

May be harmful if inhaled. May cause respiratory tract burns. Can produce delayed pulmonary edema.

#### Skin Contact:

Causes severe skin irritation. Can cause severe injury (reddening and swelling). May cause deep, penetrating ulcers of the skin. Can cause chemical burn.

#### Eye Contact:

Causes redness and pain. Causes severe eye burns. Causes serious eye damage. May cause irreversible eye injury. Contact may cause ulceration of the conjunctiva and cornea. Eye damage may be delayed.

#### Ingestion:

Can burn mouth, throat and stomach. Causes severe digestive tract burns with abdominal pain and vomiting. May cause perforation of the digestive tract. May cause severe and permanent damage to the digestive tract. May cause systemic effects.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
1310-58-3	Potassium hydroxide	<15.0 %
1310-73-2	Sodium hydroxide	<10.0 %
111-76-2	Ethylene glycol monobutyl ether	<5.00 %

## 4. FIRST AID MEASURES

### Emergency and First Aid

#### Procedures:

##### In Case of Inhalation:

Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask. Get medical attention immediately.

##### In Case of Skin Contact:

Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Gently wash with plenty of soap and water. Wash contaminated clothing separately before reuse. Get medical advice/attention.

##### In Case of Eye Contact:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do after 5 minutes and continue rinsing for an additional 15 minutes. Get immediate medical advice/attention.

##### In Case of Ingestion:

Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

##### Note to Physician:

Treat symptomatically and supportively. Show this safety data sheet to the doctor in attendance.

## 5. FIRE FIGHTING MEASURES

<b>Flash Pt:</b>	> 212 F (100 C)	Method Used:	Pensky-Marten Closed Cup
<b>Explosive Limits:</b>	LEL: No data.	UEL:	No data.
<b>Autoignition Pt:</b>	NA		
<b>Suitable Extinguishing Media:</b>	Use water spray, dry chemical, carbon dioxide, or appropriate foam.		
<b>Fire Fighting Instructions:</b>	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH approved (or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Contact of this product with many "active" metals such as aluminum, copper and zinc, can cause formation of flammable hydrogen gas. Use water with caution and in flooding amounts. Contact with moisture or water may generate sufficient heat to ignite nearby combustible materials. Containers can build up pressure if exposed to heat (fire). Use water spray to keep fire-exposed containers cool.		
<b>Flammable Properties and Hazards:</b>	Contact of this product with many "active" metals such as aluminum, copper and zinc, can cause formation of flammable hydrogen gas. Use water with caution and in flooding amounts. Contact with moisture or water may generate sufficient heat to ignite nearby combustible materials.		

## 6. ACCIDENTAL RELEASE MEASURES

<b>Protective Precautions, Protective Equipment and Emergency Procedures:</b>	Use proper personal protective equipment as indicated in Section 8.
<b>Environmental Precautions:</b>	Do not let product enter drains, sewers, watersheds or water systems.
<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	Use proper personal protective equipment as indicated in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Contain spill using an inert diking material. Transfer material into an approved container for possible recovery and reuse or for disposal. Neutralize residual product with a weak acid, such as acetic acid.

## 7. HANDLING AND STORAGE

<b>Precautions To Be Taken in Handling:</b>	Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Keep away from heat, sparks and flame. Keep away from oxidizing agents.
<b>Precautions To Be Taken in Storing:</b>	Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from sources of ignition. Keep away from oxidizing agents. Protect containers against damage. Keep container closed when not in use.
<b>Other Precautions:</b>	Handle in accordance with good industrial hygiene and safety practices. Keep out of reach of children.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
1310-58-3	Potassium hydroxide	No data.	TLV: 2mg/m3 CEIL: 2 mg/m3	No data.
1310-73-2	Sodium hydroxide	PEL: 2 mg/m3	CEIL: 2 mg/m3	No data.
111-76-2	Ethylene glycol monobutyl ether	PEL: 50 ppm	TLV: 20 ppm	No data.

<b>Respiratory Equipment (Specify Type):</b>	Avoid breathing vapors and mists. Use a NIOSH/MSHA approved respirator, with a full-facepiece or a full-facepiece respirator with organic vapor cartridges when concentrations are unknown.
<b>Eye Protection:</b>	Wear chemical splash goggles and a full-face shield where there is potential for eye contact.
<b>Protective Gloves:</b>	Wear appropriate protective gloves to prevent skin exposure. Rubber or neoprene gloves.
<b>Other Protective Clothing:</b>	Wear appropriate protective clothing to prevent skin exposure. Chemical resistant boots. Chemical resistant apron.
<b>Engineering Controls (Ventilation etc.):</b>	Use adequate general or local exhaust ventilation to minimize exposure levels. Provide adequate ventilation where the air contacts open process equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
<b>Work/Hygienic/Maintenance Practices:</b>	Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical States:</b>	[ ] Gas [ X ] Liquid [ ] Solid
<b>Appearance and Odor:</b>	Appearance: Brownish. Liquid. Odor: Mild.
<b>Melting Point:</b>	NA
<b>Boiling Point:</b>	220 F (104 C)
<b>Autoignition Pt:</b>	NA
<b>Flash Pt:</b>	> 212 F (100 C) Method Used: Pensky-Marten Closed Cup
<b>Explosive Limits:</b>	LEL: No data. UEL: No data.
<b>Specific Gravity (Water = 1):</b>	1.28
<b>Density:</b>	NA
<b>Vapor Pressure (vs. Air or mm Hg):</b>	NA
<b>Vapor Density (vs. Air = 1):</b>	NA
<b>Evaporation Rate:</b>	NA
<b>Solubility in Water:</b>	Complete
<b>Saturated Vapor Concentration:</b>	NA
<b>Viscosity:</b>	NA
<b>pH:</b>	> 12.0
<b>Percent Volatile:</b>	NA
<b>Molecular Formula &amp; Weight:</b>	PROPRIETARY 0.0

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	Contact of this product with many "active" metals such as aluminum, copper and zinc, can cause formation of flammable hydrogen gas.
<b>Stability:</b>	Unstable [ ] Stable [ X ]
<b>Conditions To Avoid - Instability:</b>	High temperatures, Incompatible materials, Excess heat.
<b>Incompatibility - Materials To Avoid:</b>	Strong acids, Contact of this product with many "active" metals such as aluminum, copper and zinc, can cause formation of flammable hydrogen gas.
<b>Hazardous Decomposition Or Byproducts:</b>	High temperatures and flames may produce: Carbon monoxide, Carbon dioxide, Oxides of potassium, sodium oxide.
<b>Possibility of Hazardous Reactions:</b>	Will occur [ ] Will not occur [ X ]



# SAFETY DATA SHEET

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Supersedes Revision: 02/04/2020

**Conditions To Avoid -  
Hazardous Reactions:**

No data available.

## 11. TOXICOLOGICAL INFORMATION

**Toxicological Information:**

Epidemiology: No information available.  
Teratogenicity: No information available.  
Reproductive Effects: No data available.  
Mutagenicity: No information available.  
Neurotoxicity: No data available.  
Other Studies: CAS# 111-76-2:  
Acute toxicity, LC50, Inhalation, Rat, 450.0 ppm, 4 H.  
Acute toxicity, LD50, Oral, Rat, 470.0 mg/kg  
Acute toxicity, LD50, Skin, Rabbit, 220.0 mg/kg.

Other Studies: CAS# 1310-58-3:  
Acute toxicity, LD50, Oral, Rat, 273 mg/kg

Other Studies: CAS# 1310-73-2  
Acute toxicity, LDLO, Oral, Species: Rabbit, 500.0 mg/kg.

**Irritation or Corrosion:**

Other Studies: CAS# 111-76-2:  
Standard Draize Test, Eyes, Species: Rabbit, 100.0 mg, 24 H.

Other Studies: CAS# 1310-58-3:  
Standard Draize Test, Skin, Species: Rabbit, 50.0 mg, 24H

Other Studies: CAS# 1310-73-2  
Standard Draize Test, Eyes, Species: Rabbit, 400.0 ug.

**Carcinogenicity:**

NTP? No IARC Monographs? No OSHA Regulated? No

## 12. ECOLOGICAL INFORMATION

**General Ecological  
Information:**

Environmental: No information found.  
Physical: No information found.

**Results of PBT and vPvB  
assessment:**

Other Studies: CAS# 1310-58-3:  
LC50, Western Mosquitofish (*Gambusia affinis*), adult(s), 80000 ug/L, 96H, Mortality

Other Studies: CAS# 1310-73-2:  
LC50, Common Shrimp, Sand Shrimp (*Crangon crangon*), adult(s), 33000 - 100000 ug/L, 48H, Mortality  
LC50, Western Mosquitofish (*Gambusia affinis*), adult(s), 125000 ug/L, 96H, Mortality  
LC50, Cockle (*Cerastoderma edule*), adult(s) 330000 - 1000000 ug/L, 48H, Mortality  
LC50, Guppy (*Poecilia reticulata*), young organism(s), 196.0 mg/L, 96H, Mortality.

Other Studies: CAS# 111-76-2:  
LC50, Water Flea (*Daphnia magna*), 1720 mg/l, 24 H, Intoxication  
LC50, Common Shrimp, Sand Shrimp (*Crangon crangon*), 775000 ug/l, 96 H, Mortality  
LC50, Amphipod (*Chaetogammarus marinus*), young organism(s), 1000 mg/l, 24 H, Mortality  
LC50, Carp (*Leuciscus idus* ssp. *melanotus*), 1575 mg/l, 48 H, Mortality  
Effective concentration to 0% of test organisms, Blue-Green Algae (*Microcystis aeruginosa*), 156000 ug/L, Population

**Persistence and Degradability:** No data available.

**Bioaccumulative Potential:** No data available.

**Mobility in Soil:** No data available.

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification. Observe all federal, state, and local environmental regulations.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

## 14. TRANSPORT INFORMATION

### LAND TRANSPORT (US DOT):

**DOT Proper Shipping Name:** CAUSTIC ALKALI LIQUIDS, N.O.S. (POTASSIUM HYDROXIDE, SODIUM HYDROXIDE)

**DOT Hazard Class:** 8 CORROSIVE

**UN/NA Number:** UN1719

**Packing Group:** II



## 15. REGULATORY INFORMATION

### EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
1310-58-3	Potassium hydroxide	No	Yes 1000 LB	No
1310-73-2	Sodium hydroxide	No	Yes 1000 LB	No
111-76-2	Ethylene glycol monobutyl ether	No	No	Yes-Cat. N230

### CAS # Hazardous Components (Chemical Name)

### Other US EPA or State Lists

1310-58-3	Potassium hydroxide	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: Title 8
1310-73-2	Sodium hydroxide	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: TAC, Title 8
111-76-2	Ethylene glycol monobutyl ether	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: TAC, Title 8

## 16. OTHER INFORMATION

**Revision Date:** 02/04/2020

**Additional Information About This Product:** No data available.

### Company Policy or Disclaimer:

Information presented herein is believed to be accurate and reliable to the best of our knowledge. However, we make no warranty or merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting





# SAFETY DATA SHEET

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from its use. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process. Users should make their own investigations to determine the suitability of the information for their particular purposes.

# Dyna Foam 800 XL

(Formerly Smokehouse 101)

## ALKALINE CLEANER

### DANGER

Causes serious eye irritation.

Harmful if inhaled. Harmful if swallowed.

Causes severe skin burns and eye damage.

**Precautionary Statements:** Do not breathe mist/vapors/spray. Wear protective gloves, protective clothing, eye protection, and face protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

### First Aid:

IF ON SKIN (or hair): Immediately remove all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or a doctor.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

SPECIFIC TREATMENT: See Section 4 of the SDS to reference supplemental first aid instruction if immediate measures are required.

**Storage/Disposal:** Dispose of contents and containers in accordance with local, regional, national, and international regulations.

**Supplemental Information:** This product may be fatal if swallowed. Take proper precautions, especially when using this product in an enclosed or semi-enclosed area. At elevated temperatures, this product may react with the reducing sugars in foods and beverages to produce toxic carbon monoxide. When entering a tank, even an empty one, follow all appropriate confined entry procedures (ANSI Z117.1).

KEEP OUT OF REACH OF CHILDREN.



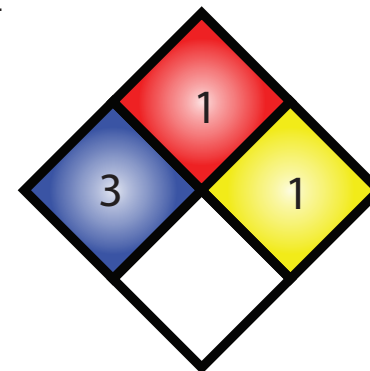
SHEPARD BROS., INC.  
503 S. CYPRESS ST.  
La Habra, CA 90631 • (562) 697-1366

**SAME  
TRUSTED  
FORMULA**



CONTAINS: POTASSIUM HYDROXIDE, SODIUM HYDROXIDE. DO NOT MIX WITH ACIDS.

Contact your Shepard Bros., Inc. representative for more specific use instructions and recommended dispensing equipment.



Read safety data sheets for more detailed information.

PROPER SHIPPING NAME:

**UN1719,**  
CAUSTIC ALKALI LIQUIDS, N.O.S.  
(POTASSIUM HYDROXIDE, SODIUM  
HYDROXIDE), 8, PGII

PRODUCT ID:

BATCH NO.:

NET CONTENTS:

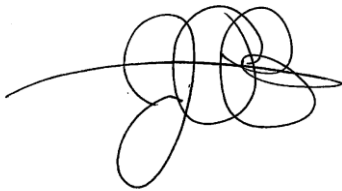
January 1, 2020

Based on current U.S. Food and Drug Administration Guidelines, this Letter of Guarantee certifies that the Shepard Bros., Inc. product, **Dyna Foam 800 XL**, is safe and suitable as a general cleaning agent on all surfaces or for use with steam or mechanical cleaning devices in all departments of establishments processing food for human or animal consumption.

When used according to the product label directions and in accordance with Good Manufacturing Practice this product will have no deleterious effects on the foods being processed.

This product must be used, handled and stored in a manner that will not adulterate food products. Before using this compound, food products and packaging materials must be removed from the room or carefully protected. After using this compound, surfaces must be thoroughly rinsed with potable water. This product must always be used according to applicable label directions.

Sincerely,



Jose Arias  
Director of Compliance & Regulatory Affairs  
Shepard Bros., Inc.



Shepard Bros., Inc.  
503 S. Cypress St.  
La Habra, CA 90631

SHEPARD BROS. (562) 697-1366

**Dyna Foam 800 XL**  
Caustic Soda Test Kit  
**SBRTK3000-Z**

1. Rinse vial 3 times with solution to be tested.
2. Fill bottle to 5 or 10 mL mark with sample.
3. Add 3 drops of Phenolphthalein indicator (PH1605), and swirl to mix. The solution should turn pink.
4. Add Hydrochloric acid 7.7N (HA6207), dropwise while stirring until the sample returns to its original color. Hold dropper vertically. Count number of drops added.

Results:

5. **TO TEST 10% AND HIGHER CONCENTRATION SOLUTIONS:**

**\*\*\*Use 5 mL sample: 1 drop = 0.2 % alkalinity as sodium hydroxide (by weight)**

Multiply number of drops x 0.2 to obtain % alkalinity as Caustic Soda (by weight)

Multiply number of drops x 1.43 to obtain % product (by volume)

Multiply number of drops x 1.67 to obtain oz product/gal

Multiply number of drops x 14300 to obtain ppm product in solution (by vol)

**Example:** 10 % solution by vol= 7 drops

12 % solution by vol = 9 drops

20 % solution by vol= 14 drops

10 oz/gal = 6 drops

20 oz/gal = 12 drops

1% as Sodium Hydroxide= 5 drops

**TO TEST 5-10 % CONCENTRATION SOLUTIONS:**

**\*\*\*Use 10 mL sample: 1 drop = 0.1% alkalinity as sodium hydroxide (by weight)**

Multiply number of drops x 0.1 to obtain % alkalinity as Caustic Soda (by weight)

Multiply number of drops x 0.715 to obtain % product (by volume)

Multiply number of drops x 0.909 to obtain oz product/gal

Multiply number of drops x 7150 to obtain ppm product in solution (by vol)

**Example:** 5 % solution by vol = 7 drops

10 % solution by vol = 14 drops

12% solution by vol = 17 drops

10 oz/gal = 11 drops

1% as Sodium Hydroxide= 10 drops

**NOTE:** For accuracy and consistency hold the dropper bottle in a vertical position during the titration.



Shepard Bros., Inc.  
503 S. Cypress St.  
La Habra, CA 90631

SHEPARD BROS. (562) 697-1366

**Dyna Foam 800XL**  
Caustic Soda Test Kit  
**SBRTK3035-Z**

1. Rinse vial 3 times with solution to be tested.
2. Fill bottle to 5, 10 or 25 mL mark with sample.
3. Add 3 drops of Phenolphthalein indicator (PH1605), and swirl to mix. The solution should turn pink.
4. Add Hydrochloric acid 2.5 N, one drop at a time, swirling after each drop, until color changes from pink to colorless. Hold dropper vertically. Count number of drops added.

5. **TO TEST VERY CONCENTRATED SOLUTIONS:**

\*\*\***Use 5 mL sample: 1 drop = 800 ppm alkalinity as sodium hydroxide (by weight)**

number of drops x 0.08 to obtain % alkalinity as Caustic Soda (by weight)

number of drops x 0.588 to obtain % product (by volume)

number of drops x 0.74 to obtain fl-oz product/gal

number of drops x 5880 to obtain ppm product in solution (by volume)

**Example:** 5% solution by vol = 9 drops

6% solution by vol = 10 drops

5 fl-oz/gal = 7 drops

6 fl-oz/gal = 8 drops

**TO TEST CONCENTRATED SOLUTIONS:**

\*\*\***Use 10 mL sample: 1 drop = 400 ppm alkalinity as sodium hydroxide (by weight)**

number of drops x 0.04 to obtain % alkalinity as Caustic Soda (by weight)

number of drops x 0.25 to obtain % product (by volume)

number of drops x 0.333 to obtain fl-oz product/gal

number of drops x 2500 to obtain ppm product in solution (by volume)

**Example:** 2% solution by vol = 8 drops

3% solution by vol = 12 drops

2 fl-oz/gal = 6 drops

3 fl-oz/gal = 9 drops

**TO TEST DILUTED SOLUTIONS:**

\*\*\***Use 25 mL sample: 1 drop = 160 ppm alkalinity as sodium hydroxide (by weight)**

number of drops x 0.016 to obtain % alkalinity as Caustic Soda (by weight)

number of drops x 0.112 to obtain % product (by volume)

number of drops x 0.143 to obtain fl-oz product/gal

number of drops x 1120 to obtain ppm product in solution (by volume)

**Example:** 1% solution by vol = 9 drops

1 fl-oz/gal = 7 drops

**NOTE:** For accuracy and consistency hold the dropper bottle in a vertical position during the titration.