

BID PROPOSAL FORM BID NO. 2017-008

**BID TO: CITY COMMISSION
CITY OF MARGATE**

1. The undersigned bidder proposes and agrees, if this bid is accepted, to enter into an Agreement with the Owner in the form included in the Contract Documents to perform the Work as specified or indicated in said Contract Documents entitled:

**FURNISH AND DELIVER SODIUM HYDROXIDE
BID NO. 2017 - 008**

2. Bidder accepts all of the terms and conditions of the Contract Documents, including without limitation those in the Notice Inviting Bids and Instructions to Bidders, dealing with the disposition of the Bid Security.
3. The bid will remain open for the period stated in the Notice Inviting Bids unless otherwise required by law. Bidder will enter into an Agreement within the time and in the manner required in the Notice Inviting Bids and the Instructions to Bidders, and will furnish the insurance certificates, Payment Bond and Performance Bond required by the Contract Documents.
4. It is the Contractor's responsibility to contact the City @ (954) 935-5346 prior to the bid opening to determine if any addenda have been issued on the project. Bidder has examined copies of all the Contract Documents including the following addenda (receipt of all of which is acknowledged):

Number _____ Date _____

5. Bidder has familiarized himself with the nature and extent of the Contract Documents, Work, site, locality where the Work is to be performed, the legal requirements (federal, state and local laws, ordinances, rules and regulations), and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as bidder deems necessary.
6. This bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation. Bidder has not directly or indirectly induced or solicited any other bidder to submit a false or sham bid. Bidder has not solicited or induced any person, firm or corporation to refrain from bidding and bidder has not sought by collusion to obtain for itself any advantage over any other bidder or over Owner.

To all the foregoing, and including all Bid Schedule(s) and Information Required of Bidder contained in this Bid Form, said bidder further agrees to complete the Work required under the Contract Documents within the Contract Time stipulated in said Contract Documents, and to accept in full payment thereof the Contract Price based on the Total Bid Price(s) named in the aforementioned Bidding Schedule(s).

NAME OF FIRM: Allied Universal Corporation

ADDRESS: 3901 NW 115 Avenue., Miami, FL 33178

NAME OF SIGNER: Cristhianne Munguia
(Print or Type)

TITLE OF SIGNER: Bid Coordinator

SIGNATURE: 

DATE: February 22, 2017

TELEPHONE NO.: 305-888-2623

FACSIMILE NO.: 786-522-0215

SCHEDULE OF BID PRICES – BID NO.2017-008

TO: CITY COMMISSION
CITY OF MARGATE

(Please fill in all blanks and return with your proposal.)

In accordance with your request for proposals and the specifications contained herein,
the undersigned proposes the following:

DESCRIPTION	TOTAL COST
TOTAL COST PER GALLON OF SODIUM HYDROXIDE DELIVERED – TRUCKLOAD (OVER 3500 GAL)	\$ <u>1.69</u> /GAL
TOTAL COST PER GALLON OF SODIUM HYDROXIDE DELIVERED – LESS THAN TRUCKLOAD Per Bid Specifications	\$ <u>2.03</u> /GAL
Minimum ordering amount <u>500</u> gals (not less than 400 gal)	

ALL BIDS MUST BE SIGNED WITH THE VENDOR NAME AND BY AN OFFICER OR
EMPLOYEE HAVING THE AUTHORITY TO BIND THE COMPANY OR FIRM BY
SIGNATURE.

MATERIAL SAFETY DATA SHEETS ENCLOSED? YES X NO

SPECIFICATION SHEETS/BROCHURES? YES X NO

HAVE YOUR INSURANCE REPRESENTATIVE REVIEW THE SAMPLE INSURANCE
CERTIFICATE TO ENSURE COMPLIANCE.

WILL YOUR FIRM ACCEPT PAYMENT VIA A CITY OF MARGATE PROCUREMENT
CARD? PLEASE CIRCLE ONE YES NO

BIDDER'S GENERAL INFORMATION:

The bidder shall furnish the following information. Additional sheets shall be attached as required. Failure to complete Item Nos. 1, 3, and 7 (if required) will cause the bid to be non-responsive and may cause its rejection. In any event, no award will be made until all of the Bidder's General Information (i.e., items 1 through 7 inclusive) is delivered to the CITY.

- (1) CONTRACTOR'S name and address:
Allied Universal Corporation
3901 NW 115 Avenue
Miami, FL 33178
- (2) CONTRACTOR'S telephone number: 305-888-2623
- (3) CONTRACTOR'S license: Primary classification: N/A for this bid
State License Number: _____
Supplemental classifications held, if any: _____
Name of Licensee, if different from (1) above: _____

- (4) Name of person who inspected site of proposed WORK for your firm:
Name: N/A for this bid Date of Inspection: _____
- (5) Name, address, and telephone number of surety company and agent who will provide the required bonds on this contract (if required): Donald Cote
Aon Risk Solutions
1001 Brickell Bay Drive, Suite 1100., Miami, FL 33131
- (6) ATTACH TO THIS BID the experience resume of the person who will be designated as Supervisor for this project.
See attached.

- (7) ATTACH TO THIS BID a financial statement (**If Required**), references, and other information, sufficiently comprehensive to permit an appraisal of CONTRACTOR'S current financial condition. (**Not Required**)

- (8) Subcontractors: The Bidder further proposes that as part of their submittal there is attached a list of subcontracting firms or businesses who will be awarded subcontracts for portions of the work in the event the bidder is awarded the Contract.

We do not use Subcontractors.

REFERENCE SHEET BID NO. 2017-008

In order to receive Bid Award Consideration on the proposed bid, it is a requirement that this sheet be completed and returned with your bid/proposal. This information may be used in determining the bid award for this Project.

BIDDER (COMPANY NAME): Allied Universal Corporation

ADDRESS: 3901 NW 115 Avenue., Miami, FL 33178

CONTACT PERSON: Cristhianne Munguia TITLE: Bid Coordinator

TELEPHONE: 305-888-2623 FACSIMILE: 786-522-0215

NUMBER OF YEARS IN BUSINESS: 63

ADDRESS OF NEAREST FACILITY: 8350 NW 93rd St., Miami, FL 33166

LIST THREE (3) COMPANIES OR GOVERNMENTAL AGENCIES WHERE THESE PRODUCTS OR SERVICES HAVE BEEN PROVIDED IN THE LAST YEAR.

1. Company Name: Miami Dade Water & Sewer
Address: Hialeah, FL 33011 Phone: 786-229-0701
Contact Person: Ed Turner Title: Plant Superintendent
2. Company Name: Palm Beach County
Address: Boca Raton, FL 33433 Phone: 561-616-6814
Contact Person: Sandy Cservenyak Title: Purchasing Agent
3. Company Name: City of Ft. Myers
Address: Ft. Myers, FL 33916 Phone: 239-321-7238
Contact Person: Debra Kearns Title: Purchasing Agent

**COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT
BID NO. 2017-008**

Bidder certifies that all material, equipment, etc. contained in this bid meets all O.S.H.A. requirements. Bidder further certifies that if he/she is the successful bidder, and the material, equipment, etc., delivered is subsequently found to be deficient in any O.S.H.A. requirement in effect on date of delivery, all costs necessary to bring the material, equipment, etc. into compliance with the aforementioned requirements shall be borne by the bidder.

**OCCUPATIONAL HEALTH AND SAFETY MATERIAL SAFETY DATA SHEET
REQUIRED:**

In compliance with Chapter 442, Florida Statutes, any item delivered from a contract resulting from this bid must be accompanied by a MATERIAL SAFETY DATA SHEET (MSDS). The MSDS must include the following information:

- A. The chemical name and the common name of the toxic substance.
- B. The hazards or other risks in the use of the toxic substances, including:
 - 1. The potential for fire, explosion, corrosivity and reactivity;
 - 2. the known acute and chronic health effects of risks from exposure, including the medical conditions which are generally recognized as being aggravated by exposure to the toxic substance; and
 - 3. the primary routes of entry and symptoms of overexposure.
- C. The proper precautions, handling practices, necessary personal protective equipment, and other safety precautions in the use of or exposure to the toxic substances, including appropriate emergency treatment in case of overexposure.
- D. The emergency procedure for spills, fire, disposal and first aid.
- E. A description in lay terms of the known specific potential health risks posed by the toxic substances intended to alert any person reading this information.
- F. The year and month, if available, that the information was compiled and the name, address and emergency telephone number of the manufacturer responsible for preparing the information.

SIGNATURE: _____

DATE: February 22, 2017

**CITY OF MARGATE
STATEMENT OF NO BID**

**IF YOU DO NOT INTEND TO BID ON THIS PROPOSAL, RETURN THIS FORM
TO ADDRESS WHERE BID IS TO BE SUBMITTED:**

I/We have declined to bid on your proposal No: **2017-008**

Bid Description: **FURNISH AND DELIVER SODIUM HYDROXIDE 50% BY WEIGHT**

For the following reason:

- _____ 1. Specifications are too tight, i.e. geared toward one brand or manufacturer only (Explain reason below)
- _____ 2. Insufficient time to respond to invitation.
- _____ 3. We do not offer this commodity/service or equivalent.
- _____ 4. Our product/service schedule would not permit us to perform.
- _____ 5. Unable to meet specifications.
- _____ 6. Unable to meet bonding requirements.
- _____ 7. Specifications unclear (Explain below).
- _____ 8. Other (Specify below).

REMARKS: _____

Attach additional pages if required.

I/We understand that if the NO BID form is not executed and returned, our name may be deleted from the list of qualified bidders for the City of Margate.

COMPANY NAME: _____

ADDRESS: _____

TELEPHONE NO: _____ DATE: _____

SIGNATURE OF BIDDER: _____

DRUG-FREE WORKPLACE PROGRAM FORM BID NO. 2017-008

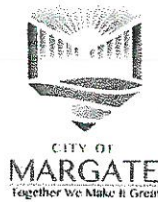
In accordance with Section 287.087, State of Florida Statutes, preference shall be given to businesses with Drug-free Workplace Programs. Whenever two or more bids which are equal with respect to price, quality, and service are received for the procurement of commodities or contractual service, a bid received from a business that certifies that it has implemented a Drug-free Workplace Program shall be given preference in the award process. In the event that none of the tied vendors have a Drug-free Workplace program in effect the City reserves the right to make final Decisions in the City's best interest. In order to have a Drug-free Workplace Program, a business shall:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any State, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community by any employee who is convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation. If bidder's company has a Drug-free Workplace Program, so certify below:

AS THE PERSON AUTHORIZED TO SIGN THE STATEMENT, I CERTIFY THAT THIS FIRM COMPLIES FULLY WITH THE ABOVE REQUIREMENTS.

SIGNATURE OF BIDDER: 

DATE: February 22, 2017



NON-COLLUSIVE AFFIDAVIT FOR 2017-008

State of Florida)

County of Dade)

Cristhianne Munguia being first duly sworn, deposes
and says that:

He/she is the Bid Coordinator, (Owner, Partner, Officer, Representative or Agent) of Allied Universal Corp. the Offeror that has submitted the attached Proposal;

He/she is fully informed regarding the preparation and contents of the attached Proposal and of all pertinent circumstances regarding such Proposal;

Such Proposal is genuine and is not a collusive or sham Proposal;

Neither the said Offeror nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Offeror, firm, or person to submit a collusive or sham Proposal in connection with the Work for which the attached Proposal has been submitted; or to refrain from bidding in connection with such Work; or have in any manner, directly or indirectly, sought by agreement or collusion, or communication, or conference with any Offeror, firm, or person to fix the price or prices in the attached Proposal or of any other Offeror, or to fix any overhead, profit, or cost elements of the Proposal price or the Proposal price of any other Offeror, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against (Recipient), or any person interested in the proposed Work;

The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Offeror or any other of its agents, representatives, owners, employees or parties in interest, including this affiant.

Signed, sealed and delivered in the presence of:

Witness

Angela Suncar

Witness

Gilda Fair

By

Cristhianne Munguia

Printed Name

Bid Coordinator

Title

ACKNOWLEDGMENT
NON-COLLUSIVE AFFIDAVIT FOR 2017-008

State of Florida
County of Dade

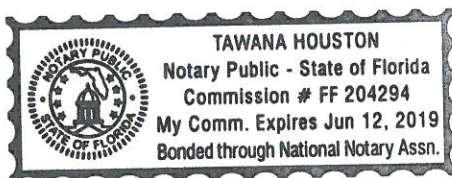
On this the 22 day of February, 2017, before me, the undersigned Notary Public of the State of Florida, personally appeared

Cristhianne Munguia, Angela Suncar and Gilda Fair
(Name(s) of individual(s) who appeared before notary)

whose name(s) is/are Subscribed to within the instrument, and he/she/they acknowledge that he/she/they executed it.

WITNESS my hand
and official seal.

NOTARY PUBLIC
SEAL OF OFFICE:



02/22/17

Tawana Houston
NOTARY PUBLIC, STATE OF FLORIDA

Tawana Houston
(Name of Notary Public: Print,
Stamp, or Type as Commissioned)

- ☐ Personally known to me, or
☐ Produced identification:

(Type of Identification Produced)

☐ DID take an oath, or ☐ DID NOT take an oath



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:
	PHONE (A/C, No, Ext): FAX (A/C, No):
INSURED	E-MAIL ADDRESS:
	PRODUCER CUSTOMER ID #:
	INSURER(S) AFFORDING COVERAGE
	NAIC #
	INSURER A:
INSURER B:	
INSURER C:	
INSURER D:	
INSURER E:	
INSURER F:	

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW ARE IN EFFECT AND ARE ASSIGNED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE COVERAGE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTY	TYPE OF INSURANCE	ADDL INSUR	INSURER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY					
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY					EACH OCCURRENCE \$ 500,000
	<input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR					DAMAGE TO RENTED PREMISES (Ea occurrence) \$
						MED EXP (Any one person) \$ 5,000
	GEN'L AGGREGATE LIMIT APPLIES PER:					PERSONAL & ADV INJURY \$ 500,000
	<input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC					GENERAL AGGREGATE \$ 500,000
						PRODUCTS - COMPROP AGG \$ 500,000
						\$
	AUTOMOBILE LIABILITY					
	<input checked="" type="checkbox"/> ANY AUTO					COMBINED SINGLE LIMIT (Ea accident) \$ 100,000
	<input type="checkbox"/> ALL OWNED AUTOS					BODILY INJURY (Per person) \$
	<input type="checkbox"/> SCHEDULED AUTOS					BODILY INJURY (Per accident) \$
	<input type="checkbox"/> HIRED AUTOS					PROPERTY DAMAGE (Per accident) \$
	<input type="checkbox"/> NON-OWNED AUTOS					\$
						\$
	UMBRELLA LIAB					
	<input type="checkbox"/> EXCESS LIAB					EACH OCCURRENCE \$
	<input type="checkbox"/> OCCUR					AGGREGATE \$
	<input type="checkbox"/> CLAIMS-MADE					\$
	DEDUCTIBLE					\$
	RETENTION \$					\$
						\$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY					
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under SPECIAL PROVISIONS below	Y/N	N/A			Note: When applicable, the Insured shall provide a copy of authorized certificate or
						Workers Compensation Exemption

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

The City of Margate additional insured for General Liability Only (REQUIRED)

CERTIFICATE HOLDER**CANCELLATION**

The City of Margate
(Department Name)
6790 Margate Blvd
Margate, Florida 33063

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



The Public Health and Safety Organization

NSF Product and Service Listings

These NSF Official Listings are current as of **Wednesday, February 22, 2017** 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=Allied+Universal+Corporation&ChemicalName=Sodium+Hydroxide&PlantState=Florida+FL&](http://info.nsf.org/Certified/PwsChemicals/Listings.asp?CompanyName=Allied+Universal+Corporation&ChemicalName=Sodium+Hydroxide&PlantState=Florida+FL&)

NSF/ANSI 60 Drinking Water Treatment Chemicals - Health Effects

Allied Universal Corporation

3901 Northwest 115th Avenue

Miami, FL 33178

United States

800-981-6700

305-888-2623

[Visit this company's website](#)

<http://www.allieduniversal.com>

Facility : Fort Pierce, FL

Sodium Hydroxide

Trade Designation

Caustic Soda

Caustic Soda 25%

Caustic Soda 50%

Rayon Grade Caustic Soda 50%

Sodium Hydroxide

Sodium Hydroxide 25%

Sodium Hydroxide 50%

Product Function

Corrosion & Scale Control

Corrosion & Scale Control

Corrosion & Scale Control

Corrosion & Scale Control

Corrosion & Scale Control

Corrosion & Scale Control

Corrosion & Scale Control

Max Use

100 mg/L

200mg/L

100mg/L

100mg/L

100 mg/L

200mg/L

100mg/L

NOTE: Only products bearing the NSF Mark on the product, product packaging, and/or documentation shipped with the product are Certified.

Facility : Miami, FL**Sodium Hydroxide**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic Soda 50%	Corrosion & Scale Control	100mg/L
Sodium Hydroxide 50%	Corrosion & Scale Control	100mg/L
Caustic Soda	Corrosion & Scale Control	100mg/L
Rayon Grade Caustic Soda 50%	Corrosion & Scale Control	100mg/L
Sodium Hydroxide	Corrosion & Scale Control	100mg/L

NOTE: Only products bearing the NSF Mark on the product, product packaging, and/or documentation shipped with the product are Certified.

Facility : Tampa, FL**Sodium Hydroxide**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Sodium Hydroxide 50%	Corrosion & Scale Control	100mg/L
Caustic Soda 50%	Corrosion & Scale Control	100mg/L
Caustic Soda	Corrosion & Scale Control	100 mg/L
Caustic Soda 25%	Corrosion & Scale Control	200mg/L
Rayon Grade Caustic Soda 50%	Corrosion & Scale Control	100mg/L
Sodium Hydroxide	Corrosion & Scale Control	100 mg/L
Sodium Hydroxide 25%	Corrosion & Scale Control	200mg/L

NOTE: Only products bearing the NSF Mark on the product, product packaging, and/or documentation shipped with the product are Certified.

Number of matching Manufacturers is 1

Number of matching Products is 19

Processing time was 0 seconds

EMERGENCY CONTACT NUMBERS

CORPORATE:

WORKING HOURS:

(305) 888 – 2623

EMERGENCY CONTACTS (OTHER PHONE NUMBERS):

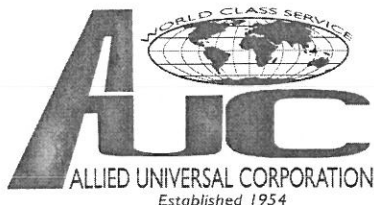
- | | |
|--|--|
| 1. RON ZEIGLER (S. REGIONAL OPERATIONS MANAGER) | WORK (772) 464-7001, CELL (772) 342-1872 |
| 2. ANTHONY FEDD (N. REGIONAL OPERATIONS MANAGER) | WORK (912) 267-6064, CELL (850) 212-6858 |
| 3. JIM LAFRENIERE (FLEET OPERATIONS MANAGER) | WORK (305) 894-4173, CELL (305) 491-3430 |
| 4. MIKE HARRIS (FLEET MAINTENANCE MANAGER) | WORK (912) 267-9590, CELL (912) 571-0704 |
| 5. VACANT (DRIVER SAFETY COMPLIANCE MANAGER) | CELL |
| 6. VACANT (DRIVER SAFETY COMPLIANCE MANAGER) | CELL |
| 7. TODD TUCKER (VICE PRESIDENT OF OPERATIONS - SECURITY) | WORK (786) 522-0200, CELL (903) 987-3248 |

US TSA's TRANSPORTATION SECURITY COORDINATION CENTER:

(703) 563-3236 OR 3237

BRANCHES:

	<u>HOME OR CELL PHONE NO.</u>
<u>MIAMI, FL</u> (305) 888-2623	
JAMIE JOHNSON	CELL # (305) 216-4612
LEO DELEON	CELL # (305) 310-0762
JUAN CARLOS CEDENO	CELL # (786) 365-2482
<u>FT. PIERCE, FL</u> (772) 464-6195	
JAUMING CHEN	CELL # (832) 459-0870
WALTER CIECWIERZ	CELL # (201) 993-3536
TOM STRICKLAND	CELL # (772) 919-2073
<u>TAMPA, FL</u> (813) 832-4868	
ELAINE BENNETT	CELL # (901) 326-6262
KEN HAYES	CELL # (313) 820-4339
HERMAN HARRIS	CELL # (813) 426-4060
KAREN GARILLI	CELL # (813) 966-3635
<u>JACKSONVILLE, FL</u> (904) 438-4976	
KY NICHOLSON	CELL # (904) 607-8141
DAVID SCHULTZ	CELL # (912) 222-9487
<u>BRUNSWICK, GA</u> (912) 267-9470	
WILLIAM WARE	CELL # (502) 333-8059
MIKE LEEN	CELL # (772) 528-5436
CHARITY BREWER	CELL # (912) 230-8680
<u>RANGER, GA</u> (706) 334-7377	
EARL WHITE	CELL # (813) 317-8470
MATHEW MULLINS	CELL # (678) 767-0193
LISA DALE	CELL # (770) 769-6528
<u>ELLISVILLE, MS</u> (601) 477-2550	
BOB BOYKIN	CELL # (251) 604-7365
TIGRAN ARMSTRONG	CELL # (601) 554-6582
ANGELA ANDREWS	CELL # (251) 604-7365



3901 NW 115 Avenue
Miami, Florida 33178
305-888-2623 office
305-463-8369 fax

February 22, 2017

Allied Universal Corporation is a privately owned company, which has been in business since 1954. Our Corporate Headquarters is located at 3901 N.W. 115 Avenue, Miami, FL 33178.

There are presently 7 delivery locations; Miami, FL; Ft. Pierce, FL; CFI-Tampa, FL; Jacksonville, FL Terminal, Brunswick and Ranger, GA and Ellisville, MS. We package Gas Chlorine in all locations, except Ft. Pierce and Jacksonville and manufacture Sodium Hypochlorite, in all of our locations, except our Jacksonville Terminal and have serviced Utilities and Municipalities, in 22 states, for over 60 years. We also distribute other water treatment chemicals, swimming pool chemicals, and some chemicals for industrial use.

The delivering facility which will supply the City of Margate is our Miami, FL facility by our affiliate company, Transportation Services Unlimited, with a dedicated fleet of over 100 tractors and tankers, with an employee complement of approximately 275 people.

The location of the nearest emergency station is the Miami, FL facility, located at 8350 N.W 93rd Street., Miami, FL 33166. With normal delivery lead time of 3 work days. Contact name for all deliveries is Juan Carlos Cedeno, phone number 786-312-1503, e-mail JuanC@Allieduniversal.com. He is available from 6:30 a.m. until 3:30 p.m.

Other key personnel is: Jaimie Johnson, Branch Manager 786-312-1501, is in charge of emergency crews and Ron Zeigler South Regional Operations Manager 772-342-1872. Attached you will find the Emergency Contact list and Emergency Spill Procedure for your review.

If you have any questions or concerns on any of this information, please contact Cristhianne Munguia, Bid Coordinator, Allied Universal Corporation, 3901 N.W. 115 Avenue, Miami, FL 33178, phone number (305) 888-2623/Ext. 0125; Fax, (786) 522-0215; E-Mail, CristyM@allieduniversal.com

/cm

3901 NW 115 Avenue
Miami, Florida 33178
305-888-2623

9501 Rangeline Road
Ft. Pierce, Florida 34987
772-464-6195

30 Neil Gunn Drive
Ellisville, MS 39437
601-477-2550

5215 W. Tyson Avenue
Tampa, Florida 33611
813-832-4868

8350 NW 93 Street
Miami, Florida 33166
305-888-2623

204 SCM Road
Brunswick, GA 31525
912-267-9470

1405 Possum Hollow Road
Ranger, GA 30734
706-334-7377

2100 Port Road
West Memphis, AR 72301
870-732-3107



3901 NW 115th Avenue
Miami, Florida 33178
305-888-2623 office
305-885-4671 fax

August 2013

Dear Allied Customer:

As a member of the National Association of Chemical Distributors and The Chlorine Institute, Allied Universal Corporation strongly encourages all of its customers to formulate, periodically review and update their procedures for the proper handling and use of Allied's chemical products. Customer procedures should, of course, include emergency preparedness and plans for handling potential chemical spills and releases.

It is the responsibility of each customer to develop its own individual, site-specific emergency procedures. The attached "Spill Contingency" pamphlet contains examples of some of the types of procedures customers may wish to consider when formulating, reviewing or updating their respective emergency procedures. Customers should NOT rely upon these examples, as they are not intended to be comprehensive, nor will they be appropriate for every customer, since our customers' business operations, personnel, physical facilities and locations are diverse, and customer practices and procedures will, by necessity, vary accordingly. Customers may, however, find these examples useful in formulating, reviewing or updating their own individualized, site-specific practices and procedures.

Allied strongly recommends that each customer consult with a qualified and licensed environmental cleanup service in formulating emergency procedures for handling chemical spills or releases. As part of these procedures, each customer should have available for immediate use the contact information for local environmental cleanup services.

All customers must ensure that their employees are trained in the proper and safe handling and use of all chemical products, and that their employees are familiar with all applicable labels and Material Safety Data Sheets and Safety Data Sheets (after 6/1/2015). This employee training must be documented and maintained on file at all times, in accordance with applicable government regulations.

It is the responsibility of every customer to familiarize themselves and to comply with all applicable federal, state and local laws and regulations pertaining to chemicals utilized in the customer's business operations, including, but not limited to, title 29 of the Code of Federal Regulations, section 1910.38. Customers should not rely upon the attached exemplar procedures. Customers should consult with and rely only upon the advice of licensed legal and environmental professionals. Allied will not be responsible for any incidental, consequential, special or other damages arising from or relating to the attached exemplar procedures, or its customers' formulation and implementation of emergency preparedness and chemical cleanup procedures.

If Allied can assist your efforts in the proper handling of our products, please contact your Sales Representative.

NOTE: Many Chlorine Institute Pamphlets are available for free online at www.chlorineinstitute.com, including Pamphlet 64 Emergency Plans, 65 Personal Protective Equipment, Pamphlet 1 Chlorine Handbook, and many more.

WARNING: CUSTOMERS SHOULD NOT RELY UPON THESE EXEMPLAR PROCEDURES, AS THEY ARE INTENDED SOLELY FOR THE CUSTOMER'S USE AS A STARTING POINT IN FORMULATING EACH CUSTOMER'S INDIVIDUAL, SITE-SPECIFIC EMERGENCY PREPAREDNESS/CHEMICAL CLEANUP PROCEDURES. CUSTOMERS SHOULD CONSULT WITH AND RELY ONLY UPON THE ADVICE OF LICENSED LEGAL AND ENVIRONMENTAL PROFESSIONALS IN FORMULATING THEIR INDIVIDUAL, SITE-SPECIFIC PROCEDURES. ALLIED IS NOT RESPONSIBLE FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INCIDENTAL, CONSEQUENTIAL AND SPECIAL DAMAGES, ARISING FROM THE CUSTOMER'S FORMULATION AND IMPLEMENTATION OF EMERGENCY PREPAREDNESS/CHEMICAL CLEANUP PROCEDURES.

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SPILL CONTINGENCY

In the event of a spill or leak, the employee discovering the spill or leak should immediately notify the site supervisor or manager. The site supervisor or manager should direct the employee to determine the source or cause of the leak and provide the employee with instructions on how to control or contain the incident, if possible. If containment and control is not possible, the facility owner or authorized site manager manager/supervisor should call the local public agency and first responders as well as their supplier.

Please insert applicable phone numbers and names for your location.

EMERGENCY RESPONSE PHONE NUMBERS	
FIRE DEPARTMENT	911
ALLIED 24HR CHEMICAL SPILL EMERGENCY NUMBER	1-903-987-3248 Or CHEMTREC 1-800-424-9300
ALLIED BRANCH SUPPLIER NUMBER: Miami, FL Ft. Pierce, FL CFI - Tampa, FL Brunswick, GA Ranger, GA Ellisville, MS	305-888-2623, x127 OR x139 772-464-6195, x205 813-832-4868 912-267-9470, x123 OR x133 706-334-7377, x. 203 OR x205 601-477-2550, x. 1001 OR x1002
ALLIED SALES REPRESENTATIVE	
LOCAL HOSPITAL NAME & PHONE NUMBER	
OTHER APPLICABLE EMERGENCY NUMBER	
FACILITY NEIGHBOR	
FACILITY NEIGHBOR	

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Hazardous Materials such as Sodium Hypochlorite Solution (Bleach), Sodium Hydroxide Solution (Caustic) and Acids have different properties and as such have different Reportable Quantities (RQ) dealing with notification. Reportable Quantity (RQ) as defined by the USEPA, means that quantity (as set forth by regulation), the release of which requires notification to the National Response Center at 1-800-424-8802.

Both the USEPA and USDOT have published tables on Reportable Quantities for Hazardous Substances in the United States Code of Federal Regulations: EPA 40 CFR § 302.4 and DOT at 49 CFR § 172.101 APPENDIX A, Table 1.

It should be understood that the RQ's as listed by both USEPA & USDOT are for pure substances. The chart on page 8 can be used to determine whether a RQ leak or spill has occurred.

If a spill, leak or release to the environment, has occurred over the RQ amount, and material has not been contained by a containment device (e.g. scrubber, building, dike, etc.), notification to Federal, State and local authorities must and may have to be made. Federal notification is required, State and Local notification will vary from State-to-State and locality-to-locality. You must check with your State and Local applicable authorities to determine notification requirements. The Federal and some State numbers are listed below:

US NATIONAL RESPONSE CENTER	800-424-8802
FL STATE WARNING POINT	800-320-0519
GA OFFICE OF EMERGENCY SERVICES	800-241-4113
MS STATE WARNING POINT	800-222-6362

WARNING: CUSTOMERS SHOULD NOT RELY UPON THESE EXEMPLAR PROCEDURES, AS THEY ARE INTENDED SOLELY FOR THE CUSTOMER'S USE AS A STARTING POINT IN FORMULATING EACH CUSTOMER'S INDIVIDUAL, SITE-SPECIFIC EMERGENCY PREPAREDNESS/CHEMICAL CLEANUP PROCEDURES. CUSTOMERS SHOULD CONSULT WITH AND RELY ONLY UPON THE ADVICE OF LICENSED LEGAL AND ENVIRONMENTAL PROFESSIONALS IN FORMULATING THEIR INDIVIDUAL, SITE-SPECIFIC PROCEDURES. ALLIED IS NOT RESPONSIBLE FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INCIDENTAL, CONSEQUENTIAL AND SPECIAL DAMAGES, ARISING FROM THE CUSTOMER'S FORMULATION AND IMPLEMENTATION OF EMERGENCY PREPAREDNESS/CHEMICAL CLEANUP PROCEDURES.

If it has been determined that a release in excess of the Reportable Quantity (RQ) has occurred (see listings on page 8) to the air, grounds or waters of the State, notification must be made within 15 minutes from the time the release was discovered in accordance with the United States Code of Federal Regulations 40CFR §302.6 and §355.40(b) to:

1. National Response Center 800-424-8802

And to the following agencies per State applicable laws:

2. The State Warning Point/State Emergency Response Hotline

When notification is required to the Federal government and State government via the National Response Center and State Emergency Response Center require specific information as per 40CFR §355.40(b)(2)(i - vii). This information includes but will not be limited to:

1. Name, location, and telephone number
2. Name and address of the party responsible for the incident
3. Date and time of the incident
4. Location of the incident
5. Source and cause of the release or spill (i.e. tank failure)
6. Types of materials (i.e. chemical) released or spilled
7. Quantity of material released or spilled
8. Danger or threat posed by the release or spill (i.e. acute or chronic health risks, environmental damage, etc. – use a Material Safety Data Sheet for this information)
9. Number and type of injuries (if any)
10. Mitigation efforts, if any, being made to stop the release
11. Weather conditions at the incident location
12. Any other relevant information

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Within seven (7) days after a release which requires verbal notification to the Federal and State governments, the owner or operator of the facility shall provide a written follow up emergency notice to the State Emergency Response Center and Local Emergency Planning Council (LEPC). The letter should contain, at a minimum, the following information:

1. Chemical Name - Include whether an extremely hazardous substance. Also, the UN (i.e. UN 1791 for bleach, UN 1824 for caustic, etc).
2. Location, time and duration of release.
3. Medium or Media into which the release occurred.
4. Estimate of quantity of product released.
5. Known or anticipated acute or chronic health risks associated with the emergency and where appropriate, advice regarding medical attention necessary for exposed individuals. (Use Material Safety Data Sheet - MSDS).
6. Actions that were taken as a result of the release, including evacuation and hospitalizations, and
7. Name and telephone number of Emergency Coordinator.

The following table lists the name and addresses of a few of these agencies:

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WRITTEN FOLLOW-UP NOTIFICATION ADDRESSES	
FL STATE EMERGENCY RESPONSE COMMISSION	FL State Emerg. Response Commission 255 Shumard Oak Boulevard Tallahassee, FL 32399 800-320-0519
GA DEPARTMENT OF NATURAL RESOURCES	Department of Natural Resources Environmental Protection Division 7 Martin Luther King Drive, Room 643 Atlanta, Georgia 30334 800-241-4113
MS EMERGENCY MANAGEMENT AGENCY	MEMA PO Box 4501 Jackson, MS 39296-4501 800-222-6362 601-352-9100
OTHER STATE EMERGENCY AGENCY	INSERT ADDRESS HERE
LOCAL EMERGENCY PLANNING COMMISSIONS	CHECK WITH YOUR LEPC TO DETERMINE WHERE YOUR LETTER MUST BE SENT.

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REPORTABLE QUANTITY CHEMICAL LIST

<u>PRODUCT</u>	<u>RQ - IN GALLONS</u>	<u>RQ - IN POUNDS</u>
CHLORINE GAS	0.86 Gallons	10 Pounds
MURIATIC ACID 20 Bé (Hydrochloric Acid)	1,639 Gallons	5000 Pounds
MURIATIC ACID 22 Bé (Hydrochloric Acid)	1,449 Gallons	5000 Pounds
SODIUM BISULFITE SOLUTION - 38%	1,170 Gallons	5000 Pounds
SODIUM HYPOCHLORITE SOLUTION - 10.5%	98 Gallons	100 Pounds
SODIUM HYPOCHLORITE SOLUTION - 12.5%	80 Gallons	100 Pounds
SODIUM HYPOCHLORITE SOLUTION - 15%	64 Gallons	100 Pounds
SODIUM HYDROXIDE SOLUTION - 50%	156 Gallons	1000 Pounds
SODIUM HYDROXIDE SOLUTION - 25%	374 Gallons	1000 Pounds
SULFUR DIOXIDE	44 Gallons	500 Pounds
SULFURIC ACID - 28 Bé	296 Gallons	1000 Pounds

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I. PROCEDURES FOR SODIUM HYPOCHLORITE SOLUTION

DO NOT REFER TO SODIUM HYPOCHLORITE AS CHLORINE OR LIQUID CHLORINE. DO NOT USE CHLORINE IN THE DESCRIPTION AS IT IS CONFUSING (THEY ASSUME IT TO BE CHLORINE GAS) TO PUBLIC RESPONDERS. DESCRIBE PRODUCT SPILLED AS SODIUM HYPOCHLORITE, BLEACH, OR LIQUID BLEACH.

1. Spill or Leak in Bulk Storage Tank
 - a. Containment drain valve (if available) must be closed. Valve should only be opened to drain rainwater from containment and closed afterward. Verify State and local regulations for discharging rainwater prior to discharging. Chlorine levels and pH must not exceed State and local requirements before discharging.
 - b. Determine the source of the actual leak.
 - c. If the storage tank system is not damaged, pump only good Sodium Hypochlorite back into the storage tank for re-use.
 - d. Spilled or released Sodium Hypochlorite that cannot be recovered or reused must be neutralized and properly disposed of in accordance with applicable Federal, State and Local regulations.
 - e. Notify your supplier.
2. Discharges to Ground or Pavement
 - a. Determine the source of the Sodium Hypochlorite leak.
 - b. Stop the leak and contain the spilled product.
 - c. If the personal safety of facility individuals is in danger, site supervision should evacuate the facility.
 - d. Notify the local Fire Department.
 - e. Spilled/released Sodium Hypochlorite that cannot be recovered/reused must be neutralized and properly disposed of in accordance with applicable regulations.
 - f. Notify your supplier.

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3. Treatment, Neutralization, Clean Up Procedures

- a. Spills of Sodium Hypochlorite solution should never be rinsed or flushed to drains or sewers. Suitable absorbent materials such as sand, vermiculite or clay should be used to absorb the material. Contaminated absorbents and soils should be scraped up using shovels and placed in suitable hazardous material containers and disposed of in accordance with all Federal, State and Local regulations.
- b. Neutralization of Sodium Hypochlorite may be accomplished using Sodium Sulfite, Sodium Bisulfite or Sodium Thiosulfate. Ratio is approximately one (1) pound for each gallon of spilled material. Material should be dissolved in a bucket of clean, clear water and applied to the residue area. Caution should be used as some heat may be generated during this process. By-products of this neutralization are water, salts and liberation of oxygen to the atmosphere.
- c. After neutralization has been conducted, the remaining residue is generally considered safe for rinsing to local sewer systems connected to Waste Water Treatment Stations.

Permission must be obtained through the local treatment facility and local environmental agencies before any rinsing of residue is started.

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II. PROCEDURES FOR SODIUM HYDROXIDE SOLUTION

1. Spill or Leak in Bulk Storage Tank
 - a. Containment drain valve (if available) must be closed. Valve should only be opened to drain rainwater from containment and closed afterward. Verify State and local regulations for discharging rainwater prior to discharging. Chlorine levels and pH must not exceed State and local requirements before discharging.
 - b. Determine the source of the actual leak.
 - c. If the storage tank system is not damaged, pump only good Sodium Hydroxide back into the storage tank for re-use.
 - d. Spilled or released Sodium Hydroxide that cannot be recovered or reused must be neutralized and properly disposed of in accordance with applicable Federal, State and Local regulations
 - e. Notify your supplier.
2. Discharges to Ground or Pavement
 - a. Determine the source of the Sodium Hydroxide leak.
 - b. Stop the leak and contain the spilled product.
 - c. If the personal safety of facility individuals is in danger, site supervision should evacuate the facility.
 - d. Notify the local Fire Department.
 - e. Notify your supplier.
3. Treatment, Neutralization, Clean Up Procedures
 - a. Spills of Sodium Hydroxide solution must never be rinsed or flushed to drains or sewers. Suitable absorbent materials such as sand, vermiculite or clay should be used to absorb the material. Contaminated absorbents and soils should be

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scraped up using shovels and placed in suitable hazardous material containers and disposed of in accordance with all applicable regulations.

- b. After removing absorbents from ground, neutralization of remaining residue may be accomplished using a weak acid solution such as 5% acetic acid (vinegar). Neutralization will occur rapidly and should be checked with pH paper. Caution should be used as some heat may be generated during this process. By-products of this neutralization are water and salt.
- c. After neutralization has been conducted, the remaining residue is generally considered safe for rinsing to local sewer systems connected to Waste Water Treatment Stations.

Permission must be obtained through the local treatment facility and local environmental agencies before rinsing of residue is started.

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III. PROCEDURES FOR ACID SPILLS/RELEASES

MURIATIC ACID and POOL ACID

1. Spill or Leak in Bulk Storage Tank
 - a. Containment drain valve (if available) must be closed. Valve should only be opened to drain rainwater from containment and closed afterward. Verify State and local regulations for discharging rainwater prior to discharging. pH levels must not exceed State and local requirements before discharging.
 - b. Determine the source of the actual leak.
 - c. If the storage tank system is not damaged, pump only good material back into the storage tank for re-use.
 - d. Spilled or released Acid that cannot be recovered or reused must be neutralized and properly disposed of in accordance with applicable Federal, State and Local regulations.
 - e. Notify your supplier.
2. Discharges to Ground or Pavement - Drums, Totes, Bottles, etc.
 - a. Determine the source of the acid leak.
 - b. Stop the leak and contain the spilled product.
 - c. If the personal safety of facility individuals is in danger, site supervision should evacuate the facility.
 - d. Notify the local Fire Department.
 - e. Spilled or released Acid that cannot be recovered or reused must be neutralized and properly disposed of in accordance with applicable regulations.
 - f. Notify your supplier.
3. Treatment, Neutralization, Clean Up Procedures
 - a. Acid spills must never be rinsed or flushed to drains or sewers. Suitable absorbent materials such as sand,

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vermiculite or clay should be used to absorb the material. Contaminated absorbents and soils should be scraped up using non-reactive shovels, placed in suitable hazardous material containers and disposed of in accordance with all Federal, State and Local regulations.

- b. After removing absorbents from ground, neutralization of remaining residue may be accomplished using a weak alkalinity increaser such as sodium bicarbonate or soda ash.
- c. Use approximately 4.5 pounds of soda ash or 6.5 pounds of sodium bicarbonate mixed in a bucket of clear clean water and apply to the residue area. Neutralization will occur rapidly and should be checked with pH paper. Caution should be used as some heat may be generated during this process. By-products of this neutralization are water and salt.
- d. After neutralization has been conducted, the remaining residue is generally considered safe for rinsing to local sewer systems connected to Waste Water Treatment Stations.

Permission must be obtained through the local treatment facility and environmental agencies before rinsing of residue is started.

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IV. PROCEDURES FOR CHLORINE OR SULFUR DIOXIDE RELEASES

The following functions comprise an emergency response concept of operations:

- assessment, classification, and response to any emergency condition;
- timely and effective mitigation of the emergency condition;
- site security and control of emergency response activities;
- emergency alerting of all personnel, including the activation of all necessary emergency response personnel, emergency evacuation routes and procedures;
- notification and coordination of response activities with appropriate Federal, state and local emergency response agencies; and
- rescue, recovery and decontamination procedures for an emergency condition.

An Emergency Response Team or Teams should be established to ensure the capability exists, 24-hours a day, to manage and coordinate all emergency response functions necessary to protect Facility employees and the public.

Facility operations and the associated hazard potentials vary throughout any 24 hour period; taking this into account, your emergency response team(s) should consist of those positions necessary to respond to conditions that may arise as a result of facility operations or emergencies.

It must be noted at this time that in any release of either chlorine or sulfur dioxide, it is essential that the shipping container be positioned so that a gas release occurs. Both chlorine and sulfur dioxide are gases that have been refrigerated and compressed into a liquid state. Each of these materials has a very low boiling (vaporization) point, chlorine being -29° F. and sulfur dioxide being -14° F. The warmer the ambient temperature, the more rapidly the liquid will vaporize. Each will vaporize to over 400 times the liquid amount.

Releases of both chlorine and sulfur dioxide are easily detectable with a strong solution of aqua ammonia. It is recommended that a strength of 26 Bé aqua ammonia be used. In the absence of this strength, regular strength house hold ammonia may be used. Leaks should be detected with the vapor of the aqua ammonia, as applying a liquid solution to the area of a leak may contribute to a more rapid failure of the equipment. As lower concentrations of both chlorine and sulfur dioxide are not visible, the use of a rag soaked in ammonia tied to the end of a stick may be helpful in determining where the vapor cloud is.

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Cylinders - Chlorine

Chlorine cylinders are United States Department Of Transportation (USDOT) approved shipping containers and come in two (2) common sizes. One hundred (100#) pound and one hundred - fifty pound (150#).

Leaks may develop in the following areas:

- Neck ring area
- Cylinder Wall
- Cylinder Bottom
- Valve
- Packing Gland
- Valve Threading
- Valve Fusible Plug

Historically, leaks are due are most often due to human error, not equipment failure.

Many valve leaks are minimal and are normally dealt with by tightening down on the packing gland nut or the valve. Leaks which are unstoppable by either tightening down on either the valve itself or the packing gland nut are easily mitigated by the installation of the Chlorine Institute Emergency Kit "A" or moving the cylinder into the Chlorine Institute approved recovery vessel, "Chlor-Safe" recovery vessel.

Ton Containers - Chlorine

One ton containers in chlorine service are USDOT Specification 106 and known as "multi-unit-tank-car-tanks". They are approximately 30 inches in diameter and 82 inches in length. Depending on the manufacturer, they may have either concave or convex heads. The ton container has two valve and three fusible plugs on valve end, while the other end has three fusible plugs and a plate containing information pertaining to that particular container.

The valve end, the valves are situated at the center of the container and connected to eductor pipes. The eductor pipes are designed so that when the valves are aligned vertically, the top valve will dispense gas and the bottom valve will dispense liquid.

Ton containers weigh approximately 1,300 - 1,650 pounds when empty and 3,300 - 3,500 pounds when filled. Liquid content, when full (2000#), is about 170 gallons.

WARNING: CUSTOMERS SHOULD NOT RELY UPON THESE EXEMPLAR PROCEDURES, AS THEY ARE INTENDED SOLELY FOR THE CUSTOMER'S USE AS A STARTING POINT IN FORMULATING EACH CUSTOMER'S INDIVIDUAL, SITE-SPECIFIC EMERGENCY PREPAREDNESS/CHEMICAL CLEANUP PROCEDURES. CUSTOMERS SHOULD CONSULT WITH AND RELY ONLY UPON THE ADVICE OF LICENSED LEGAL AND ENVIRONMENTAL PROFESSIONALS IN FORMULATING THEIR INDIVIDUAL, SITE-SPECIFIC PROCEDURES. ALLIED IS NOT RESPONSIBLE FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INCIDENTAL, CONSEQUENTIAL AND SPECIAL DAMAGES ARISING FROM THE CUSTOMER'S FORMULATION AND IMPLEMENTATION OF EMERGENCY PREPAREDNESS/CHEMICAL CLEANUP PROCEDURES.

Leaks may develop in the following areas:

- Valve threads at container body
- Valve packing
- Fusible plug threads at container body
- Fusible plug metal
- Holes in container wall

Each of the above leaks can be mitigated by the installation of the Chlorine Institute Emergency Kit "B".

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Cylinders - Sulfur Dioxide

Sulfur Dioxide cylinders are United States Department Of Transportation (USDOT) approved shipping containers and come in two (2) common sizes. One hundred (100#) pound and one hundred - fifty pound (150#).

Leaks may develop in the following areas:

- Neck ring area
- Cylinder Wall
- Cylinder Bottom
- Valve
- Packing Gland
- Valve Threading
- Valve Fusible Plug

Historically, leaks are due are most often due to human error, not equipment failure.

Many valve leaks are minimal and are normally dealt with by tightening down on the packing gland nut or the valve. Leaks which are unstoppable by either tightening down on either the valve itself or the packing gland nut are easily mitigated by the installation of the Chlorine Institute Emergency Kit "A" or moving the cylinder into the Chlorine Institute approved recovery vessel, "Chlor-Safe" recovery vessel.

NOTE: For sulfur dioxide service, the viton[®] gasket/O-ring that would normally be used in chlorine service must be changed and an EPDM gasket/O-ring used. The EPDM gasket/O-ring is readily identifiable as it is gray and marked with lettering indicating EPDM SULFUR DIOXIDE service only.

Ton Container - Sulfur Dioxide

Sulfur Dioxide one ton containers are also USDOT Specification 106. They are identical to the containers used to ship chlorine.

The same leaks that occur in chlorine containers may occur in sulfur dioxide containers and are handled in the exact same manner.

NOTE: For sulfur dioxide service, the viton[®] gasket that would normally be used in chlorine service must be changed and an EPDM gasket used. The EPDM gasket is readily identifiable as it is gray and marked with lettering indicating EPDM SULFUR DIOXIDE service only.

WARNING: CUSTOMERS SHOULD NOT RELY UPON THESE EXEMPLAR PROCEDURES, AS THEY ARE INTENDED SOLELY FOR THE CUSTOMER'S USE AS A STARTING POINT IN FORMULATING EACH CUSTOMER'S INDIVIDUAL, SITE-SPECIFIC EMERGENCY PREPAREDNESS/CHEMICAL CLEANUP PROCEDURES. CUSTOMERS SHOULD CONSULT WITH AND RELY ONLY UPON THE ADVICE OF LICENSED LEGAL AND ENVIRONMENTAL PROFESSIONALS IN FORMULATING THEIR INDIVIDUAL, SITE-SPECIFIC PROCEDURES. ALLIED IS NOT RESPONSIBLE FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INCIDENTAL, CONSEQUENTIAL AND SPECIAL DAMAGES, ARISING FROM THE CUSTOMER'S FORMULATION AND IMPLEMENTATION OF EMERGENCY PREPAREDNESS/CHEMICAL CLEANUP PROCEDURES.

V. PROCEDURES FOR SODIUM BISULFITE SOLUTION

1. Spill or Leak in Bulk Storage Tank
 - f. Containment drain valve (if available) must be closed. Valve should only be opened to drain rainwater from containment and closed afterward. Verify State and local regulations for discharging rainwater prior to discharging. pH must not exceed State and local requirements before discharging.
 - g. Determine the source of the actual leak.
 - h. If the storage tank system is not damaged, pump only good Sodium Bisulfite back into the storage tank for re-use.
 - i. Spilled or released Sodium Bisulfite that cannot be recovered or reused must be neutralized and properly disposed of in accordance with applicable Federal, State and Local regulations.
 - j. Notify your supplier.
2. Discharges to Ground or Pavement
 - g. Determine the source of the Sodium Bisulfite leak.
 - h. Stop the leak and contain the spilled product.
 - i. If the personal safety of facility individuals is in danger, site supervision should evacuate the facility.
 - j. Notify the local Fire Department.
 - k. Spilled/released Sodium Bisulfite that cannot be recovered/reused must be neutralized and properly disposed of in accordance with applicable regulations.
 - l. Notify your supplier.
3. Treatment, Neutralization, Clean Up Procedures
 - d. Spills of Sodium Bisulfite solution should never be rinsed or flushed to drains or sewers. Suitable absorbent materials

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such as sand, vermiculite or clay should be used to absorb the material. Contaminated absorbents and soils should be scraped up using shovels and placed in suitable hazardous material containers and disposed of in accordance with all Federal, State and Local regulations.

- e. Neutralization of Sodium Bisulfite may be accomplished using Sodium Ash, Lime or Limestone. Ratio is approximately one (1) pound for each gallon of spilled material. Material should be dissolved in a bucket of clean, clear water and applied to the residue area. Caution should be used as some heat may be generated during this process. By-products of this neutralization are water, salts and liberation of oxygen to the atmosphere.
- f. After neutralization has been conducted, the remaining residue is generally considered safe for rinsing to local sewer systems connected to Waste Water Treatment Stations.

Permission must be obtained through the local treatment facility and local environmental agencies before any rinsing of residue is started.

WARNING: CUSTOMERS SHOULD NOT RELY UPON THESE EXEMPLAR PROCEDURES, AS THEY ARE INTENDED SOLELY FOR THE CUSTOMER'S USE AS A STARTING POINT IN FORMULATING EACH CUSTOMER'S INDIVIDUAL, SITE-SPECIFIC EMERGENCY PREPAREDNESS/CHEMICAL CLEANUP PROCEDURES. CUSTOMERS SHOULD CONSULT WITH AND RELY ONLY UPON THE ADVICE OF LICENSED LEGAL AND ENVIRONMENTAL PROFESSIONALS IN FORMULATING THEIR INDIVIDUAL, SITE-SPECIFIC PROCEDURES. ALLIED IS NOT RESPONSIBLE FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INCIDENTAL, CONSEQUENTIAL AND SPECIAL DAMAGES, ARISING FROM THE CUSTOMER'S FORMULATION AND IMPLEMENTATION OF EMERGENCY PREPAREDNESS/CHEMICAL CLEANUP PROCEDURES.



**OLIN CORPORATION
SALES SPECIFICATION**

PAGE 1

Date Printed: 2016-08-08

Effective Date: 11/03/2015

Supersedes Date: 06/27/2014

Name: Caustic Soda Solution 50%, Commercial Grade

Specification Number: 000000015216

Previous Specified Material: 00015216

Additional Product Information:

Viscous liquid, free of color and suspended material

Final Testing Requirements

Test and Test Condition	Limit	Unit	Method	Note
Total Alkalinity, Net (as NaOH)	49.00 — 51.00	WT%	ASTM E291	1
Total Alkalinity, Net (as Na ₂ O)	38.00 — 39.50	WT%	ASTM E291	2
Sodium Carbonate	0.20 Max	%	ASTM E291	3
Sodium Chloride	1.0 Max	%	ASTM E1787	4
Sodium Sulfate	0.025 Max	%	ASTM E1787	5
Iron	5.0 Max	mg/kg	ASTM E291	6

Final Testing Requirements Notes:

- 1 Alternate test method: DOWM 100508
- 2 Alternate test method: DOWM 100508
- 3 Alternate test method: DOWM 101442
- 4 Alternate test method: DOWM 100935
- 5 Sodium Sulfate Spec is 500 ppm (0.050%) Max for Ontario Terminals
- 6 Alternate test method: DOWM 100775

**OLIN CORPORATION
SALES SPECIFICATION**

Name: Caustic Soda Solution 50%, Commercial Grade
Specification Number: 000000015216
Effective Date: 11/03/2015

General Notes

- 1 This product, based on an assay concentration (as NaOH) of 48.5% - 51.5%, meets the following test requirements of the Food Chemicals Codex (FCC), current edition, for Sodium Hydroxide Solution:
Arsenic (as As) - 1.5 mg/kg maximum;
Carbonate (as Na₂CO₃) - 1.5% maximum;
Lead (as Pb) - 1 mg/kg maximum;
Mercury - 0.05 mg/kg maximum
- 2 Users of Olin Caustic Soda Solution in food-related applications must carefully assess this product to determine if it is suitable for the application. It cannot be assumed that products meeting the FCC test requirements set forth above are suitable for food usage.
- 3 This product is produced using a non-mercury process. Mercury would not be anticipated to be found in the product.
- 4 Product supplied in North America is certified by NSF International NSF/ANSI Standard 60 Drinking Water Treatment Chemicals for use as Corrosion & Scale Control and pH Adjustment at a maximum use level of 100 mg/L.
- 5 All values are on an actual solution basis.

READ PRECAUTIONARY INFORMATION AND MATERIAL SAFETY SHEETS. THIS PRODUCT IS SHIPPED IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS REGARDING CLASSIFICATION, PACKAGING, SHIPPING AND LABELING.

SAFETY DATA SHEET

1. Identification

Product identifier	Sodium Hydroxide Solution 25-50%		
Other means of identification			
SDS number	AUC-003		
Synonyms	Sodium hydroxide * Soda lye solution * Caustic soda solution * Caustic soda * Lye * Liquid caustic		
Recommended use	Water Treatment; pH Neutralizer; Pulping and Bleach; Manufacture of Detergents and Soaps		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier/Distributor information			
Manufacturer			
Company name	Allied Universal Corporation		
Address	3901 N.W. 115th Avenue Miami, FL 33178 United States		
Telephone	General:	1-305-888-2623	
	24-Hour alert:	1-786-522-0207	
Website	www.allieduniversal.com		
E-mail	Not available.		
Contact person	Operations Department		
Emergency phone number	CHEMTREC	1-800-424-9300 (US/Canada) +01 703-527-3887 (International)	
Supplier	Refer to Manufacturer		

2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Environmental hazards	This mixture does not meet the classification criteria according to OSHA HazCom 2012.	
OSHA defined hazards	This mixture does not meet the classification criteria according to OSHA HazCom 2012.	
Label elements		



Signal word	Danger
Hazard statement	May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation.
Precautionary statement	
Prevention	Keep only in original container. Do not breathe mist. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/clothing and eye/face protection.
Response	Specific treatment (see this label). IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Absorb spillage to prevent material damage.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store in corrosive resistant container with a resistant inner liner.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

No OSHA defined hazard classes.

Other hazards which do not result in classification: Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat. Reacts vigorously, violently or explosively with many organic and inorganic chemicals, such as strong acids, acid chlorides, acid anhydrides, ketones, glycols and organic peroxides. Chronic skin contact with low concentrations may cause dermatitis.

Supplemental information

Not applicable.

3. Composition/information on ingredients**Mixtures**

Chemical name	Common name and synonyms	CAS number	%
Sodium hydroxide	Caustic soda Lye Soda lye	1310-73-2	25 - 50

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures**Inhalation**

Move to fresh air. If breathing is difficult, trained personnel should give oxygen. If breathing stops, provide artificial respiration. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.

Skin contact

Take off immediately all contaminated clothing. Immediately flush skin with running water for at least 20 minutes. Cover wound with sterile dressing. Do not rub area of contact. Wash contaminated clothing before reuse. Leather and shoes that have been contaminated with the solution may need to be destroyed. Call a physician or poison control center immediately.

Eye contact

Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take care not to rinse contaminated water into the unaffected eye or onto the face. Call a physician or poison control center immediately.

Ingestion

If swallowed: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. Call a physician or poison control center immediately.

Most important symptoms/effects, acute and delayed

Inhalation of mists can cause severe respiratory irritation. Symptoms may include coughing, choking and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. Corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.

Indication of immediate medical attention and special treatment needed

Immediate medical attention is required. Causes chemical burns. Symptoms may be delayed.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures**Suitable extinguishing media**

Use fire-extinguishing media appropriate for surrounding materials. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire. Some chemical extinguishing agents may react with this material. Do not use halogenated extinguishing agents.

Specific hazards arising from the chemical

Not considered flammable. Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat. The heat that is generated may be sufficient enough to ignite nearby combustible materials. Reacts vigorously, violently or explosively with many organic and inorganic chemicals, such as strong acids, acid chlorides, acid anhydrides, ketones, glycols and organic peroxides. Toxic fumes, gases or vapors may evolve on burning.

Special protective equipment and precautions for firefighters

Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn.

Fire fighting equipment/instructions

Fight fire with normal precautions from a reasonable distance. Evacuate the area promptly. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

Hazardous combustion products

Sodium oxides.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Ventilate the area. Remove sources of ignition. Stop leak if you can do so without risk. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Water spray may reduce vapor; but may not prevent ignition in closed spaces.

Small Spills: Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Dilute alkali with water and neutralize with acids (e.g. acetic acid / vinegar).

Large Spills: Prevent entry into waterways, sewer, basements or confined areas. If not recoverable, dilute with water or flush to holding area and neutralize. Remove with vacuum trucks or pump to storage/salvage vessels. Contact the proper local authorities.

Never return spills to original containers for re-use. Contaminated absorbent material may pose the same hazards as the spilled product. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground. Contact local authorities in case of spillage to drain/aquatic environment.

7. Handling and storage

Precautions for safe handling

Use only outdoors or in a well-ventilated area. Wear chemically resistant protective equipment during handling. Wear protective gloves/clothing and eye/face protection. Do not breathe mist. Do not taste or swallow. Avoid contact with eyes, skin and clothing. Keep away from heat. Keep away from metals and other incompatibles. When preparing or diluting solution, always add to water, slowly and with stirring. Use cold water to prevent excessive heat generation. When diluting, always add the product to water. Never add water to the product. Label containers appropriately. Wash thoroughly after handling. When using, do not eat, drink or smoke. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Store away from incompatible materials (see Section 10 of the SDS). Store in original tightly closed container. May be corrosive to Aluminum, stainless steels, carbon steel, copper, bronze, etc. Store in corrosive resistant/ container with a resistant inner liner.

Compatible storage materials may include, but are not limited to the following: nickel and nickel alloys, steel, plastics, plastic or rubber-lined steel, FRP, or Derakane vinyl ester resin. Do not allow material to freeze.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	PEL	2 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear eye/face protection. Chemical goggles and face shield are recommended.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Advice should be sought from glove suppliers.
Other	Where contact is likely, wear chemical-resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield. Eye wash facilities and emergency shower must be available when handling this product.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH/MSHA approved air-purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may be used to reduce exposure. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134). Advice should be sought from respiratory protection specialists.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Do not breathe mist. Avoid contact with eyes, skin and clothing. When using, do not eat, drink or smoke. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	Clear to slightly turbid, viscous liquid.
Physical state	Liquid.
Form	Viscous liquid.
Color	Clear water-white
Odor	Odorless.
Odor threshold	Not available.
pH	> 14 (at high alkali concentration in water, pH scale is not applicable)
Melting point/freezing point	-13 °F (-25 °C) (25% concentration)
Initial boiling point and boiling range	284 °F (140 °C) (50% concentration) 240.8 °F (116 °C) (25% concentration)
Flash point	Not Applicable
Evaporation rate	Not applicable (the only evaporation that occurs is water)
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not Applicable
Flammability limit - upper (%)	Not Applicable
Explosive limit - lower (%)	Not Applicable
Explosive limit - upper (%)	Not Applicable
Vapor pressure	0.2 kPa 1.5 mm Hg 95 mm Hg @ 60°F
Vapor pressure temp.	77 °F (25 °C)
Vapor density	Not available.
Relative density	1.52 g/cm ³ (50% concentration)
Relative density temperature	68 °F (20 °C)
Solubility(ies)	
Solubility (water)	Soluble in all proportions.

Solubility (other)	Soluble in absolute alcohol, methanol and glycerol. Moderately soluble in ethanol. Insoluble in acetone and diethyl ether.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not Applicable
Decomposition temperature	Not available.
Viscosity	25.39 cSt (40% solution)
Viscosity temperature	68 °F (20 °C)
Other information	
Specific gravity	1.29 (25% concentration) 1.52 (50% concentration)

10. Stability and reactivity

Reactivity	Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat. May be corrosive to Aluminum, stainless steels, carbon steel, copper, bronze, etc.
Chemical stability	Material is stable under normal conditions. Rapidly absorbs moisture and carbon dioxide from the air forming sodium carbonate. Water, when added to sodium hydroxide may cause localized overheating and possible spattering.
Possibility of hazardous reactions	Reacts vigorously, violently or explosively with many organic and inorganic chemicals, such as strong acids, acid chlorides, acid anhydrides, ketones, glycols and organic peroxides. Attacks plastics, such as polyamide-imide (Torlon) (10-100% solutions), polybutylene terephthalate and polyethylene terephthalate (20-100%), thermoset polyester isophthalic acid (10-100%), polyvinylidene fluoride (Kynar; PVDF) (70-100% solutions), polyurethane (rigid) (80-100%), and polyvinylidene chloride (Saran) (100%); elastomers, such as polysulfide and butadiene-styrene (SBR) (10-100%) and soft rubber (30-100%) (52,55); and coatings, such as polyester and vinyls (10-100%), coal tar epoxy, general purpose epoxy, epoxy polyamide and phenolic (7 -100%).
Conditions to avoid	Contact with incompatible materials. Avoid high temperatures. Do not use in areas without adequate ventilation.
Incompatible materials	Metals. Acids. Sodium borohydride. Tetrahydrofuran. Chlorinated compounds. Maleic anhydride. Cyanogen azide. Nitroalkanes. Silver nitrate. Ammonia. Acetaldehyde. Acrolein. Acrylonitrile. Allyl alcohol. Phosphorus. Hydroquinone. Sugars. Methanol. Zinc. Aluminum. Tin.
Hazardous decomposition products	None known. In the event of fire the following can be released: Sodium oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause severe irritation to the nose, throat, and respiratory tract.
Skin contact	Causes severe skin burns. Not expected to be absorbed through the skin.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.

Most important symptoms/effects, acute and delayed	Inhalation of mists can cause severe respiratory irritation. Symptoms may include coughing, choking and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. Corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.
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Information on toxicological effects

Acute toxicity	There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.
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Components	Species	Test Results
Sodium hydroxide (CAS 1310-73-2)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	No Data in Literature

Components	Species	Test Results
<i>Inhalation</i>		
LC50	Rat	No Data in Literature
<i>Oral</i>		
LD50	Rat	No Data in Literature

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Hazardous by OSHA criteria. Skin corrosion/irritation - Category 1. Causes severe skin burns.
Serious eye damage/eye irritation	Hazardous by OSHA criteria. Serious eye damage/eye irritation - Category 1 Causes serious eye damage.
Respiratory or skin sensitization	
Respiratory sensitization	Not expected to be a respiratory sensitizer.
Skin sensitizer	Causes skin burns.
Germ cell mutagenicity	Not expected to be mutagenic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Not listed.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Hazardous by OSHA criteria. Specific Target Organ Toxicity (STOT), Single Exposure. Category 3. May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Not classified as a specific target organ toxicity -repeated exposure.
Aspiration toxicity	Not expected to be an aspiration hazard.
Chronic effects	Chronic skin contact with low concentrations may cause dermatitis.

12. Ecological information

Ecotoxicity	Because of the high pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems. However, may be neutralized by naturally occurring acidity in the environment. The ingredient ecotoxicity data appearing below is expected to be primarily associated with pH.
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Components	Species	Test Results
Sodium hydroxide (CAS 1310-73-2)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Water flea (Ceriodaphnia dubia) 40 mg/l, 48 hours
Fish	LC50	Western mosquitofish (Gambusia affinis) 125 mg/l, 96 hours
Persistence and degradability	No data is available on the degradability of this product. Biodegradation is not applicable to inorganic substances.	
Bioaccumulative potential	No accumulation in living organisms is expected due to high solubility and dissociation properties.	
Mobility in soil	High water solubility indicates a high mobility in soil.	
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1824
UN proper shipping name	SODIUM HYDROXIDE SOLUTION
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. US CERCLA Reportable Quantity (RQ): 1000 lbs / 454 kg
Special provisions	B2, IB2, N34, T7, TP2
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242

IATA

UN number	UN1824
UN proper shipping name	SODIUM HYDROXIDE SOLUTION
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	8L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1824
UN proper shipping name	SODIUM HYDROXIDE SOLUTION
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

This substance/mixture is not intended to be transported in bulk.

DOT





15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Sodium hydroxide (CAS 1310-73-2) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

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

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Sodium hydroxide (CAS 1310-73-2)

US. New Jersey Worker and Community Right-to-Know Act

Sodium hydroxide (CAS 1310-73-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Sodium hydroxide (CAS 1310-73-2)

US. Rhode Island RTK

Sodium hydroxide (CAS 1310-73-2)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

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

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

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 12-19-2014

Version # 01

HMIS H= 3, F= 0, R= 0

NFPA H= 3, F= 0, R= 1



Certified to
NSF/ANSI 60

Maximum Use in Potable Water for Sodium Hydroxide 25%: 200 mg/L. Maximum Use in Potable Water for Sodium Hydroxide 50%: 100 mg/L.

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substance List
EINECS: European Inventory of Existing Commercial chemical Substances
EPA: Environmental Protection Agency
EPCRA: Emergency Planning and Community Right-to-Know Act
HSDB® - Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC: Intermediate Bulk Container
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
LC: Lethal Concentration
LD: Lethal Dose
NIOSH: National Institute of Occupational Safety and Health
NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Cooperation and Development
OSHA: Occupational Safety and Health Administration
PPE: Personal Protective Equipment
RCRA: Resource Conservation and Recovery Act
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TLV: Threshold Limit Values
TWA: Time Weighted Average

Disclaimer

Prepared by: ICC The Compliance Center Inc. 1-888-442-9628
<http://www.thecompliancescenter.com>

Disclaimer

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Bibliography

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