



CENTRALBIDDING
FROM CENTRAL AUCTION HOUSE

25-81 Chemicals
Plaquemines Parish Government

Project documents obtained from www.CentralBidding.com
10-Dec-2024 07:54:52 AM

**PLAQUEMINES PARISH GOVERNMENT
PURCHASING DEPARTMENT
333 F EDWARD HEBERT, BLDG 102 ROOM 333
BELLE CHASSE, LA 70037**

**SPECIFICATIONS
FOR
FURNISHING CHEMICALS
FOR USE BY THE WATER & SEWER DEPARTMENTS
BID #25-81**

**BID OPENING-FRIDAY, DECEMBER 27, 2024
10:00 A.M., PURCHASING AGENT'S OFFICE,
333 F EDWARD HEBERT, BLDG 102 ROOM 333
BELLE CHASSE, LA 70037**

THIS PACKAGE (PAGES 1 - 15) INCLUDES THE FOLLOWING PAGES:

TITLE PAGE (PAGE 1)

ADVERTISEMENT (PAGE 2)

CORPORATE RESOLUTION (PAGE 3)

AFFIDAVITS (PAGES 4-5)

INSTRUCTIONS AND GENERAL CONDITIONS (PAGES 6-8)

SPECIFICATIONS AND PROPOSAL BLANK (PAGE 9-15)

Plaquemines Parish Government

Parish President
W. Keith Hinkley

PURCHASING DEPARTMENT
333 F Edward Hebert Blvd.
Building 102, Suite 333
Belle Chasse, Louisiana 70037
(504) 934-6430
Fax (504) 934-6439
purchasing@ppgov.net

Council Members
District 1 - Tyrone Edwards
District 2 - Brian Champagne
District 3 - Christopher "Chris" Schulz
District 4 - Dr. Stuart J Guey, Jr.
District 5 - Patricia L. "Patty" McCarty
District 6 - Lloyd "Ronnie" Newsom, Jr.
District 7 - Carlton M LaFrance Sr.
District 8 - Mitch Jurisch, Jr.
District 9 - Mark "Hobbo" Cognevich

ADVERTISEMENT FOR BIDS

Sealed bids will be received by the Plaquemines Parish Government, through its Purchasing Agent, at its office at 333 F EDWARD HEBERT, BLDG 102 ROOM 333, Belle Chasse, LA 70037, until 10:00 A.M., **FRIDAY, DECEMBER 27, 2024**, and then publicly opened and read in the Parish Purchasing Agent's Office, for furnishing **CHEMICALS, for use BY THE WATER & SEWER DEPARTMENTS, Bid #25-81**, all in accordance with specifications on file in the Parish Purchasing Agent's Office, 333 F EDWARD HEBERT, BLDG 102 ROOM 333, Belle Chasse, LA 70037, (Telephone (504) 934-6430, which may be obtained by any bonafide bidder. Evidence of authority to submit the bid shall be required in accordance with R.S. 38:2212 (A) (1) (c) and/or R.S. 23:1594 (c) (2) (d).

The right is reserved to reject any and all bids and to waive any informalities.

KEITH HINKLEY
PARISH PRESIDENT
PLAQUEMINES PARISH GOVERNMENT

PG: DEC 10, 17, 2024

CORPORATE RESOLUTION

EXCERPT FROM MINUTES OF THE BOARD OF DIRECTORS OF Allied Universal
Corporation INCORPORATED. THE MEETING OF
DIRECTORS OF Allied Universal Corporation
INCORPORATED, DULY NOTICED AND HELD ON December 10, 2024, A
QUORUM BEING THERE PRESENT, ON MOTION DULY MADE AND SECONDED, IT WAS
RESOLVED: THAT Cristhianne Munguia, BE AND IS HEREBY
APPOINTED, CONSTITUTED AND DESIGNATED AS AGENT AND ATTORNEY-IN-FACT OF THE
CORPORATION WITH FULL POWER AND AUTHORITY TO ACT ON BEHALF OF THIS
CORPORATION IN ALL NEGOTIATIONS, BIDDING CONCERNS AND TRANSACTIONS WITH
THE PARISH OF PLAQUEMINES OR ANY OF ITS AGENCIES, DEPARTMENTS, EMPLOYEES OR
AGENTS, INCLUDING BUT NOT LIMITED TO THE EXECUTION OF ALL BIDS, PAPERS,
DOCUMENTS, AFFIDAVITS, BONDS, SURETIES, CONTRACTS AND ACTS AND TO RECEIVE
AND RECEIPT THEREFORE ALL PURCHASE ORDERS AND NOTICES ISSUED PURSUANT TO
THE PROVISIONS OF ANY SUCH BID OR CONTRACT, THIS CORPORATION HEREBY
RATIFYING, APPROVING, CONFIRMING AND ACCEPTING EACH AND EVERY SUCH ACT
PERFORMED BY SAID AGENT AND ATTORNEY-IN-FACT.

I HEREBY CERTIFY THE FOREGOING TO BE
A TRUE AND CORRECT COPY OF AN
EXCERPT OF THE MINUTES OF THE ABOVE
DATED MEETING OF THE BOARD OF
DIRECTORS OF SAID CORPORATION,
AND THE SAME HAS NOT BEEN REVOKED
OR RESCINDED.



SECRETARY TREASURER
President/CEO

December 19, 2024

DATE

AFFIDAVIT

STATE OF Florida

PARISH/COUNTY OF Miami-Dade

Cristhianne Munguia BEING FIRST DULY SWORN,

DEPOSES AND SAYS:

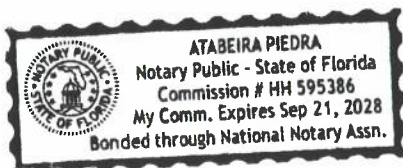
SHE Bid Coordinators OF
THAT HE IS (PARTNER, OFFICER, OWNER, ETC)
Allied Universal Corporation
(COMPANY)

THE PARTY MAKING THE FOREGOING PROPOSAL BID, THAT SUCH BID IS GENUINE AND NOT COLLUSIVE, NOR A SHAM. THAT SAID BIDDER HAS NOT COLLUDED, CONSPIRED, CONNIVED, OR AGREED, DIRECTLY OR INDIRECTLY, WITH ANY BIDDER OR PERSON, TO PUT IN A SHAM BID OR TO REFRAIN FROM BIDDING, AND HAS NOT IN ANY MANNER DIRECTLY OR INDIRECTLY, SOUGHT BY AGREEMENT OR COLLUSION, OR COMMUNICATION OR CONFERENCE, WITH ANY PERSON TO FIX THE BID PRICE ELEMENT OF SAID BID, OR OF THAT OF ANY OTHER BIDDER OR TO SECURE ANY ADVANTAGE AGAINST ANY OTHER BIDDER OR TO ANY PERSON INTERESTED IN THE PROPOSED CONTRACT. AND THAT ALL STATEMENTS CONTAINED IN SAID PROPOSAL OR BID ARE TRUE.


(SIGNATURE OF BIDDER)

THE ABOVE STATEMENT MUST BE SUBSCRIBED AND SWORN TO AND BEFORE A NOTARY PUBLIC.

SUBSCRIBED AND SWORN ON THIS 19th DAY OF December
2024



BY 

NOTARY PUBLIC

EMPLOYEE VERIFICATION AFFIDAVIT FORM
(R.S. 38:2212.10(C))
(Verification of Employees)

Appearer, as a Bidder, does hereby attest that:

LA. R.S. 38:2212.10 Verification of Employees


- A. Appear is registered and participates in a status verification system to verify that all employees in the state of Louisiana are legal citizens of the United States or are legal aliens.
- B. If awarded the contract, Appearer shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the state of Louisiana.
- C. If awarded the contract, Appearer shall require all subcontractors to submit to it a sworn affidavit verifying compliance with Paragraphs (A) and (B) of this Subsection.

Allied Universal Corporation
NAME OF BIDDER

Cristhianne Munguia
NAME OF AUTHORIZED SIGNATORY OF BIDDER

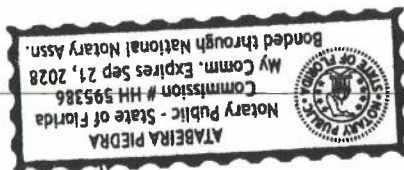
December 19, 2024
DATE

Bid Coordinator
TITLE OF AUTHORIZED SIGNATORY OF BIDDER


**SIGNATURE OF AUTHORIZED
SIGNATORY OF BIDDER**

SUBSCRIBED AND SWORN ON THIS 19th **DAY OF** December 20 **2024**


NOTARY PUBLIC



PLAQUEMINES PARISH GOVERNMENT
PURCHASING DEPARTMENT
333 F EDWARD HEBERT, BLDG 102 ROOM 333
BELLE CHASSE, LA 70037

BID NO. 25-81

Sealed bids will be received in the **Purchasing Department, 333 F EDWARD HEBERT, BLDG 102 ROOM 333, BELLE CHASSE, LA 70037** until **10:00 A.M., FRIDAY, DECEMBER 27, 2024.**

NOTE: ONLY BIDS WRITTEN IN INK OR TYPEWRITTEN AND PROPERLY SIGNED BY A MEMBER OF THE FIRM OR AUTHORIZED REPRESENTATIVE, WILL BE ACCEPTED. PENCIL/AND OR PHOTOSTATIC FIGURES OR SIGNATURES DISQUALIFY BID.

ALL ENVELOPES MUST BE SEALED. ALL BIDS MUST BE EITHER MAILED IN OR HAND DELIVERED TO THE PURCHASING DEPARTMENT. NO FAXED BIDS WILL BE ACCEPTED OR CONSIDERED.

FOR YOUR CONVENIENCE, AN ENVELOPE IS INCLUDED WITH THIS BID PACKAGE. PLEASE SUBMIT YOUR BID IN THE ENCLOSED ENVELOPE.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. This bid package (Pages 1- 15) must be returned in its entirety.

Questions pertaining to this bid are to be **faxed only** to (504) 934-6439 no later than **FIVE (5)** working days prior to bid opening. Bid numbers should be mentioned in all requests.

Plaquemines Parish Government reserves the right to reject any and all bids in whole or in part and to waive any and all informalities in the best interest of Plaquemines Parish according to the Law.

The purpose and intention of this bid invitation is to afford all suppliers an equal opportunity to bid on all construction, maintenance, repair, operating supplies and/or equipment listed in this bid proposal. Plaquemines Parish will accept one bid only from each vendor. Items bid must meet or exceed specifications.

Plaquemines Parish will accept one price for each item unless otherwise indicated. **Two or more prices for one item will result in bid disqualification.**

If the bidder is an agency, corporation, partnership or other legal entity, the president, vice-president, secretary/treasurer or an authorized agent, shall sign the proposal, and satisfactory evidence of the authority of the person signing for the agency, corporation, partnership, or other legal entity, shall be attached to the proposal.

AWARD OF CONTRACT: Plaquemines Parish reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of Plaquemines Parish. Every contract or order shall be awarded to the **LOWEST RESPONSIBLE BIDDER**, taking into consideration the **CONFORMITY WITH THE SPECIFICATIONS** and the **DELIVERY AND/OR COMPLETION DATE**.

A preference of 10% is hereby given to foodstuffs and paper products grown, manufactured and processed in Louisiana, quality being equal to articles offered by competitors outside the state. "LSA-RS 38:2251-2261."

USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified and complete product data is submitted with bid.

PRICES: All prices shall be quoted in the unit of measure specified, and unless otherwise specified, shall be exclusive of State and Parish taxes. As per LSA-RS 47:301 et seq., all governmental bodies are excluded from payment of sales taxes to any Louisiana taxing body. All bids shall be based on FOB DELIVERY TO ANY Parish Department, located anywhere within the Parish as designed by the Purchasing Department.

CANCELLATION OF CONTRACT: Plaquemines Parish reserves the right to cancel all or any part of the contract if orders are not shipped in the delivery time specified. Plaquemines Parish reserves the right to cancel any contract at anytime and for any reason by issuing a thirty (30) day written notice to the contractor.

If applicable, please indicate: **SMALL BUSINESS**_____

MINORITY BUSINESS_____

Plaquemines Parish requires a firm price for a period of one year. Any quantities listed are for bidding purposes. Actual requirements may be more or less than quantities listed. Plaquemines Parish would like to reserve the right to purchase items from this bid for an additional year directly following the one year term of the original bid if both parties are in agreement to do so.

WITHDRAWAL OF BID: A bid may be withdrawn by the bidder **ONLY** if done by **AFFIDAVIT within 48 hours of bid opening**, but only for "patently obvious, unintentional, and substantial mechanical, clerical or mathematical errors." Any bidder who does not fulfill their bid, will be responsible for paying difference between his bid and the next lowest bidder.

~~Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975 or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except~~

that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (d), (d), (e), and (k)(5) of the Regulations.

RESPONSE TO INVITATION: If your company is unable to bid on this request, please state your reason on bid form, and return to this office before bid opening date. Failure to do so will result in the removal of your company from all future bids.

A Louisiana State Contractor's license may be required in accordance with LSA-R.S. 37:2150 et seq.

The charter for local Self-Government for Plaquemines Parish prohibits the Government from doing business with any firm, individual, partnership, or corporation employing or owned by an individual who is an elected official or employee of the Plaquemines Parish Government nor any members of such person's immediate family.

This bid must be signed by an authorized representative of the company/firm for bid to be valid. Evidence of authority to submit and sign the bid shall be required in accordance with R.S. 38:2212 (A) (1) (c) and/or R.S.23:1594(C) (2) (d). Evidence must be included in the submitted bid package. The corporate resolution must be completed and returned or other evidence to authorize the signature on this bid. **Failure to include a corporate resolution or evidence of authority to sign will result in your bid not being considered for award.**

COMPLETE bid package (Pages 1- 15), including instructions and specifications, must be returned in its entirety for bid to be valid. Signing indicates you have read and comply with the instructions and conditions. **Failure to sign all necessary sections of the bid package will result in your bid not being considered for award. Affidavit must be notarized and included in the bid package.** Failure to include all sheets, properly signed and executed will result in your bid not being considered for award.

TERMS OF PAYMENT: Payment will be made within 30 days after the end of the month which delivery was made.

THE PLAQUEMINES PARISH GOVERNMENT CANNOT ACCEPT ANY BIDS BY MAIL OR HAND DELIVERED ON DAYS RECOGNIZED AS HOLIDAYS BY THE UNITED STATES POSTAL SERVICE.

The Plaquemines Parish Government does not give out bid results over the telephone. All companies bidding will be sent a copy of the "tabulation sheet" for the bids received

*The name of a particular brand, make or manufacturer in the specifications as provided herein is used only to denote the quality standard of product desired and does not restrict bidders to the specific brand, make, manufacturer or specification name, which are used only to set forth and convey to prospective bidders the general style, character and quality of product desired. Equivalent products meeting the minimum specifications will be acceptable.

Liquid Ammonia Sulfate

Specifications for furnish liquid ammonia sulfate as follows for use for the Plaquemines Parish Water and Wastewater systems parish wide:

| | |
|----------------------------|-----------------------------------|
| Concentration: | 30-40% |
| Appearance and odor: | Clear, colorless liquid – no odor |
| Ph | 3.0-4.5 |
| Solubility in water | Complete |
| Specific gravity (water=1) | 1.21 – 1.23 |
| Boiling Point: | 214.6F (102C) |
| Freezing Point: | Less 4F |

MUST BE NSF Certified

Deliveries are to be made as requested on order:
Parish Wide – Plaquemines Parish

REQUIRED: truck delivery for totes must have tailgate lift truck

Orders must be shipped within 3 days ARO

Price: \$ NO BID per Pound bulk - bulk minimum _____ Pound

Price \$ NO BID 275 Gallon tote

Sodium Hypochlorite

Specifications to furnish sodium hypochlorite as follows for use by the Water and Wastewater systems parish wide:

| | |
|-----------------------------|--------------------------------|
| Concentration: | 12.50% |
| Appearance and odor: | Clear, pale yellow or greenish |
| Ph: | 12.0 – 13.0 |
| Solubility in water: | Complete |
| Specific gravity (water=1): | 1.20 – 1.40 |
| Boiling point: | Decomposes |
| Freezing point: | 7 – 10 F |

Must be NSF Certified

Orders must be shipped 3 days ARO

Deliveries are to be made as requested on order:
Parish Wide – Plaquemines Parish

REQUIRED: drums/totes tailgate lift truck fro deliveries

Price: \$ 1.81 per gallon (bulk) - bulk minimum 4,500 gal

Price: \$ NO BID per 55 gallon drum

Price: \$ NO BID per 250 gallon tote

CHLORINE GAS LIQUID

Specifications to furnish chlorine gas liquid for the Plaquemines Parish Water and Wastewater systems parish wide:

| | |
|----------------------------|---------------------------------------|
| CONCENTRATION: | 99.5% - 100% |
| APPEARANCE AND COLOR: | Green to yellow gas, amber liquid gas |
| Ph: | N/A |
| Solubility in water: | 0.7% @ 20C |
| Specific gravity (water=1) | 1.4 @ 15.6 C |
| Boiling point: | 29.27 F (-34.04C) |

MUST BE NSF Certified

1200 lb. cylinder \$ 1,465.00, minimum delivery of 4 1200# cylinders

150# cylinder \$ NO BID (deliver to Empire Booster Station)

DELIVERY must be made within 5 days ARO

Deliveries are to be made as requested on order:
Parish Wide Plaquemines Parish, LA

Cationic Polyacrylamide Polymer

Specifications for use by the Water/Sewer Department systems parish wide:

Polymer must be specifically designed for wastewater sludge conditioning for belt press Operation. Product must be proven to be effective for a period of two week trial conducted at no charge.

Product must be equal to or superior to Phoenix EC3300 polymers.

Product specifications:

Parameter: specific gravity

Limits: 1.01-1.19

Typical properties:

Parameter: Appearance

Results: Opaque liquid

Deliveries to be made as requested per order

Parish wide Plaquemines Parish, LA

REQUIRED: Tailgate lift for deliveries

Price: \$ NO BID per lb bulk – minimum bulk: _____

Price: \$ NO BID per 2500 lb tote

Price \$ NO BID per 450 pound drum

Chlorine Tablets

Specifications:

TMB 548-chlorination tablets

2 5/8 inches in size

DELIVERED:

Parish wide as per request on each order in Plaquemines Parish, LA

Price: \$ NO BID 50# pails

GRANULAR CHLORINE

Specifications:
CM-MB-608 high performance grade

DELIVERY: Parish wide in Plaquemines Parish, LA as requested per order

Price: \$ NO BID per 50# pails

D-CHLOR DECHLORINATION TABLETS

Specifications:

Sodium Sulfite (Na₂SO₃) 92.3% plus moisture

DELIVERY: Parish wide in Plaquemines Parish, LA as requested per order

Price: \$ NO BID per 50# pails

NAME OF BIDDER Allied Universal Corporation

ADDRESS OF BIDDER 3901 NW 115 Avenue., Miami, FL 33178

AUTHORIZED SIGNATURE  DATE December 19, 2024

PRINT NAME Cristhianne Munguia TITLE Bid Coordinator

PHONE NUMBER 305-888-2623 Email - Bids@allieduniversal.com
~~FAX NUMBER~~



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

RESOLVED that Cristhianne Munguia, Bid Coordinator for Allied Universal Corporation, be authorized to sign and submit the Contract of this corporation for the following project:

Supply and Delivery of Chemicals to Plaquemines Parish Government.

This bid or proposal shall include any other certificate of certification, which may be required by general municipal, state, or federal law(s). Such inclusion shall be the act and deed of this corporation, and for any inaccuracies or misstatements in such certificates or certifications this corporate bidder shall be liable under the penalties of perjury.

The foregoing is a true and correct copy of the resolution adopted by Allied Universal Corporation at the meeting of its Board of Directors held on the 10th day of December 2024.

(Seal of Corporation)





Jim Palmer, President - CEO

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

14770 Old Saint Augustine Road
Jacksonville, FL 32207
AUC Jacksonville- 904-619-6180

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

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

9545 Rangeline Road
Ft. Pierce, Florida 34987
ANT 1 Ft. Pierce - 772-464-6195

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

2815 Inland Transport St.
Palmetto, Florida 34221
ANT 2 Manatee - 941-803-4457



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

EXPERIENCE & AFILIATES

December 2024

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. In the following we also package Chlorine Gas and manufacture Sodium Hypochlorite. Miami, FL; Ft. Pierce, FL; Palmetto, FL; Brunswick, GA and Ellisville, MS. The following are our Terminals: Jacksonville, FL and Dothan, AL

We 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 Plaquemines Parish Government is our Ellisville, MS 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 Ellisville, MS facility is located at 30 Neil Gunn Dr, Ellisville, MS 39437. With normal delivery lead time of 3 work days. Contact name for all deliveries is Erin Jordan, phone number 601-477-2550 Ext.1003, e-mail ellisvilledispatch@allieduniversal.com. He is available from 6:30 a.m. until 3:30 p.m.

Other key personnel is: Bobby Boykin Branch Manager 601-477-2550, Ext. 1001 and Don Couche Region 2. Operations Manager 941-993-2548.

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; E-Mail, Bids@Allieuniversal.com

Allied Universal Corporation

Cristhianne Munguia
Bid Coordinator

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

14770 Old Saint Augustine Road
Jacksonville, FL 32207
AUC **Jacksonville**- 904-619-6180

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

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

9545 Rangeline Road
Ft. Pierce, Florida 34987
ANT 1 **Ft. Pierce** - 772-464-6195

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

2815 Inland Transport St.
Palmetto, Florida 34221
ANT 2 **Manatee** - 941-803-4457

Company ID Number: 122833

Information Required for the E-Verify Program**Information relating to your Company:**

| | |
|--|---------------------------------------|
| Company Name | Allied Universal Corporation |
| Company Facility Address | 3901 NW 115 Avenue Miami, FL 33178 |
| Company Alternate Address | 3901 NW 115 Avenue Miami, FL 33178 |
| County or Parish | MIAMI-DADE |
| Employer Identification Number | 590776285 |
| North American Industry Classification Systems Code | 325 |
| Parent Company | |
| Number of Employees | 100 to 499 |
| Number of Sites Verified for | 8 site(s) |

Company ID Number: 122833

Are you verifying for more than 1 site? If yes, please provide the number of sites verified for in each State:

| | |
|----|---|
| AL | 1 |
| FL | 5 |
| GA | 1 |
| MS | 1 |



The Public Health and Safety Organization

NSF Product and Service Listings

These NSF Official Listings are current as of **Friday, December 13, 2024** at 12:15 a.m. Eastern Time. Please [contact NSF](#) 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+Hypochlorite&PlantCountry=UNITED+STATES&](#)

NSF/ANSI/CAN 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 : # 2 Jacksonville, Florida

Sodium Hypochlorite[HY]

| <i>Trade Designation</i> | <i>Product Function</i> | <i>Max Use</i> |
|--|--------------------------|----------------|
| Aqua Guard Chlorinating Sanitizer | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Chlorinating Sanitizer 10.5% | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Chlorinating Sanitizer 10.5% Chlorine | Disinfection & Oxidation | 100mg/L |
| By Weight | | |
| Aqua Guard Sodium Hypochlorite 10.5% | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Sodium Hypochlorite 10.5% By Weight | Disinfection & Oxidation | 100mg/L |
| Sodium Hypochlorite | Disinfection & Oxidation | 100mg/L |
| Sodium Hypochlorite 10.5% Chlorine By Weight | Disinfection & Oxidation | 100mg/L |

[HY] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products shall be monitored in the finished drinking water to ensure compliance to all applicable regulations. Also, reference the AWWA B300 (Hypochlorites) standard's Recommendations for the Handling and Storage of Hypochlorite Solutions appendix for information on preservation techniques for hypochlorite bleach in transit and storage.

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

Facility : Fort Pierce, FL

Sodium Hypochlorite[HY]

| <i>Trade Designation</i> | <i>Product Function</i> | <i>Max Use</i> |
|--|--------------------------|----------------|
| Aqua Guard Chlorinating Sanitizer | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Chlorinating Sanitizer 10.5% | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Chlorinating Sanitizer 10.5% Chlorine By Weight | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Sodium Hypochlorite 10.5% | Disinfection & Oxidation | 100 mg/L |
| Aqua Guard Sodium Hypochlorite 10.5% By Weight | Disinfection & Oxidation | 100mg/L |
| Sodium Hypochlorite | Disinfection & Oxidation | 100mg/L |
| Sodium Hypochlorite 10.5% Chlorine By Weight | Disinfection & Oxidation | 100mg/L |

[HY] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products shall be monitored in the finished drinking water to ensure compliance to all applicable regulations. Also, reference the AWWA B300 (Hypochlorites) standard's Recommendations for the Handling and Storage of Hypochlorite Solutions appendix for information on preservation techniques for hypochlorite bleach in transit and storage.

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 Hypochlorite[HY]

| <i>Trade Designation</i> | <i>Product Function</i> | <i>Max Use</i> |
|--------------------------|-------------------------|----------------|
|--------------------------|-------------------------|----------------|

| | | |
|--|--------------------------|---------|
| Aqua Guard Chlorinating Sanitizer 10.5% Chlorine By Weight | Disinfection & Oxidation | 100mg/L |
| Sodium Hypochlorite 10.5% Chlorine By Weight | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Sodium Hypochlorite 10.5% By Weight | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Chlorinating Sanitizer 10.5% | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Sodium Hypochlorite 10.5% | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Chlorinating Sanitizer | Disinfection & Oxidation | 100mg/L |
| Sodium Hypochlorite | Disinfection & Oxidation | 100mg/L |

[HY] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products shall be monitored in the finished drinking water to ensure compliance to all applicable regulations. Also, reference the AWWA B300 (Hypochlorites) standard's Recommendations for the Handling and Storage of Hypochlorite Solutions appendix for information on preservation techniques for hypochlorite bleach in transit and storage.

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

Facility : Palmetto, FL

Sodium Hypochlorite[HY]

| <i>Trade Designation</i> | <i>Product Function</i> | <i>Max Use</i> |
|--|--------------------------|----------------|
| Aqua Guard Chlorinating Sanitizer | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Chlorinating Sanitizer 10.5% | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Chlorinating Sanitizer 10.5% Chlorine By Weight | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Sodium Hypochlorite 10.5% | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Sodium Hypochlorite 10.5% By Weight | Disinfection & Oxidation | 100mg/L |
| Sodium Hypochlorite | Disinfection & Oxidation | 100mg/L |
| Sodium Hypochlorite 10.5% Chlorine By Weight | Disinfection & Oxidation | 100mg/L |

[HY] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products shall be monitored in the finished drinking water to ensure compliance to all applicable regulations. Also, reference the AWWA B300 (Hypochlorites) standard's Recommendations for the Handling and Storage of Hypochlorite Solutions appendix for information on preservation techniques for hypochlorite bleach in transit and storage.

Facility : Brunswick, GA

Sodium Hypochlorite[HY]

| <i>Trade Designation</i> | <i>Product Function</i> | <i>Max Use</i> |
|---|--------------------------|----------------|
| Aqua Guard Bleach | Disinfection & Oxidation | 74mg/L |
| Aqua Guard Bleach 12.5% | Disinfection & Oxidation | 74mg/L |
| Aqua Guard Chlorinating Sanitizer | Disinfection & Oxidation | 87mg/L |
| Aqua Guard Chlorinating Sanitizer 10.5% | Disinfection & Oxidation | 87mg/L |
| Aqua Guard Sodium Hypochlorite 10.5% | Disinfection & Oxidation | 87mg/L |
| Aqua Guard Sodium Hypochlorite 12.5% | Disinfection & Oxidation | 74mg/L |
| Sodium Hypochlorite 10.5% | Disinfection & Oxidation | 87mg/L |
| Sodium Hypochlorite 12.5% | Disinfection & Oxidation | 74mg/L |

[HY] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products shall be monitored in the finished drinking water to ensure compliance to all applicable regulations. Also, reference the AWWA B300 (Hypochlorites) standard's Recommendations for the Handling and Storage of Hypochlorite Solutions appendix for information on preservation techniques for hypochlorite bleach in transit and storage.

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

Facility : Ellisville, MS

Sodium Hypochlorite[HY]

| <i>Trade Designation</i> | <i>Product Function</i> | <i>Max Use</i> |
|---|--------------------------|----------------|
| Aqua Guard Bleach | Disinfection & Oxidation | 84mg/L |
| Aqua Guard Bleach 12.5% | Disinfection & Oxidation | 84mg/L |
| Aqua Guard Chlorinating Sanitizer | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Chlorinating Sanitizer 10.5% | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Sodium Hypochlorite 10.5% | Disinfection & Oxidation | 100mg/L |
| Aqua Guard Sodium Hypochlorite 12.5% | Disinfection & Oxidation | 84mg/L |
| Sodium Hypochlorite 10.5% | Disinfection & Oxidation | 100mg/L |
| Sodium Hypochlorite 12.5% | Disinfection & Oxidation | 84mg/L |

[HY] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products shall be monitored in the finished drinking water to ensure compliance to all applicable regulations. Also, reference the AWWA B300 (Hypochlorites) standard's Recommendations for the Handling and

Storage of Hypochlorite Solutions appendix for information on preservation techniques for hypochlorite bleach in transit and storage.

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

Allied Universal Corporation

3901 Northwest 115 Avenue

Miami, FL 33178

United States

305-888-2623

Visit this company's website

(<http://www.allieduniversal.com>)

Facility : # 3 USA

Sodium Hypochlorite[HY]

| <i>Trade Designation</i> | <i>Product Function</i> | <i>Max Use</i> |
|--------------------------------------|--------------------------|----------------|
| Aqua Guard Bleach | Disinfection & Oxidation | 84mg/L |
| Aqua Guard Bleach 12.5% | Disinfection & Oxidation | 84mg/L |
| Aqua Guard Sodium Hypochlorite 12.5% | Disinfection & Oxidation | 84mg/L |
| Sodium Hypochlorite 12.5% | Disinfection & Oxidation | 84mg/L |

[HY] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products shall be monitored in the finished drinking water to ensure compliance to all applicable regulations. Also, reference the AWWA B300 (Hypochlorites) standard's Recommendations for the Handling and Storage of Hypochlorite Solutions appendix for information on preservation techniques for hypochlorite bleach in transit and storage.

Number of matching Manufacturers is 2

Number of matching Products is 48

Processing time was 0 seconds

SAFETY DATA SHEET

1. Identification

| | | | |
|--|---|--|--|
| Product identifier | Sodium Hypochlorite, 10-15% Solution | | |
| Other means of identification | | | |
| SDS number | AUC-004 | | |
| Synonyms | Aqua Guard Chlorinating Santizier * Aqua Guard Bleach * Aqua Guard Sodium Hypochlorite 10.5% * Aqua Guard Sodium Hypochlorite 12.5% * Sodium Hypochlorite * Liquid Bleach * Bleach * Hypo | | |
| Recommended use | Swimming pool chemical, hard surface cleaner, water treatment, bleaching, textiles, cooling towers, laudry sanitizer and agricultural/ aquacultural purposes | | |
| 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. Causes serious 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

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. Specific treatment (see this label). Wash contaminated clothing before reuse.

Storage

Store locked up. 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 acids may liberate and toxic gas. Chronic skin contact with low concentrations may cause dermatitis.

Supplemental information

None.

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

| Chemical name | Common name and synonyms | CAS number | % |
|--|---------------------------------|------------|---------|
| Sodium Hypochlorite | HYPOCHLORITE SOLUTION | 7681-52-9 | 10-15.5 |
| Sodium hydroxide | Caustic soda Lye Soda lye | 1310-73-2 | 1-5 |
| Other components below reportable levels | | | 80-90 |

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

4. First-aid measures**Inhalation**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. If breathing is difficult, trained personnel should give oxygen. Call a physician or poison control center immediately.

Skin contact

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

Eye contact

Immediately flush eyes with plenty of water for at least 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing for 10-15 minutes. Call a physician or poison control center immediately. Take care not to rinse contaminated water into the unaffected eye or onto the face.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. If swallowed: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

Corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. 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. 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. Treat symptomatically.

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**

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂). Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide. Use water with caution. Contact with water will generate considerable heat.

| | |
|--|---|
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. Do not use dry chemical extinguishing agents. Maleic anhydride may react with the basic sodium compounds. Use chemical extinguishing agents with caution. Some chemical extinguishing agents may react with this material. |
| Specific hazards arising from the chemical | Not considered flammable. Vapors are heavier than air and may spread along floors. Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat. Reacts violently with a wide variety of organic and inorganic chemicals including alcohol, carbides, chlorates, picrates, nitrates and metals. Toxic fumes, gases or vapours 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. |
| General fire hazards | Vapors are heavier than air and may spread along floors. |
| Hazardous combustion products | Hydrogen gas. Hydrogen chloride. Chlorine. Oxygen. 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. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. 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. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas. Remove with vacuum trucks or pump to storage/salvage vessels. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Small spills can be neutralized by covering with a reducing agent, such as Sodium thiosulfate or Sodium sulphite. If not recoverable, dilute with water or flush to holding area and neutralize. |
| Environmental precautions | Never return spills to original containers for re-use. Contact the proper local authorities. Contaminated absorbent material may pose the same hazards as the spilled product. For waste disposal, see Section 13. Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground. |

7. Handling and storage

| | |
|---|--|
| Precautions for safe handling | Use only outdoors or in a well-ventilated area. Wear protective gloves/clothing and eye/face protection. Label containers appropriately. When using, do not eat, drink or smoke. Do not taste or swallow. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling. Observe good industrial hygiene practices. |
| Conditions for safe storage, including any incompatibilities | Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Avoid ultraviolet (UV) light sources. Inspect periodically for damage or leaks. Store in corrosive resistant container with a resistant inner liner. Store in original tightly closed container. Keep container tightly closed. Store in a well-ventilated place. Store away from and do not mix with incompatible materials such as acids, oxidizers, organics, reducing agents and all metals except titanium. Keep away from food, drink and animal feedings. |

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 |

US. Workplace Environmental Exposure Level (WEEL) Guides

| Components | Type | Value |
|-------------------------------------|------|---------|
| SODIUM HYPOCHLORITE (CAS 7681-52-9) | STEL | 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. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Chemical goggles and face shield are recommended. Eye wash facilities and emergency shower must be available when handling this product.

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, chemical protective clothing, rubber boots, and chemical safety goggles plus a face shield. Use of an impervious apron is recommended.

Respiratory protection

Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Particulate filter.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using, do not eat, drink or smoke. Do not breathe mist. Avoid contact with eyes, skin and clothing. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

9. Physical and chemical properties**Appearance**

Clear yellow/green liquid.

Physical state

Liquid.

Form

Liquid.

Color

Clear to yellow/green.

Odor

Pungent. Chlorine-like.

Odor threshold

Not available.

pH

11 - 13

Melting point/freezing point

-150 °F (-101.11 °C)

Initial boiling point and boiling range

> 212 °F (> 100 °C)

Flash point

Not Applicable

Evaporation rate

Not available.

Flammability (solid, gas)

Not applicable.

Upper/lower flammability or explosive limits**Flammability limit - lower (%)**

Not Applicable

Flammability limit - lower (%) temperature

Not Applicable

| | |
|--|----------------|
| Flammability limit - upper (%) | Not Applicable |
| Flammability limit - upper (%) temperature | Not Applicable |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | 12 mm Hg |
| Vapor density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | Soluble |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Other information | |
| Density | 1.18 g/cm3 |
| Molecular formula | NaOCl |
| Molecular weight | 74.4 |
| Specific gravity | 1.165-1.23 |

10. Stability and reactivity

| | |
|---|---|
| Reactivity | Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat. Reacts with amines and ammonia compounds to form explosively unstable compounds. May be corrosive to metals. May be corrosive to: Aluminum. Stainless steel. Carbon steel. Copper. Bronze |
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | Reacts vigorously or violently with many organic and inorganic chemicals such as: acids, acrolein, acrylonitrile, chlorinated hydrocarbons (e.g. 1,2 dichloroethylene), chlorine dioxide, maleic anhydride, nitroethane, nitroparaffins, 2-nitrophenol, nitropropane, phosphorus, potassium persulfate, and tetrahydrofuran (containing peroxides). |
| Conditions to avoid | Direct sources of heat. Avoid high temperatures. Direct sunlight. Avoid contact with incompatible materials. Do not use in areas without adequate ventilation. Do not allow evaporation to dryness. |
| Incompatible materials | Metals. Strong oxidizing agents. Acids. Amines. Ammonia. Reducing agents. Nitrites. Organic compounds. |
| Hazardous decomposition products | None known, refer to hazardous combustion products in Section 5. In the event of fire the following can be released: Chlorine. Sodium chlorate. |

11. Toxicological information

Information on likely routes of exposure

| | |
|---|--|
| Inhalation | Prolonged inhalation may be harmful. May cause irritation to the respiratory system. May cause severe irritation to the nose, throat, and respiratory tract. |
| Skin contact | Causes severe skin burns. |
| Eye contact | Causes serious eye damage. |
| Ingestion | Causes digestive tract burns. Ingestion may cause severe irritation of the mouth, the esophagus and the gastrointestinal tract. |
| Most important symptoms/effects, acute and delayed | Corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. 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. 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. |

Information on toxicological effects

Acute toxicity Not expected to be hazardous by OSHA criteria. There is no available data for the product itself, only for the ingredients. See data for individual ingredient acute toxicity data.

| Components | Species | Test Results |
|--|---|---|
| Sodium hydroxide (CAS 1310-73-2) | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | No Data in Literature |
| Inhalation | | |
| LC50 | Rat | No Data in Literature |
| Oral | | |
| LD50 | Rat | No Data in Literature |
| Sodium Hypochlorite (CAS 7681-52-9) | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | > 10000 mg/kg |
| Inhalation | | |
| LC50 | Rat | > 5.25 mg/l/4h |
| Oral | | |
| LD50 | Rat | 8910 mg/kg |
| Skin corrosion/irritation | Hazardous by OSHA criteria. Causes severe skin burns. Causes severe skin burns and eye damage. Skin corrosion/irritation - Category 1. | |
| Serious eye damage/eye irritation | Hazardous by OSHA criteria. Causes serious eye damage. Serious eye damage/eye irritation - Category 1 | |
| Respiratory or skin sensitization | | |
| Respiratory sensitization | Not expected to be a respiratory sensitizer. | |
| Skin sensitizer | Not expected to be hazardous by OSHA criteria. Not expected to be a skin sensitizer. | |
| | May cause an allergic skin reaction (e.g. hives, rash) in some hypersensitive individuals. | |
| Germ cell mutagenicity | Not expected to be mutagenic. | |
| Carcinogenicity | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. | |
| IARC Monographs. Overall Evaluation of Carcinogenicity | | |
| Sodium Hypochlorite (CAS 7681-52-9) | | 3 Not classifiable as to carcinogenicity to humans. |
| 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. May cause respiratory irritation. Specific Target Organ Toxicity (STOT), Single Exposure, Category 3. | |
| 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 | Prolonged inhalation may be harmful. Chronic skin contact with low concentrations may cause dermatitis. | |

12. Ecological information

| Ecotoxicity | | Toxic to aquatic life. | |
|----------------------------------|------|---------------------------------|-------------------|
| Components | | Species | Test Results |
| Sodium hydroxide (CAS 1310-73-2) | | | |
| Aquatic | | | |
| Acute | | | |
| Crustacea | EC50 | Water flea (Ceriodaphnia dubia) | 40 mg/l, 48 hours |

| Components | | Species | Test Results |
|-------------------------------------|------|--|----------------------|
| Fish | LC50 | Western mosquitofish (<i>Gambusia affinis</i>) | 125 mg/l, 96 hours |
| Sodium Hypochlorite (CAS 7681-52-9) | | | |
| Aquatic | | | |
| <i>Acute</i> | | | |
| Crustacea | EC50 | Water flea (<i>Daphnia magna</i>) | 0.169 mg/l, 48 hours |
| Fish | LC50 | Bluegill (<i>Lepomis macrochirus</i>) | 0.58 mg/l, 96 hours |

| | |
|--------------------------------------|---|
| Persistence and degradability | 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. 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 | UN1791 |
| UN proper shipping name | HYPOCHLORITE SOLUTIONS (RQ = 100) |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Label(s) | 8 |
| Packing group | III |
| Environmental hazards | |
| Marine pollutant | Yes |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Special provisions | IB3, N34, T4, TP2, TP24 |
| Packaging exceptions | 154 |
| Packaging non bulk | 203 |
| Packaging bulk | 241 |
| This product does meet the definition of a marine pollutant as described in 49 CFR section 171.8. | |

IATA

| | |
|-------------------------------------|---|
| UN number | UN1791 |
| UN proper shipping name | HYPOCHLORITE SOLUTION |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Packing group | III |
| 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 | UN1791 |
| UN proper shipping name | HYPOCHLORITE SOLUTION |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Packing group | III |
| 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 | Not available. |

DOT



IATA; IMDG



Marine pollutant



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. |
| Sodium Hypochlorite (CAS 7681-52-9) | 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 Yes

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)

Sodium Hypochlorite (CAS 7681-52-9)

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

Sodium hydroxide (CAS 1310-73-2)

Sodium Hypochlorite (CAS 7681-52-9)

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

Sodium hydroxide (CAS 1310-73-2)

Sodium Hypochlorite (CAS 7681-52-9)

US. Rhode Island RTK

Sodium hydroxide (CAS 1310-73-2)

Sodium Hypochlorite (CAS 7681-52-9)

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.

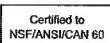
International Inventories

| 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 |

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|--|---|------------------------|
| 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 | 12-03-2020 |
| Version # | 04 |
| HMIS | H: 3 F: 0 R: 1 |
| NFPA | H: 3 F: 0 R: 1 |



Maximum use level for Sodium hypochlorite under NSF/ANSI Standard 60 - Maximum use in potable water is 84 mg/L for 12.5% bleach and 100 mg/L for 10.5% bleach.

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
EC: European Community
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
IMDG: International Maritime Dangerous Goods
LC: Lethal Concentration
LD: Lethal Dose
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
Prepared by: ICC The Compliance Center Inc. 1-888-442-9628
<http://www.thecompliancecenter.com>

Disclaimer

Disclaimer
This Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by / obtained from Allied Universal Corporation and CCOHS' Web Information Service. The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc. and Allied Universal Corporation expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

Bibliography

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Allied Universal Corporation
Canadian Centre for Occupational Health and Safety, CCInfoWeb Databases, 2014
(Chempendium, RTECS, HSDB, INCHEM)
European Chemicals Bureau, Existing Chemicals Work Area, EINECS Information System, 2014.
Material Safety Data Sheet from manufacturer.
OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2014.



The Public Health and Safety Organization

NSF Product and Service Listings

These NSF Official Listings are current as of **Friday, December 13, 2024** at 12:15 a.m. Eastern Time. Please [contact NSF](#) 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=Chlorine&PlantCountry=UNITED+STATES&](http://info.nsf.org/Certified/PwsChemicals/Listings.asp?CompanyName=Allied+Universal+Corporation&ChemicalName=Chlorine&PlantCountry=UNITED+STATES&)

NSF/ANSI/CAN 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 : Miami, FL

Chlorine[CL]

| <i>Trade Designation</i> | <i>Product Function</i> | <i>Max Use</i> |
|--------------------------|--------------------------|----------------|
| Chlorine | Disinfection & Oxidation | 30mg/L |

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products shall be monitored in the finished drinking water to ensure compliance to all applicable regulations.

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

Facility : Brunswick, GA

Chlorine[CL]

| <i>Trade Designation</i> | <i>Product Function</i> | <i>Max Use</i> |
|--------------------------|--------------------------|----------------|
| Chlorine | Disinfection & Oxidation | 30 mg/L |

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products shall be monitored in the finished drinking water to ensure compliance to all applicable regulations.

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

Facility : Ellisville, MS

Chlorine[CL]

| <i>Trade Designation</i> | <i>Product Function</i> | <i>Max Use</i> |
|--------------------------|--------------------------|----------------|
| Chlorine | Disinfection & Oxidation | 30 mg/L |

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products shall be monitored in the finished drinking water to ensure compliance to all applicable regulations.

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 3

Processing time was 0 seconds

SAFETY DATA SHEET

1. Identification

| | |
|---|--|
| Product identifier | Chlorine |
| Other means of identification | |
| SDS number | AUC-005 |
| Synonyms | Liquid Chlorine * Elemental Chlorine * Molecular chlorine * Compressed Chlorine Gas |
| Recommended use | Production of chlorinated inorganic and organic chemicals; bleaching agent for paper, textiles and fabrics; used in water purification, sewage disinfection and food processing. |
| Recommended restrictions | Professional use only |
| 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 | Oxidizing gases | Category 1 |
| | Gases under pressure | Liquefied gas |
| Health hazards | Acute toxicity, inhalation | Category 2 |
| | 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 | Hazardous to the aquatic environment, acute hazard | Category 1 |
| OSHA defined hazards | This mixture does not meet the classification criteria according to OSHA HazCom 2012. | |
| Label elements | | |



| | |
|--------------------------------|---|
| Signal word | Danger |
| Hazard statement | May cause or intensify fire; oxidizer. Contains gas under pressure; may explode if heated. Causes severe skin burns and eye damage. Fatal if inhaled. May cause respiratory irritation. Very toxic to aquatic life. |
| Precautionary statement | |
| Prevention | Keep/Store away from clothing and other combustible materials. Keep reduction valves free from grease and oil. Do not breathe gas. Use only outdoors or in a well-ventilated area. Wear respiratory protection. Wash hands and face thoroughly after handling. Wear protective gloves/clothing and eye/face protection. Avoid release to the environment. |

| | |
|--|--|
| Response | Specific treatment is urgent (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. In case of fire: Stop leak if safe to do so. Collect spillage. |
| Storage | Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. |
| 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: Toxic fumes, gases or vapors may evolve on burning. Chlorine is extremely corrosive to most metals in the presence of moisture (> 150 ppm water and/or -40 degrees F dew point) or at high temperatures. Combines with water to produce hydrochloric and hypochlorous acid. Severe, short-term exposures may cause long-lasting respiratory effects, e.g. Reactive Airways Dysfunction (RADs), due to the material's severe irritating properties. Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Direct contact with liquefied gas may cause frostbite and corrosive injury to the eyes. |
| Supplemental information | Keep away from heat. Make sure valves on gas cylinders are fully opened when gas is used. Open cylinder valve slowly to prevent rapid decompression and damage to valve seat. Use smallest possible amounts in designated areas with adequate ventilation. Liquid chlorine lines must have suitable expansion chambers between block valves due to high coefficient of expansion. Shut flow off at cylinder valve and not just at the regulator after use. Use a suitable hand truck to move cylinders; do not drag, roll, slide, or drop. Secure cylinders in an upright position at all times, close all valves when not in use. Establish written emergency plan and special training where chlorine is used. Regularly inspect and test piping and containers used for chlorine service. |

3. Composition/information on ingredients

Substances

| Chemical name | Common name and synonyms | CAS number | % |
|---------------|--|------------|------|
| Chlorine | Liquid Chlorine Elemental Chlorine Molecular chlorine Compressed Chlorine Gas | 7782-50-5 | 99.5 |

4. First-aid measures

| | |
|---------------------|---|
| Inhalation | Take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate protective equipment, use the buddy system). IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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. Immediately call a POISON CENTER or doctor/physician. |
| Skin contact | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Do not rub area of contact. Gently remove clothing or jewelry. Carefully cut around clothing that sticks to the skin. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor/physician. Discard any shoes or clothing items that cannot be decontaminated. |
| Eye contact | IF IN EYES: Rinse cautiously with water for several 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. Do not rub eyes. Immediately call a POISON CENTER or doctor/physician. |
| Ingestion | Not an expected route of entry under normal conditions of use. If ingestion of a large amount does occur, call a poison control center immediately. Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. |

Most important symptoms/effects, acute and delayed

Fatal if inhaled. Immediately dangerous to life or health (IDLH) at 10 ppm. May cause severe irritation to the nose, throat, and respiratory tract. Symptoms may include coughing, choking and wheezing. Could also cause tightness in the chest, a blue discolouration of the skin (cyanosis), severe headache, nausea, vomiting and fainting. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. May result in unconsciousness and possibly death. Severe, short-term exposures may cause long-lasting respiratory effects, e.g. Reactive Airways Dysfunction (RADs), due to the material's severe irritating properties. With this condition, asthma-like symptoms and increased reactivity of the airways is experienced.

Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. If product is sprayed directly on skin, symptoms of frostbite may be experienced including numbness, prickling and itching.

Corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. If product is sprayed directly into the eyes, could cause freezing of the eye.

Indication of immediate medical attention and special treatment needed

Immediate medical attention is required. Fatal if inhaled. Causes chemical burns. Symptoms may be delayed. Keep victim under observation. Medical supervision for minimum 48 hours. Provide general supportive measures and treat symptomatically.

General information

First-aid procedures should be reviewed by appropriate personnel familiar with chlorine and its conditions of use in the workplace.

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media

Extinguishing media - small fires: Dry chemicals. Carbon dioxide (CO₂).

Extinguishing media - large fires: Water Spray or Fog. Foam.

Unsuitable extinguishing media

Use water with caution. May react with water. Do not use direct water spray or water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Pressurized container may explode when exposed to heat or flame. May react to cause fire and or explosion upon contact with many organic compounds, ammonia, hydrogen and with many metals at elevated temperatures. Chlorine will support the burning of most combustible materials. Combines with water to produce hydrochloric and hypochlorous acid. Liquefied chlorine can accumulate static charge by flow or agitation, since it has a very low electrical conductivity. Chlorine containers or cylinders may vent rapidly or rupture violently, if exposed to fire or excessive heat for a sufficient period of time. Intense local heat (above 200 deg C) on the steel walls of chlorine cylinders can cause an iron/chlorine fire resulting in rupture of the container. Vapors are heavier than air and may spread along floors. Toxic fumes, gases or vapors may evolve on burning.

Special protective equipment and precautions for firefighters

Firefighters should wear full protective clothing including self contained breathing apparatus. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. A full-body chemical resistant suit should be worn.

Fire fighting equipment/instructions

Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do so without risk. Remove combustible materials. Stop the flow of gas before extinguishing fire, if safe to do so. Use water spray to direct escaping gas away from workers if it is necessary to stop the flow of gas. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Stay away from ends of cylinders and withdraw immediately in case of rising sounds or discolouration of 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.

General fire hazards

The product itself does not burn. However, material is considered to be an oxidizing gas. Supporter of combustion and can intensify a fire.

Hazardous combustion products

Toxic chemicals are formed when combustible materials burn in chlorine. These may include corrosive hydrogen chloride gas and other chlorine compounds.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Restrict access to area until completion of clean-up. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Consider initial downwind evacuation for at least 500 meters (1/3 mile). Ensure clean-up is conducted by trained personnel only. Ventilate closed spaces before entering them. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Stop the flow of material, if this is without risk. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Remove or isolate incompatible materials as well as other hazardous materials. Do not spray leak with water since a reaction producing corrosive hypochlorous and hydrochloric acids occurs, which can aggravate the leak.

May be absorbed and neutralized into solutions of caustic soda, or lime and placed in polypropylene, polyvinyl chloride, fibreglass or lead containers. Since hypochlorites are formed, the solutions must be treated with a reducing agent such as sodium sulfite before disposal. Do not immerse container in caustic solution.

Large Spills: Large uncontrollable leaks require environmental considerations and possible evacuation of the surrounding area. When possible draw off chlorine to process or disposal system

Contact the proper local authorities.

For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Prevent entry into waterways, sewer, basements or confined areas. Contact local authorities in case of spillage to drain/aquatic environment.

7. Handling and storage

Precautions for safe handling

Establish written emergency plan and special training where chlorine is used.

Use only outdoors or in a well-ventilated area. Wear respiratory protection. Wear protective gloves/clothing and eye/face protection. See Section 8 of the SDS for Personal Protective Equipment. Do not breathe gas. Avoid contact with eyes, skin, and clothing. Regularly inspect and test piping and containers used for chlorine service. Liquid chlorine lines must have suitable expansion chambers between block valves due to high coefficient of expansion. Keep away from heat. Keep/Store away from clothing and other combustible materials. Keep reduction valves free from grease and oil. Use only chlorine compatible lubricants. Use smallest possible amounts in designated areas with adequate ventilation. Shut flow off at cylinder valve and not just at the regulator after use. Use a suitable hand truck to move cylinders; do not drag, roll, slide, or drop. Protect against physical damage. Wash hands after handling and before eating.

Conditions for safe storage, including any incompatibilities

Store in steel pressure cylinders in a cool, dry area outdoors or in well-ventilated, detached or segregated areas of non-combustible construction. Keep container tightly closed. Store locked up. Protect from sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Do not store near combustible materials. Wood and other organic materials should not be used on floors, structural materials, or ventilation systems in the storage area. Store away from incompatible materials (see Section 10 of the SDS). Secure cylinders in an upright position at all times, close all valves when not in use. Use a "first in - first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Store at temperatures not exceeding 55°C (131°F). For the specified temperature the system pressure is 225 psig (1551 kPa).

8. Exposure controls/personal protection

Occupational exposure limits

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

| Material | Type | Value |
|--------------------------|---------|------------------------------|
| Chlorine (CAS 7782-50-5) | Ceiling | 3 mg/m ³ 1 ppm |

US. ACGIH Threshold Limit Values

| Material | Type | Value |
|--------------------------|------|--------------------------------|
| Chlorine (CAS 7782-50-5) | STEL | 0.4 ppm/0.29 mg/m ³ |
| | TWA | 0.1 ppm/1.16 mg/m ³ |

US. NIOSH: Pocket Guide to Chemical Hazards

| Material | Type | Value |
|--------------------------|---------|-----------------------------------|
| Chlorine (CAS 7782-50-5) | Ceiling | 1.45 mg/m ³ 0.5 ppm |

Biological limit values

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

Exposure guidelines

The NIOSH IDLH concentration for Chlorine is 10 ppm.

| | |
|--|--|
| Appropriate engineering controls | Ensure adequate ventilation, especially in confined areas. 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. In case of insufficient ventilation, wear suitable respiratory equipment. |
| Individual protection measures, such as personal protective equipment | |
| Eye/face protection | Wear eye/face protection. Chemical goggles are recommended. Wear a full-face respirator, if needed. A full face shield may also be necessary. Eye wash fountains are required. |
| Skin protection | |
| Hand protection | Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers. |
| Other | Wear appropriate chemical-resistant clothing. Where contact is likely, wear chemical-resistant gloves, a chemical suit and rubber boots. Eye wash facilities and emergency shower must be available when handling this product. |
| Respiratory protection | Up to 5 ppm: 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. Up to 10 ppm: A SAR (supplied air respirator) operated in a continuous flow mode or powered air purifying respirator with cartridge(s); a full facepiece chemical cartridge respirator with cartridge(s); a gas mask with canister; a full facepiece SCBA (self contained breathing apparatus) ; or a full facepiece SAR may be used to reduce exposure. EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS: Positive pressure, full-facepiece SCBA; or positive pressure, full-facepiece SAR with an auxiliary positive pressure SCBA. 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 gas. Avoid contact with eyes, skin and clothing. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product. Remove soiled clothing and wash it thoroughly before reuse. Inform laundry personnel of contaminant's hazards. |

9. Physical and chemical properties

Appearance

| | |
|---|---|
| Physical state | Gas (or liquid under pressure). |
| Form | Compressed liquefied gas. |
| Color | Amber color; vaporizes to greenish, yellow gas. |
| Odor | Pungent suffocating odor |
| Odor threshold | 0.02 - 3.4 ppm (detection) |
| pH | Not applicable (reacts with water to form an acidic solution) |
| Melting point/freezing point | -149.8 °F (-101 °C) |
| Initial boiling point and boiling range | -30.28 °F (-34.6 °C) |
| Flash point | Not Applicable |
| Evaporation rate | Not Applicable. Gas at normal temperatures. |
| Flammability (solid, gas) | The product is not flammable. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not Applicable |
| Flammability limit - upper (%) | Not Applicable |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | 638.4 kPa @ 20°C (68°F) 4788 mm Hg @ 20°C (68°F) |
| Vapor density | 2.49 @ 0°C (32°F) (Air = 1) |
| Relative density | 3.21 kg/m³ @ 0°C (32°F) |

| | |
|--|--|
| Solubility(ies) | |
| Solubility (water) | 6.3 mg/l (Slightly soluble) |
| Solubility (other) | Soluble in dimethylformamide, disulfur dichloride, benzene, chloroform, carbon tetrachloride, hexachlorobutadiene, tetrachloroethane, pentachloroethane, chlorobenzene, nitrobenzene, glacial acetic acid (99.84%) and other chlorides |
| Partition coefficient (n-octanol/water) | Not applicable (gas) |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Viscosity temperature | Not Applicable (Gas) |
| Other information | |
| Critical temperature | 290.75 °F (143.75 °C) |
| Explosive properties | Not explosive. |
| Molecular weight | 70.91 |
| Oxidizing properties | Strong oxidizing agent because of its electron-transfer capabilities. Supporter of combustion and can intensify a fire. Note, that Chlorine does not yield oxygen or any other oxidizing substance. |
| Specific gravity | 0.003 @ 0°C (32°F) |

10. Stability and reactivity

| | |
|---|--|
| Reactivity | Combines with water to produce hydrochloric and hypochlorous acid. These acids can decompose to hydrochloric acid and oxygen. Contact with combustible material may cause fire. |
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | Hazardous polymerization does not occur. Chlorine is extremely corrosive to most metals in the presence of moisture (> 150 ppm water and/or -40 degrees F dew point) or at high temperatures. Will support or initiate combustion or explosion of organic matter and other oxidizable material. Note, that Chlorine does not yield oxygen or any other oxidizing substance. Liquid or gaseous chlorine can react violently with many combustible materials, and other chemicals, including water. Metal halides, carbon, finely divided metals and sulfides can accelerate the rate of chlorine reactions. Chlorine reacts with carbon monoxide to produce toxic phosgene, and sulfur dioxide to produce sulfuryl chloride. Intense local heat (above 200 deg C) on the steel walls of chlorine cylinders can cause an iron/chlorine fire resulting in rupture of the container. |
| Conditions to avoid | Keep away from combustible materials. Avoid contact with incompatible materials. Keep away from heat. Do not use in areas without adequate ventilation. |
| Incompatible materials | Tin; Metals; Sulfides; Titanium. Reacts with most metals at high temperatures. Reacts with water to produce hydrochloric acids, which are corrosive to most metals. Ammonia, elemental metals, certain metal hydroxides, carbides, nitrides, oxides, phosphides and sulfides, easily oxidized materials, organic materials, reducing agents, alkalis and unstable and reactive compounds. |
| Hazardous decomposition products | Hydrogen chloride gas. Hydrochloric acid. Hypochlorous acid. |

11. Toxicological information

Information on likely routes of exposure

| | |
|---------------------|---|
| Inhalation | Very toxic by inhalation. Fatal if inhaled. May cause severe irritation to the nose, throat, and respiratory tract. |
| Skin contact | Causes skin burns. Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Not expected to be absorbed through the skin. |
| Eye contact | Causes severe eye burns. If product is sprayed directly into the eyes, could cause freezing of the eye. |
| Ingestion | Not an expected route of entry under normal conditions of use. |

Most important symptoms/effects, acute and delayed

Fatal if inhaled. Immediately dangerous to life or health (IDLH) at 10 ppm. May cause severe irritation to the nose, throat, and respiratory tract. Symptoms may include coughing, choking and wheezing. Could also cause tightness in the chest, a blue discolouration of the skin (cyanosis), severe headache, nausea, vomiting and fainting. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. May result in unconsciousness and possibly death. Severe, short-term exposures may cause long-lasting respiratory effects, e.g. Reactive Airways Dysfunction (RADs), due to the material's severe irritating properties. With this condition, asthma-like symptoms and increased reactivity of the airways is experienced.

Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. If product is sprayed directly on skin, symptoms of frostbite may be experienced including numbness, prickling and itching.

Corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. If product is sprayed directly into the eyes, could cause freezing of the eye.

Information on toxicological effects

Acute toxicity

Hazardous by OSHA criteria. Classification:
Acute Toxicity (inhalation - gas) - Category 2. Fatal if inhaled.
See below for individual ingredient acute toxicity data.

| Product | Species | Test Results |
|--------------------------|---------|------------------------|
| Chlorine (CAS 7782-50-5) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | No data in literature. |
| <i>Inhalation</i> | | |
| LC50 | Rat | 147 ppm, 4 Hours |
| <i>Oral</i> | | |
| LD50 | Rat | No data in literature. |

Skin corrosion/irritation

Hazardous by OSHA criteria. Classification:
Skin corrosion/irritation - Category 1. Causes severe skin burns.

Serious eye damage/eye irritation

Hazardous by OSHA criteria. Classification:
Serious eye damage/eye irritation - Category 1. Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization

This product is not expected to cause respiratory sensitization.

Skin sensitizer

This product is not expected to cause skin sensitization.

Germ cell mutagenicity

Not expected to be mutagenic.

Carcinogenicity

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. See below for ingredients present on regulatory lists.

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. Classification:
Specific Target Organ Toxicity (STOT), Single Exposure. Category 3. May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

Not expected to be hazardous by OSHA criteria.

Aspiration toxicity

Not likely, due to the form of the product. Not expected to be an aspiration hazard.

Chronic effects

Prolonged or repeated exposure to low concentrations may cause drying and cracking of the skin, respiratory effects, gum disorders and painless destruction of teeth
Limited occupational studies with long-term exposure to low concentrations, have not shown significant respiratory effects.
Long-term animal studies confirm that chlorine is a severe irritant to the upper and lower respiratory tract.

12. Ecological information

Ecotoxicity

Very toxic to aquatic life. See below for individual ingredient ecotoxicity data.

| Product | Species | | Test Results |
|---------------------------------------|--|---|---|
| Chlorine (CAS 7782-50-5) | | | |
| Aquatic | | | |
| Acute | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 0.005 mg/l, 48 hours (mg Free Available Chlorine/L) |
| Fish | LC50 | Rainbow trout,donaldson trout (Oncorhynchus mykiss) | 0.014 mg/l, 96 hours |
| Persistence and degradability | Free chlorine is consumed upon contact with living tissues making measurement of biodegradation impossible and unnecessary. | | |
| Bioaccumulative potential | Not expected to be bio accumulative. | | |
| Mobility in soil | The product itself has not been tested. | | |
| 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. 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 | UN1017 | | |
| UN proper shipping name | Chlorine (CHLORINE) | | |
| Transport hazard class(es) | | | |
| Class | 2.3 | | |
| Subsidiary risk | 5.1, 8 | | |
| Label(s) | 2.3, 5.1, 8 | | |
| Packing group | Not applicable. | | |
| Environmental hazards | | | |
| Marine pollutant | Yes | | |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. US CERCLA Reportable Quantity (RQ): 10 lbs / 4.54 kg | | |
| Special provisions | 2, B9, B14, N86, T50, TP19 | | |
| Packaging exceptions | None | | |
| Packaging non bulk | 304 | | |
| Packaging bulk | 314, 315 | | |
| IATA | | | |
| UN number | UN1017 | | |
| UN proper shipping name | Chlorine | | |
| Transport hazard class(es) | | | |
| Class | 2.3 | | |
| Subsidiary risk | 5.1, 8 | | |
| Packing group | Not applicable. | | |
| Environmental hazards | Yes | | |
| ERG Code | 2CP | | |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. Refer to Special Provision A2 for shipping information. | | |
| Other information | | | |
| Passenger and cargo aircraft | Forbidden | | |

Cargo aircraft only

Forbidden

IMDG

UN number

UN1017

UN proper shipping name

CHLORINE

Transport hazard class(es)

Class

2.3

Subsidiary risk

5.1, 8

Packing group

Not applicable.

Environmental hazards

Marine pollutant

Yes

EmS

F-C, S-U

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

Not available.

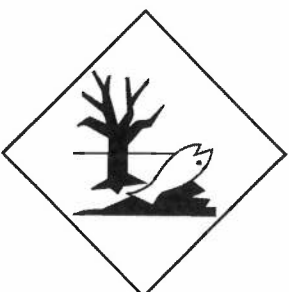
DOT



IATA; IMDG



Marine pollutant



General information

This product meets the criteria for an environmentally hazardous mixture, according to the IMDG Code.

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)

Chlorine (CAS 7782-50-5)

Listed.

SARA 304 Emergency release notification

Chlorine (CAS 7782-50-5)

10 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**

Oxidizing Gases, Gas under pressure
 Acute Toxicity
 Skin Damage
 Eye Damage
 Specific Target Organ Toxicity, single exposure

SARA 302 Extremely hazardous substance

| Chemical name | CAS number | Reportable quantity | Threshold planning quantity | Threshold planning quantity, lower value | Threshold planning quantity, upper value |
|---------------|------------|---------------------|-----------------------------|--|--|
| Chlorine | 7782-50-5 | 10 | 100 lbs | | |

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

| Chemical name | CAS number | % by wt. |
|---------------|------------|----------|
| Chlorine | 7782-50-5 | 99.5 |

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Chlorine (CAS 7782-50-5)

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

Chlorine (CAS 7782-50-5)

Clean Water Act (CWA) Hazardous substance

US FIFRA Registered Pesticide Yes

Safe Drinking Water Act (SDWA) 4 mg/l
4.0 mg/l

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

Chlorine (CAS 7782-50-5)

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

Chlorine (CAS 7782-50-5)

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

Chlorine (CAS 7782-50-5)

US. Rhode Island RTK

Chlorine (CAS 7782-50-5)

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) | No |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |

Material name: Chlorine

AUC-005 Version #: 03 Issue date: 01-07-2015, Revision Date 09-09-2021

SDS US
10 / 12

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
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 | 01-07-2015 | Revision date | 09-09-2021 |
| Version # | 03 | | |
| HMIS | H: 4 F: 0 R: 1 | | |
| NFPA | H: 4 F: 0 R: 0 Other: OX | | |



Certified to
NSF/ANSI 60

List of abbreviations

Maximum use level for Chlorine in potable water is 30 mg/L.

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

EPA: Environmental Protection Agency

EPCRA: Emergency Planning and Community Right-to-Know Act

ERG: Emergency Response Guidebook

HSDB® - Hazardous Substances Data Bank

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association

IBC: Intermediate Bulk Container

IDLH: immediately dangerous to life or health

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: Organization for Economic Cooperation and Development

OEL: National occupational exposure limits

OSHA: Occupational Safety and Health Administration

PEL: Permissible exposure limit

RCRA: Resource Conservation and Recovery Act

RQ: Reportable Quantity

RTECS: Registry of Toxic Effects of Chemical Substances

SAR: supplied-air respirator

SCBA: self-contained breathing apparatus

SDS: Safety Data Sheet

STEL: Short Term Exposure Limit

TWA: Time Weighted Average

UN: United Nations

Disclaimer

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

Disclaimer

This Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by / obtained from Allied Universal Corporation and CCOHS' Web Information Service. The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc. and Allied Universal Corporation expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Allied Universal Corporation

Bibliography

ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices (2014)
Canadian Centre for Occupational Health and Safety, CCInfoWeb Databases, 2014
(Chempendium, RTECs, HSDB, INCHEM)
International Agency for Research on Cancer Monographs (2014)
Material Safety Data Sheet from manufacturer.
OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2014.



2025

LOCAL BUSINESS TAX RECEIPT

CITY OF DORAL, FLORIDA
8401 NW 53RD TERRACE
DORAL, FL 33166
(305) 593-6631

09/30/2024

ALLIED UNIVERSAL CORP
ALLIED UNIVERSAL CORP
3901 NW 115 AVE
Doral, FL 33178-1859

LICENSE NO. 2021000426

License Fee Paid: \$150.00

FOR THE PERIOD COMMENCING OCTOBER 1 AND ENDING SEPTEMBER 30, THE ABOVE-NAMED BUSINESS IS LICENSED TO ENGAGE IN THE FOLLOWING BUSINESS FOR THE LICENSE YEAR:

WAREHOUSE/DISTRIBUTION CENTER

Square Footage: 10000

No. of Seats/Tables: 0

No. of Units/Spaces:

CONDITIONS:

DORAL:

Machines:

Employees: 35

No. of Trucks:

State License #:

Kenia Palau
Chief Licensing Official

This Document Must Be Posted

DISPLAY IN A CONSPICUOUS LOCATION



City of Ellisville

STATE OF MISSISSIPPI PRIVILEGE TAX LICENSE

No.

ISSUED TO: ALLIED UNIVERSAL CORP.
ATTN: VICKY VARGAS
3901 NW 115TH AVE
MIAMI, FL 33178

EFFECTIVE DATE

09/01/2024

BUSINESS LOCATION: 30 NEIL GUNN ROAD

EXPIRATION DATE

09/30/2025

TYPE OF BUSINESS: CHEMICALS

ACCT: 6129

| SECTION | DESCRIPTION | AMOUNT |
|------------|-------------------------------|--------|
| 27-17-365I | INVENTORY \$40,001 - \$50,000 | 150.00 |
| | TOTAL FEE > > > | 150.00 |

THIS LICENSE PROVIDES THE ABOVE TAXPAYER THE PRIVILEGE OF CONDUCTING BUSINESS AS REQUIRED BY THE MISSISSIPPI CODE 1972.
THIS LICENSE IS NOT TRANSFERABLE AND IS VALID ONLY WITHIN THE TERRITORIAL LIMITS OF THE CITY OF ELLISVILLE.

BY: MICHELLE MCALPIN, CITY OF ELLISVILLE
TAX COLLECTOR

THIS LICENSE SHALL NOT MAKE LAWFUL ANY ACT OR THING DECLARED TO BE UNLAWFUL BY THE STATE OF MISSISSIPPI.