

AGREEMENT FOR THE PURCHASE OF GOODS AND SERVICES

THIS AGREEMENT FOR THE PURCHASE OF GOODS AND SERVICES ("Agreement") is made _____, 2016, between Univar USA, Inc. ("Contractor"), whose address is 8201 S. 212th Street, Kent, Washington 98032, and telephone number is 253-872-5000 and the City of Stockton, a municipal corporation ("City").

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

1. Goods to be provided and services to be performed. Contractor shall provide the goods and perform the services as set forth on the attached Exhibit A incorporated herein by reference Contractor shall begin providing the goods/performing the services by July 1, 2016 and complete providing the goods/performing the services by June 30, 2017; provided, however, the parties may agree to change the beginning or ending date(s).

2. Compensation. For the goods and services under this Agreement, City shall pay Contractor the sum of \$ 0.95 per gallon for delivery of Sodium Bisulfite.

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

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

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

6. Indemnification. Contractor shall indemnify, save and hold harmless from and defend the City, members of the City Council and employees, agents and volunteers, against any and all claims, costs, demands, causes of action, suits, losses, and expense, including attorneys fees, arising from or out of acts or omissions of Contractor, its officials, employees, agents or sub-contractors, in connection with the goods and services that the Contractor is to

provide/performance under this Agreement, except where caused by the active or sole negligence of City, or City's willful misconduct.

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

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

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

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

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

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

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

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

To Contractor: Univar USA, Inc.
Attn: Jennifer Perras
8201 S 212th Street
Kent, WA 98032

To City: City Manager
City of Stockton
425 N. El Dorado St.
Stockton, CA 95202

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

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

b. Contractor shall not assign or transfer this Agreement.

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

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

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

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

CITY OF STOCKTON

CONTRACTOR NAME

KURT O. WILSON
CITY MANAGER

By: _____
Signature

Print name

Title: _____

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

ATTEST:

APPROVED AS TO FORM

BONNIE PAIGE
CITY CLERK

JOHN LUEBBERKE
CITY ATTORNEY

Univar USA Inc.
8201 S. 212th
Kent, WA 98032-1994
USA

T 253-872-5000
F 253-572-5041
www.univarusa.com



March 31, 2016

Dublin San Ramon Services District
Regional Wastewater Treatment Facility
Attn: Louanne Ivy
7399 Johnson Dr
Pleasanton, CA 94588

RE: Bid for Sodium Bisulfite, BACC Bid No. 12-2016

To Louanne:

Univar USA Inc. is pleased to offer a price quote on your ITB due Tuesday, April 4, 2016 and has done so on the attached required paperwork.

Our contact information for all things bid and contract related, as well as the information for your local branch, is also attached.

We look forward to hearing the results of your request – we have included a self-addressed, stamped envelope for the bid tabulations.

Thank you,

Jennifer Perras
Shawnasey McCarthy

Municipal Specialists
Western Region
Univar USA Inc.
Muniteam@univarusa.com
www.univar.com

Please Note: Seller shall indemnify Buyer for losses to the extent caused by Seller's negligence or breach of contract. Neither party is liable for incidental or consequential damages. Seller's liability is limited to the purchase price of the goods. SELLER MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Please Note: Where applicable, any State, Federal or other appropriate taxes and/or the California Mill Assessment will appear as separate line items on any invoices from Univar. If Univar's offer (pricing) was inclusive of these charges – they will be backed out of the "product" line item and shown as their own line item(s) at the time of billing.

Please Note: Cooperative Purchasing/Contract Piggy-Back Clauses: Unless otherwise checked "yes" within the attached offer, it is Univar's standard policy NOT to agree to/participate in Cooperative Purchasing but rather to work



**UNIVAR USA INC.
AUTHORIZED BID SIGNERS**

RESOLUTION

RESOLVED, that the Corporate Secretary shall maintain a list of the agents of this Corporation who are vested with authority to execute in the Corporation's behalf formal, written bids or proposals for the sale of other disposition of products handled by the Corporation. Said list shall be as established initially by the Board of Directors and thereafter, the President, or a Vice President shall have the authority, by written directive to the Corporate Secretary, to add agents to or eliminate agents from said list, and it is further

RESOLVED, that the Corporate Secretary or any Assistant Secretary of the Corporation is authorized to certify this resolution or certify to the name or names of persons on the list maintained by the Corporate Secretary and such certificate will be conclusive evidence of the authority of such person or persons so to act.

END OF RESOLUTION

CERTIFICATION

I, the undersigned, as Corporate Secretary of Univar USA Inc. do hereby certify as follows:

1. That the above resolution was duly adopted by the Board of Directors of said Corporation at a meeting duly held on December 4, 1986, and is in full force and effect.
2. That the list of persons authorized to execute, for an on behalf of this Corporation, written bids or proposals for the sale or other disposition of products handled by this Corporation, as initially established by the Board of Directors and thereafter added to by the President, or a Vice President of this Corporation as follows:

All officers and the following:

Shawnasey McCarthy – Municipal Commercial Manager
 Kristen Bimler – Municipal Specialist
 Linda Campbell – Municipal Specialist
 Sara Cauthen – Municipal Specialist
 Roise Holiday – Municipal Specialist
 Michele Karras – Municipal Specialist
 Max Malmborg – Municipal Specialist
 Jennifer Perras – Municipal Specialist
 Shelley Stevens – Municipal Specialist
 Michelle Wick – Municipal Specialist

3. That the foregoing person is authorized to execute bids pursuant to the resolution above referred to.

Dated this 31st of March, 2016.

 Perry T. Kusakabe
 Corporate Secretary



Univar USA Inc.
2256 Junction Ave.
San Jose, CA 95131-1216

T 408-435-8700
F 408-435-1735
800-659-5908
www.univar.com



GENERAL INFORMATION

Regular Office Hours during which orders may be placed:

Monday – Friday 7:00 am – 5:00 pm (PST)

In case of an emergency during non-business hours:

For Non-Chemical Emergencies:

After-hours emergency – 24-hour response: Will Allison - (408) 593-4460 (cell)
Brian Wills- (650) 670-7267
Tom Mendenhall- (650) 280-3726 (cell)

For Chemical Related Emergencies:

ChemTrec: (800) 424-9300

Names, telephone/FAX numbers of those responsible for taking orders and initiating delivery:

Office Phone: (800) 659-5908
Office Fax: (408) 435-1735

Customer Service-
John Dinh - Dispatcher for packaged goods
Ryan Amodeo- Plant Manager

custsvs-sanjose@univarusa.com
John.dinh@univarusa.com
Ryan.Amodeo@univarusa.com

For anything pertaining to bids:

Please send all bid packets/documents to:
(Unless otherwise specified)

Univar USA Inc.
Attn: WER Muni Team
8201 S. 212th
Kent, WA 98032-1994

Contacts: muniteam-west@univarusa.com

Jennifer Perras
Municipal Specialist
Phone: (253) 872-5040
Fax: (253) 872-5041
jennifer.perras@univarusa.com

Roise Holiday
Municipal Specialist
Phone: (253) 872-5068
Fax: (253) 872-5041
roise.holiday@univarusa.com

Michelle Wick
Municipal Specialist
Phone: (53) 872-5084
Fax: (253) 872-5041
michelle.wick@univarusa.com

Shawnasey McCarthy
Municipal Commercial Manager
Phone: (253) 872-5052
Fax: (253) 872-5041
shawnasey.mccarthy@univarusa.com

Remittance Address:

Univar USA Inc
PO BOX 740896
LOS ANGELES, CA 90074-0896

Standard Payment Terms:

Net 30

SODIUM BISULFITE

BID NO. 12-2016

STANDARD AGREEMENT, PAGE 1 OF 2
BAY AREA CHEMICAL CONSORTIUM
BID NO. 12-2016
SUPPLY AND DELIVERY OF SODIUM BISULFITE

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

Dear Sirs:

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

Company: Univar USA Inc.
 Address: 8201 S. 2124 St
 City, State, ZIP: Kent, WA 98032
 Phone: 253-872-5000
 Email: muniteam-west@univarusa.com
 Authorized Representative: Jennifer Ferras
 Signature: [Signature]
 Date: 3/31/16

WE ACKNOWLEDGE RECEIVING ADDENDUM/ADDENDA NUMBER 0 THROUGH _____.

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

Any load under 2,000 gal will be charged
 a \$290.00 LTL fee.

SODIUM BISULFITE

BID NO. 12-2016

STANDARD AGREEMENT, PAGE 2 OF 2

BIDDER INFORMATION

1. Legal Name of Bidder:

Univar USA Inc.

2. Bidder's Street Address:

2256 Junction Ave, San Jose, CA 95131

3. Mailing Address:

8201 S. 212th St, Kent, WA 980324. Business Telephone: 253-872-5000 Fax Number: 253-872-5041

5. Type of Supplier:

 Sole Proprietor Partnership CorporationIf Corporation, indicate State where incorporated: Illinois

6. Business License Number issued by the City where the Supplier's principal place of business is located.

Number: 3641101210 Issuing City: San Jose, CA7. Supplier Federal Tax Identification Number: 91-1347935

8. Emergency Contact:

Name: Tom MendenhallPhone Number: 650-280-3726

9. Order Contact:

Name: Customer ServiceAddress: 2256 Junction Ave, San Jose, CA 95131Phone Number: 800-655-5708 Fax Number: 408-435-1735Email: custsvs-sanjose@univarusa.com

10. References:

Company/Agency NameContact NamePhone Number1) City of Sunnyvale Dreama Howard 408-730-73562) Pima County Hazel Houston 520-751-65873) County Sanitation of LA Cheryl Shea 562-908-4288

11. Chemical Manufacturer's name and address (if different from Bidder):

Univar USA - 12522 Los Nietos Rd, Santa Fe Springs, CA 90670
Thatcher CO - Salt Lake City, UT 84127

SODIUM BISULFITE

BID NO. 12-2016

**BAY AREA CHEMICAL CONSORTIUM
BID FORM FOR BID NO. 12-2016, PAGE 1 OF 2**

Sealed bids must be enclosed in an envelope clearly marked:

**"BID FOR SODIUM BISULFITE
BACC BID NO. 12-2016"**

And delivered to:

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

No later than 9:00 A.M. PDT
Tuesday, April 5, 2016

Business Name:

Univar USA Inc.

Business Address

8201 S. 212th St
Kent, WA 98032
Attn: WER Muni team

Telephone Number: 253-872-5400

Facsimile Number: 253-872-5041

Email Address: muniteam-west@univarusa.com

Authorized Representative (Please Print):

Jennifer Perros

Date: 3/31/16

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

BACC Agencies: North Bay Locations

City of Brentwood, City of Pinole, Delta Diablo, and Rodeo Sanitary District

Unit Price for Sodium Bisulfite 25% \$.844 /gallon

BACC Agencies: East Bay Locations

East Bay Dischargers Authority

Unit Price for Sodium Bisulfite 25% \$.844 /gallon

BACC Agencies: South Bay Locations

City of San Jose and City of Sunnyvale

Unit Price for Sodium Bisulfite 25% \$.90 /gallon

BACC Agencies: Peninsula Locations

City of Daly City/North San Mateo County Sanitation District, City of South San Francisco, Sewer Authority Mid-Coastside, and Silicon Valley Clean Water

Unit Price for Sodium Bisulfite 25% \$.844 /gallon

**BAY AREA CHEMICAL CONSORTIUM
BID FORM FOR BID NO. 12-2016, PAGE 2 OF 2**

BACC Agencies: Marin-Sonoma-Napa Locations
Central Marin Sanitation Agency, Las Gallinas Valley Sanitary District, Napa Sanitation District, Sanitary District No. 5 of Marin County, and Sausalito Marin City Sanitary District
Unit Price for Sodium Bisulfite 25% \$.844 /gallon

BACC Agencies: Sacramento Area Locations
City of Roseville, City of Sacramento, City of Yuba City, and Woodland Davis Clean Water Agency
Unit Price for Sodium Bisulfite 40% \$.95 /gallon

BACC Agencies: Central Valley Locations
City of Stockton
Unit Price for Sodium Bisulfite 40% \$.95 /gallon

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

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

Univar USA Inc.
8201 S. 212th
Kent, WA 98032-1994
USA

T 253-872-5000
F 253-572-5041
www.univarusa.com



REFERENCES

1. City of Sunnyvale-
Water Pollution Control
1444 Borregas Ave
Sunnyvale, CA 94089

Contact: Dreama Howard, Buyer
Phone: (408) 730-7396

For Supply and Delivery of Sodium Bisulfite

2. County Sanitation Districts of Los Angeles County
PO Box 7998
Whittier, CA 90607-4998

Contact: Cheryl Shea, Buyer
Phone: (562) 908-4288

For Supply and Delivery of Bulk Sodium Bisulfite

3. Pima County -
Tres Rios
7101 N Casa Grande Hwy
Tucson, AZ 85701

Contact: Hazel Houston, Procurement
Phone: 520-791-6507

For Supply and Delivery of Sodium Bisulfite



The Public Health and Safety Organization

NSF Product and Service Listings

These NSF Official Listings are current as of **Wednesday, March 30, 2016** at 12:15 a.m. Eastern Time. Please contact NSF International to confirm the status of any Listing, report errors, or make suggestions.

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

NSF/ANSI 60 Drinking Water Treatment Chemicals - Health Effects

Univar USA Inc.

17411 Northeast Union Hill Road
Redmond, WA 98052
United States
425-889-3400

Facility : # 2 Distribution Center - Richmond, CA

Sodium Bisulfite

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Sodium Bisulfite 25%	Dechlorination	46mg/L
Sodium Bisulfite 42%	Dechlorination	46mg/L

NOTE: Only products bearing the "NSF 60" designation are Certified by NSF International.

Facility : Distribution Center - Phoenix 27th Ave., AZ

Sodium Bisulfite[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Sodium Bisulfite 42%	Dechlorination	46mg/L

[1] This product contains sulfite.

Sulfites have been known to cause potentially lethal allergic reactions in sulfite-sensitive individuals.

The maximum recommended allowable residual sulfite level in the finished drinking water is 100 ppb (0.1 mg/L).

NOTE: Only products bearing the "NSF 60" designation are Certified by NSF International.

Facility : Distribution Center - Redwood City, CA

Sodium Bisulfite[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Sodium Bisulfite 25%	Dechlorination	46mg/L
Sodium Bisulfite 42%	Dechlorination	46mg/L

[1] This product contains sulfite.

Sulfites have been known to cause potentially lethal allergic reactions in sulfite-sensitive individuals.

The maximum recommended allowable

residual sulfite level in the finished drinking water is 100 ppb (0.1 mg/L).

NOTE: Only products bearing the "NSF 60" designation are Certified by NSF International.

Facility : Distribution Center - Santa Fe Springs, CA

Sodium Bisulfite[2]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Sodium Bisulfite 15%	Dechlorination	46mg/L
Sodium Bisulfite 25%	Dechlorination	46mg/L
Sodium Bisulfite 42%	Dechlorination	46mg/L

[2] This product contains sulfite. Sulfites have been known to cause potentially lethal allergic reactions in sulfite-sensitive individuals. The maximum recommended allowable residual sulfite level in the finished drinking water is 100 ppb (0.1 mg/L).

NOTE: Only products bearing the "NSF 60" designation are Certified by NSF International.

Facility : Denver, CO

Sodium Bisulfite[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Sodium Bisulfite 42%	Dechlorination	46mg/L

[1] This product contains sulfite.

Sulfites have been known to cause potentially lethal allergic reactions in sulfite-sensitive individuals.

The maximum recommended allowable residual sulfite level in the finished drinking water is 100 ppb (0.1 mg/L).

NOTE: Only products bearing the "NSF 60" designation are Certified by NSF International.

Facility : Distribution Center - Dallas, GA

Sodium Bisulfite[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Sodium Bisulfite 38-40%	Dechlorinator & Antioxidant	46mg/L
Sodium Bisulfite Solution	Dechlorinator & Antioxidant	46mg/L

[1] This product contains sulfite. Sulfites have been known to cause potentially lethal allergic reactions in sulfite-sensitive individuals. The maximum recommended allowable residual sulfite level in the finished drinking water is 100 ppb (0.1 mg/L).

NOTE: Only products bearing the "NSF 60" designation are Certified by NSF International.

Facility : Portland, OR

Sodium Bisulfite[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Sodium Bisulfite	Dechlorinator & Antioxidant	46mg/L
Sodium Bisulfite 38-40%	Dechlorinator & Antioxidant	46mg/L
Sodium Bisulfite Solution	Dechlorinator & Antioxidant	46mg/L
Sodium Bisulfite Solution 38-40%	Dechlorinator & Antioxidant	46mg/L

[1] This product contains sulfite. Sulfites have been known to cause potentially lethal allergic reactions in sulfite-sensitive individuals. The maximum recommended allowable residual sulfite level in the finished drinking water is 100 ppb (0.1 mg/L).

NOTE: Only products bearing the "NSF 60" designation on the product, product packaging, and/or documentation shipped with the product are Certified.

Facility : Distribution Center - Morrisville Steel Road, PA

Sodium Bisulfite[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Sodium Bisulfite	Dechlorination	46mg/L

[1] This product contains sulfite.
Sulfites have been known to cause potentially lethal allergic reactions in sulfite-sensitive individuals. The maximum recommended allowable residual sulfite level in the finished drinking water is 100 ppb (0.1 mg/L).

NOTE: Only products bearing the "NSF 60" designation are Certified by NSF International.

Facility : Middletown, PA

Sodium Bisulfite[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Reducite	Dechlorinator & Antioxidant	46mg/L
Sodium Bisulfite	Dechlorinator & Antioxidant	46mg/L
Sodium Bisulfite Solution, 38-40%	Dechlorinator & Antioxidant	46mg/L

[1] This product contains sulfite.
Sulfites have been known to cause potentially lethal allergic reactions in sulfite-sensitive individuals. The maximum recommended allowable residual sulfite level in the finished drinking water is 100 ppb (0.1 mg/L).

NOTE: Only products bearing the "NSF 60" designation are Certified by NSF International.

Facility : Kent, WA

Sodium Bisulfite

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Sodium Bisulfite	Dechlorinator & Antioxidant	46mg/L
Sodium Bisulfite 38-40%	Dechlorinator & Antioxidant	46mg/L
Sodium Bisulfite Solution	Dechlorinator & Antioxidant	46mg/L
Sodium Bisulfite Solution 38-40%	Dechlorinator & Antioxidant	46mg/L

NOTE: Only products bearing the "NSF 60" designation are Certified by NSF International.

Facility : Tacoma, WA

Sodium Bisulfite[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
SBS	Dechlorinator & Antioxidant	46mg/L
Sodium Bisulfite	Dechlorinator & Antioxidant	46mg/L
Sodium Bisulfite 38-40%	Dechlorinator & Antioxidant	46mg/L
Sodium Bisulfite Solution	Dechlorinator & Antioxidant	46mg/L
Sodium Bisulfite Solution 38-40%	Dechlorinator & Antioxidant	46mg/L

[1] This product contains sulfite.

Sulfites have been known to cause potentially lethal allergic reactions in sulfite-sensitive individuals.

The maximum recommended allowable

residual sulfite level in the finished drinking water is 100 ppb (0.1 mg/L).

NOTE: Only products bearing the "NSF 60" designation are Certified by NSF International.

Number of matching Manufacturers is 1

Number of matching Products is 28

Processing time was 0 seconds

Product Specification



Sodium bisulfite solution

Characteristics

- > Chemical name: NaHSO₃
- > pH: 3.0 – 5.0
- > Color: Yellow
- > Odor: Sulfur
- > Iron (Fe): 2 – 10 ppm

Product Details

- > Sodium bisulfite solutions are somewhat acidic, but compatible with many of the common storage and handling materials. Excessive heating or acidification will cause decomposition and the release of sulfur dioxide fumes. Refer to the MSDS for additional cautions. Consult an experienced tank manufacturer. Indoor storage is preferred; ventilation is needed on all storage tanks and storage areas. Vent lines should be scrubbed in an alkaline solution to prevent release of sulfur dioxide fumes when filling. Annual cleaning and inspection of tanks is advised.
- > Containers of sodium bisulfite solution should be stored indoors above 50°F. At about 40°F, solids will begin to form, and around 27°F solids will freeze. Sodium bisulfite will go back into solution when warmed.
- > The following materials are considered compatible with sodium bisulfite, as linings or material of construction:
 - Cross-linked polyethylene
 - Polyethylene
 - Fiberglass reinforced plastic
 - Polypropylene, PVC
 - Stainless steel 316
- > Tank trucks are discharged using air and generally deliver 4000 gallons. Unloading pressure can be up to 30 psi. Sufficient venting must be available for unloading. Packaging is available in drums, deldrums, and IBCs.
- > Dechlorination factors: Approximately 4 lbs of sodium bisulfite solution at 38% will remove 1 lb of chlorine. 1 gallon of sodium bisulfite equals approximately 2.6 lbs. of sulfur dioxide.
- > Oxygen removal factors: Approximately 17 lbs of sodium bisulfite solution at 38% will remove 1 lb of oxygen.

Sales specifications

Weight %	38	39	40	41	42
Pounds per gallon	11.00	11.10	11.18	11.23	11.27
Freeze point, °F	38	43	44	45	46

Consult the MSDS for additional information.

All information is based on data obtained from the manufacturer or other recognized technical sources. The information is believed to be accurate. Univar USA Inc. ("Univar") makes no representations or warranty, express, or implied, concerning the accuracy or sufficiency of the information. Univar is not liable for any damages resulting from the use or non-use of the information. All transactions involving this Product are subject to Univar's standard Terms and Conditions, available at www.univar.com or upon request. Univar makes no additional representations or warranties, express or implied, as to the Product.

Univar
www.univar.com
 +1 855 888 8648
BCSAcidsProductManagement@univar.com
 17425 NE Union Hill Road.
 Redmond, WA 98052

CERTIFICATE OF ANALYSIS



Univar USA Inc.
 12522 Los Nietos Road
 Santa Fe Springs, CA 90670
 PH. 562-944-7244
 FAX 562-903-0056
www.univarusa.com

DATE: 3/18/2016

PRODUCT: Sodium Bisulfite Solution, 25%

PRODUCT GRADE: NSF

UNIVAR PRODUCT CODE: 797249

UNIVAR LOT/PJO NUMBER: SE036877234

<u>TEST</u>	<u>RESULTS</u>	<u>SPECIFICATIONS</u>
Titrate NaHSO_3 %	25.33	23.0% - 27.0%
Specific Gravity @ 60°F	1.194	1.174 - 1.208
pH	4.99	3.5 - 5.5

Univar USA Inc.

(Signature)

Julie Tweebeeke

(Print Name)

Traffic Coordinator

(Job Title)



Certified to
NSF/ANSI 60

Notes

The assay of the product is based on a dilution ratio calculation using water and a higher concentration raw material.

Consult the MSDS for additional information.

All information is based on data obtained from the manufacturer or other recognized technical sources. The information is believed to be accurate. Univar USA Inc. ("Univar") makes no representation or warranty, express, or implied, concerning the accuracy or sufficiency of the information. Univar is not liable for any damages resulting from the use or non-use of the information. All transactions involving this Product are subject to Univar's standard Terms and Conditions, available at www.univarusa.com or upon request. Univar makes no additional representations or warranties, express or implied, as to the Product.

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COMPANY IDENTITY: Univar
 PRODUCT IDENTITY: SODIUM BISULFITE SOLUTION, 5 - 27%

SDS DATE: 05/07/2013
 ORIGINAL: 05/07/2013

SAFETY DATA SHEET

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements and the International Chemical Safety Cards of the Global Harmonizing System.

THIS SDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)

IMPORTANT: Read this SDS before handling & disposing of this product.

Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT IDENTITY: SODIUM BISULFITE SOLUTION, 5 - 27%
 SDS NUMBER: CDS-2123
 COMPANY IDENTITY: Univar
 COMPANY ADDRESS: 17425 NE Union Hill Road
 COMPANY CITY: Redmond, WA 98052
 COMPANY PHONE: 1-425-889-3400
 EMERGENCY PHONES: CHEMTREC: 1-800-424-9300 (USA)
 CANUTEC: 1-613-996-6666 (CANADA)



SECTION 2. HAZARDS IDENTIFICATION

CAUTION



HAZARD STATEMENTS:

H100s = General, H200s = Physical, H300s = Health, H400s = Environmental

H290 May be corrosive to metals.
 H300 Fatal if swallowed.
 H314 Causes severe skin burns and eye damage.
 H335 May cause respiratory irritation.

PRECAUTIONARY STATEMENTS:

P100s = General, P200s = Prevention, P300s = Response, P400s = Storage, P500s = Disposal

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 P262 Do not get in eyes, on skin, or on clothing.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	CAS#	EINECS#	WT %
Water	7732-18-5	231-791-2	73-95
Sodium Bisulfite	7631-90-5	-	5-27

Trace components: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant additional hazards at the concentrations present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Materials Identification System Standard (CPR 4).

SEE SECTIONS 8, 11 & 12 FOR TOXICOLOGICAL INFORMATION.

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SECTION 4. FIRST AID MEASURES

GENERAL ADVICE:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists, refer to Section 8 for specific personal protective equipment.

EYE CONTACT:

If this product enters the eyes, open eyes while under gently running water. Use sufficient force to open eyelids. "Roll" eyes to expose more surface. Minimum flushing is for 15 minutes. Seek immediate medical attention.

SKIN CONTACT:

If the product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove contaminated clothing, taking care not to contaminate eyes. If skin becomes irritated and irritation persists, medical attention may be necessary. Wash contaminated clothing before reuse, discard contaminated shoes.

INHALATION:

After high vapor exposure, remove to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. breathing is difficult, give oxygen. If breathing has stopped, trained personnel should immediately begin artificial respiration. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If the heart has stopped, trained personnel should immediately begin cardiopulmonary resuscitation (CPR). Seek immediate medical attention. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

SWALLOWING:

If swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, give two glasses of water to drink. DO NOT INDUCE VOMITING. Never induce vomiting or give liquids to someone who is unconscious, having convulsions, or unable to swallow. Seek immediate medical attention.

NOTES TO PHYSICIAN:

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (such as: Gastric lavage after endotracheal intubation).

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take a copy of label and SDS to physician or health professional with victim.

SECTION 5. FIRE FIGHTING MEASURES

FIRE & EXPLOSION PREVENTIVE MEASURES

Not Applicable.

EXTINGUISHING MEDIA

Use water spray, carbon dioxide, foam, halon, dry chemical, and any "ABC" Class extinguishing media.

SPECIAL FIRE FIGHTING PROCEDURES

Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used. Do not enter confined fire-space without full bunker gear. (Helmet with face shield, bunker coats, gloves & rubber boots). Use NIOSH approved positive-pressure self-contained breathing apparatus.

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SECTION 5. FIRE FIGHTING MEASURES (CONTINUED)

UNUSUAL EXPLOSION AND FIRE PROCEDURES

Noncombustible.

Closed containers may explode if exposed to extreme heat.
Applying to hot surfaces requires special precautions.

SECTION 6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE AND ENVIRONMENTAL PRECAUTIONS:

Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel.

PERSONAL PROTECTIVE EQUIPMENT

The proper personal protective equipment for incidental releases (such as: 1 Liter of the product released in a well-ventilated area), use impermeable gloves (triple-gloves (rubber gloves and nitrile gloves, over latex gloves), goggles, face shield, and appropriate body protection. In the event of a large release, use impermeable gloves, specific for the material handled, chemically resistant suit and boots, and hard hat. Self-Contained Breathing Apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, select NIOSH/MSHA approved based on actual or potential airborne concentrations in accordance with latest OSHA and/or ANSI recommendations.

ENVIRONMENTAL PRECAUTIONS:

Stop spill at source. Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of the material. Close or cap valves and/or block or plug hole in leaking container and transfer to another container. Keep from entering storm sewers and ditches which lead to waterways, and if necessary, call the local fire or police department for immediate emergency assistance.

CONTAINMENT AND CLEAN-UP MEASURES:

Absorb spilled liquid with polypads or other suitable absorbent materials. If necessary, neutralize using suitable buffering material, (acid with soda ash or base with phosphoric acid), and test area with litmus paper to confirm neutralization. Clean up with non-combustible absorbent (such as: sand, soil, and so on). Shovel up and place all spill residue in suitable containers. Dispose of at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal (see Section 13 - Disposal Considerations).

SECTION 7. HANDLING AND STORAGE

HANDLING

Avoid prolonged or repeated contact.
To minimize static discharge when transferring, ensure electrical continuity by bonding and grounding all equipment. Use an inlet line diameter of at least 3.5 inches (8.9 centimeters) with a maximum flow rate of 1 meter/second.

STORAGE

Isolate from strong oxidants. Do not store above 49 C/120 F.
Keep container tightly closed & upright when not in use to prevent leakage.

NONBULK: CONTAINERS:

Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Empty containers should be handled with care. Never store food, feed, or drinking water in containers which held this product.

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SECTION 7. HANDLING AND STORAGE (CONTINUED)

BULK CONTAINERS:

All tanks and pipelines which contain this material must be labeled. Perform routine maintenance on tanks or pipelines which contain this product. Report all leaks immediately to the proper personnel.

TANK CAR SHIPMENTS:

Tank cars carrying this product should be loaded and unloaded in strict accordance with tank-car manufacturer's recommendation and all established on-site safety procedures. Appropriate personal protective equipment must be used (see Section 8, Engineering Controls and Personal Protective Equipment.). All loading and unloading equipment must be inspected, prior to each use. Loading and unloading operations must be attended, at all times. Tank cars must be level, brakes must be set or wheels must be locked or blocked prior to loading or unloading. Tank car (for loading) or storage tanks (for unloading) must be verified to be correct for receiving this product and be properly prepared, prior to starting the transfer operations. Hoses must be verified to be in the correct positions, before starting transfer operations. A sample (if required) must be taken and verified (if required) prior to starting transfer operations. All lines must be blown-down and purged before disconnecting them from the tank car or vessel.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:

Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

MATERIAL	CAS#	EINECS#	TWA (OSHA)	TLV (ACGIH)
Water	7732-18-5	231-791-2	None Known	None Known
Sodium Bisulfite	7631-90-5	-	None Known	None Known
Sodium Sulfite	7757-83-7	-	None Known	None Known

This product contains no EPA Hazardous Air Pollutants (HAP) in amounts > 0.1%.

RESPIRATORY EXPOSURE CONTROLS

Maintain airborne contaminant concentrations below exposure limits given above. If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134, European Standard EN 149, or applicable State regulations. If adequate ventilation is not available or there is potential for airborne exposure above the exposure limits, a respirator may be worn up to the respirator exposure limitations, check with respirator equipment manufacturer's recommendations/limitations. For a higher level of protection, use positive pressure supplied air respiration protection or Self Contained Breathing Apparatus or if oxygen levels are below 19.5% or are unknown.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS

Positive pressure, full-face piece Self Contained Breathing Apparatus; or positive pressure, full-face piece Self Contained Breathing Apparatus with an auxilliary positive pressure Self Contained Breathing Apparatus.

VENTILATION

LOCAL EXHAUST: Necessary MECHANICAL (GENERAL): Necessary
 SPECIAL: None OTHER: None
 Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

EYE PROTECTION:

Splash goggles or safety glasses. Face-shields are recommended when the operation can generate splashes, sprays or mists.

HAND PROTECTION:

Wear appropriate impervious gloves for routine industrial use. Use impervious gloves for spill response, as stated in Section 6 of this SDS (Accidental Release Measures).

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

BODY PROTECTION:

Use body protection appropriate for task. Cover-all, rubber aprons, or chemical protective clothing made from impervious materials are generally acceptable, depending on the task.

WORK & HYGIENIC PRACTICES:

Provide readily accessible eye wash stations & safety showers.
 Wash at end of each workshift & before eating, smoking or using the toilet.
 Promptly remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE:	Liquid, Yellow
ODOR:	Pungent, Sulfur Dioxide Odor
ODOR THRESHOLD:	Not Available
pH (Neutrality):	6.0
MELTING POINT/FREEZING POINT:	Not Available
BOILING RANGE (IBP,50%,Dry Point):	> 100 C/> 212 F(*=End Point)
FLASH POINT (TEST METHOD):	Not Applicable
EVAPORATION RATE (n-BUTYL ACETATE=1):	Not Applicable
FLAMMABILITY CLASSIFICATION:	Non-Combustible
LOWER FLAMMABLE LIMIT IN AIR (% by vol):	Not Applicable
UPPER FLAMMABLE LIMIT IN AIR (% by vol):	Not Available
VAPOR PRESSURE (mm of Hg)@20 C	17.5
VAPOR DENSITY (air=1):	0.670
GRAVITY @ 68/68 F / 20/20 C:	
SPECIFIC GRAVITY (Water=1):	1.311
POUNDS/GALLON:	10.921
WATER SOLUBILITY:	Complete
PARTITION COEFFICIENT (n-Octane/Water):	Not Available
AUTO IGNITION TEMPERATURE:	Not Applicable
DECOMPOSITION TEMPERATURE:	Not Available
VOC'S (>0.44 Lbs/Sq In) :	0.0 Vol% /0.0 g/L / 0.000 Lbs/Gal
TOTAL VOC'S (TVOC)*:	0.0 Vol% /0.0 g/L / 0.000 Lbs/Gal
NONEXEMPT VOC'S (CVOC)*:	0.0 Vol% /0.0 g/L / 0.000 Lbs/Gal
HAZARDOUS AIR POLLUTANTS (HAPS):	0.0 Wt% /0.0 g/L / 0.000 Lbs/Gal
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C)	0.0

* Using California South Coast Air Quality Management District (SCAQMD) Rule 443.1.

SECTION 10. STABILITY & REACTIVITY

STABILITY

Stable under normal conditions.

CONDITIONS TO AVOID

Temperatures at or near boiling causes evolution of toxic and corrosive sulfur dioxide gas. (Sulfur dioxide is also evolved slowly at ambient temperatures).

MATERIALS TO AVOID

This product reacts with strong acids producing heat and sulfur dioxide gas, which is toxic. Oxidizers may cause strong exothermic reactions. Other incompatibles include sodium nitrite and aluminum powder.

HAZARDOUS DECOMPOSITION PRODUCTS

Sodium Oxide & Hydroxide, sulfur dioxide from heating.

HAZARDOUS POLYMERIZATION

Will not occur.

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SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE HAZARDS

EYE & SKIN CONTACT:

Acute overexposure can cause irritation to skin.
Acute overexposure can cause irritation to eyes.

INHALATION:

No significant hazard.

SWALLOWING:

Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.

SUBCHRONIC HAZARDS/CONDITIONS AGGRAVATED

CONDITIONS AGGRAVATED

None Known.

CHRONIC HAZARDS

CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:

This product has no carcinogens listed by IARC, NTP, NIOSH, OSHA or ACGIH, as of this date, greater or equal to 0.1%.

IRRITANCY OF PRODUCT: This product is irritating to contaminated tissue.

SENSITIZATION TO THE PRODUCT: Sodium bisulfite may also cause severe allergic reaction in some asthmatics and sulfite sensitive individuals.

MUTAGENICITY: This product is not reported to produce mutagenic effects in humans.

EMBRYOTOXICITY: This product is not reported to produce embryotoxic effects in humans.

TERATOGENICITY: This product is not reported to produce teratogenic effects in humans.

REPRODUCTIVE TOXICITY: This product is not reported to cause reproductive effects in humans.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (such as: within the eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

MAMMALIAN TOXICITY INFORMATION

No mammalian information is available on this product.

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SECTION 12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

EFFECT OF MATERIAL ON PLANTS OR ANIMALS:

This product may be harmful or fatal to plant and animal life if released into the environment. Refer to Section 11 (Toxicological Information) for further data on the effects of this product's components on test animals.

EFFECT OF MATERIAL ON AQUATIC LIFE:

No aquatic environmental information is available on this product.

MOBILITY IN SOIL

Mobility of this material has not been determined.

DEGRADABILITY

This product is completely biodegradable.

ACCUMULATION

Bioaccumulation of this product has not been determined.

SECTION 13. DISPOSAL CONSIDERATIONS

Processing, use or contamination may change the waste management options. Recycle / dispose of observing national, regional, state, provincial and local health, safety & pollution laws. If in doubt, contact appropriate agencies.

SECTION 14. TRANSPORT INFORMATION

IF > 18518 LB / 8418 KG OF THIS PRODUCT IS IN 1 CONTAINER, IT EXCEEDS THE RQ OF SODIUM BISULFITE. "RQ" MUST BE PUT BEFORE THE DOT SHIPPING NAME.

DOT SHIPPING NAME: UN2693, Bisulfites, aqueous solutions, n.o.s.
 (Sodium Bisulfite), 8, PG-III

DRUM LABEL: Corrosive (8)

IATA / ICAO: UN2693, Bisulfites, aqueous solutions, n.o.s.
 (Sodium Bisulfite), 8, PG-III

IMO / IMDG: UN2693, Bisulfites, aqueous solutions, n.o.s.
 (Sodium Bisulfite), 8, PG-III

EMERGENCY RESPONSE GUIDEBOOK NUMBER: 154

CANADA: DANGEROUS GOODS TRANSPORT: This material is considered as DANGEROUS GOODS.

SECTION 15. REGULATORY INFORMATION

EPA REGULATION:

SARA SECTION 311/312 HAZARDS: Acute Health

All components of this product are on the TSCA list.

SARA Title III Section 313 Supplier Notification

This product contains the indicated <*> toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material.

SARA TITLE III INGREDIENTS	CAS#	EINECS#	WT%	(REG.SECTION)	RQ(LBS)
Sodium Bisulfite	7631-90-5	-	5-27	(313)	5000



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SECTION 15. REGULATORY INFORMATION (CONTINUED)

INTERNATIONAL REGULATIONS

The components of this product are listed on the chemical inventories of the following countries:

Australia (AICS), Canada (DSL, NDSL), China (IECSC), Europe (EINECS, ELINCS), Japan (METI/CSCL, MHLW/ISHL), South Korea (KECI), New Zealand (NZIoC), Philippines (PICCS), Switzerland (SWISS), Taiwan (NECSI), USA (TSCA).

CANADA: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

D2B: Irritating to skin / eyes.

E: Corrosive material.

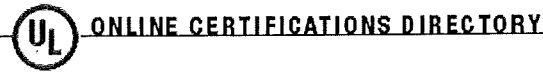
This product has been classified in accordance with hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

SECTION 16. OTHER INFORMATION

HAZARD RATINGS:

HEALTH (NFPA): 2, HEALTH (HMIS): 2, FLAMMABILITY: 0, REACTIVITY: 1
(Personal Protection Rating to be supplied by user based on use conditions.)

This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating systems.



FDPH.MH17003
Drinking Water Treatment Chemicals

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Drinking Water Treatment Chemicals

See [General Information for Drinking Water Treatment Chemicals](#)

THATCHER GROUP, INC.

1905 FORTUNE RD
PO BOX 27407
SALT LAKE CITY, UT 84127-0407 USA

MH17003

NSF/ANSI 60

Plant at: Thatcher Chemical of Florida, Inc., Deland, FL

Trade Dsg	Category	Max Use Level (mg/L)
Compliance GT	Coagulation and Flocculation	43
Ferric Sulfate, 10 - 13% Iron	Coagulation and Flocculation	500
Sodium Aluminate [*Al]	Coagulation and Flocculation	43
Poly Phosphate Ortho Phosphate Blends - TI-XXXX-XX" [*PO4]	Corrosion and Scale Control	26
TI-2914	Corrosion and Scale Control	33
Aluminum Sulfate [*Al]	Flocculation	150
T-Floc B135 [*Al]	Flocculation	250
TI-2901	Corrosion and Scale Control	38
TI-3021-O	Corrosion and Scale Control	28
TI-3031	Corrosion and Scale Control	27.8
TI-3045	Corrosion and Scale Control	30
Citric Acid Solution [*OL]	Membrane Cleaner	N/A
Citric Acid Solution	pH Adjustment	250
Soda ash	pH Adjustment	100
Ammonium Sulfate, 40%	Disinfection and Oxidation	62.5
Sodium Bisulfite Liquid	Chlorine Removal, Misc.	18

Plant at: Thatcher Chemical of Florida, Inc., Palmetto, FL

Trade Dsg	Category	Max Use Level (mg/L)
Ferric Sulfate, 10 - 13% Iron	Coagulation and Flocculation	500
T-Floc B41 [*Al]	Coagulation and Flocculation	178
Aluminum Sulfate [*Al]	Flocculation	400

Plant at: Thatcher Company of Arizona, Inc., Buckeye, AZ

Trade Dsg	Category	Max Use Level (mg/L)
T-Floc 1410	Coagulation and Flocculation	50
T-Floc 1417	Coagulation and Flocculation	100
T-Floc 1419	Coagulation and Flocculation	50

T-Floc 1420	Coagulation and Flocculation	25
Poly Phosphate Ortho Phosphate Blends - TI-XXXX-XX" [*PO4]	Corrosion and Scale Control	26
Alum, Acidified X [*Al]	Flocculation	150
Aluminum Sulfate [*Al]	Flocculation	150
TI-2903	Corrosion and Scale Control	27.5
TI-2904	Corrosion and Scale Control	33
TI-2906	Corrosion and Scale Control	29
TI-2907	Corrosion and Scale Control	14.9
TI-2908	Corrosion and Scale Control	24.9
TI-2909	Corrosion and Scale Control	9.59
TI-3020	Corrosion and Scale Control	16
TI-3021	Corrosion and Scale Control	28
Citric Acid Solution [*OL]	Membrane Cleaner	N/A
Citric Acid Solution	pH Adjustment	250
Sodium Hydroxide 18%	pH Adjustment	278
Sodium Hydroxide 20%	pH Adjustment	250
Sodium Hydroxide 25%	pH Adjustment	200
Sodium Hydroxide 30%	pH Adjustment	167
Sodium Hydroxide 33%	pH Adjustment	152
Sodium Hydroxide 50%	pH Adjustment	100
Sulfuric Acid 20 - 39%	pH Adjustment	120
Sulfuric Acid 40 - 59%	pH Adjustment	84
Sulfuric Acid 60 - 79%	pH Adjustment	63
Sulfuric Acid 80 - 93%	pH Adjustment	50
Sulfuric Acid, 98%	pH Adjustment	50
Sodium Chlorite, 18.75%	Disinfection and Oxidation	37.3
Sodium Chlorite, 25%	Disinfection and Oxidation	28
Sodium Chlorite, 30%	Disinfection and Oxidation	23.3
Sodium Chlorite, 31%	Disinfection and Oxidation	22.6
Sodium Chlorite, 31.25%	Disinfection and Oxidation	22.4
Sodium Chlorite, 37%	Disinfection and Oxidation	18.9
Sodium Chlorite, 7.5%	Disinfection and Oxidation	93.3
Copper Sulfate Solution 10-15% [*Cu]	Algaecide, etc.	26
Copper Sulfate Solution 16-20% [*Cu]	Algaecide, etc.	20
Copper Sulfate Solution 21-25% [*Cu]	Algaecide, etc.	16
Hydrofluosillic Acid	Fluoridation	6.0

Plant at: Thatcher Company of California, Inc., Sacramento, CA

Trade Dsg	Category	Max Use Level (mg/L)
Poly Phosphate Ortho Phosphate Blends - TI-XXXX-XX" [*PO4]	Corrosion and Scale Control	26
Alum, Acidified X [*Al]	Flocculation	150
Aluminum Sulfate [*Al]	Flocculation	150
Ferric Chloride	Flocculation	250
Sodium Hydroxide 18%	pH Adjustment	278

Sodium Hydroxide 20%	pH Adjustment	250
Sodium Hydroxide 25%	pH Adjustment	200
Sodium Hydroxide 30%	pH Adjustment	167
Sodium Hydroxide 33%	pH Adjustment	152
Sodium Hydroxide 50%	pH Adjustment	100
Hydrofluosilicic Acid	Fluoridation	6.0

Plant at: Thatcher Company of Montana, Inc., Missoula, MT

Trade Dsg	Category	Max Use Level (mg/L)
Aluminum Sulfate [*Al]	Flocculation	400
Aluminum Sulfate [*Al]	Flocculation	150
TI-3021	Corrosion and Scale Control	28

Plant at: Thatcher Company of Nevada, Inc., Henderson, NV

Trade Dsg	Category	Max Use Level (mg/L)
Poly Phosphate Ortho Phosphate Blends - TI-XXXX-XX" [*PO4]	Corrosion and Scale Control	26
Aluminum Sulfate [*Al]	Flocculation	150
Aluminum Sulfate, Acidified [*Al]	Flocculation	150
Zinc Orthophosphate [*Zn]	Corrosion and Scale Control	20
Citric Acid Solution [*OL]	Membrane Cleaner	N/A
Citric Acid Solution	pH Adjustment	250
Aqua Ammonia 10% to 14%	Chloramination	21
Aqua Ammonia 15% to 19%	Chloramination	15
Aqua Ammonia 20% to 24%	Chloramination	12
Aqua Ammonia 25% to 29%	Chloramination	10
Chlorine	Disinfection and Oxidation	30
Sodium Hypochlorite [*HPH]	Disinfection and Oxidation	84
Hydrofluosilicic Acid	Fluoridation	6.0

Plant at: Thatcher Company of New York, Inc., Williamson, NY

Trade Dsg	Category	Max Use Level (mg/L)
Compliance GT	Coagulation and Flocculation	43
Sodium Aluminate [*Al]	Coagulation and Flocculation	43
T-Floc B1106S [*Al]	Coagulation and Flocculation	450
Poly Phosphate Ortho Phosphate Blends - TI-XXXX-XX" [*PO4]	Corrosion and Scale Control	26
Aluminum Sulfate [*Al]	Flocculation	150
Zinc Orthophosphate [*Zn]	Corrosion and Scale Control	16.5
Citric Acid Solution [*OL]	Membrane Cleaner	N/A
Citric Acid Solution	pH Adjustment	250
Sodium Permanganate, 11% - 15% [*Mn]	Disinfection and Oxidation	298
Sodium Permanganate, 16% - 20% [*Mn]	Disinfection and Oxidation	224
Sodium Permanganate, 21% - 25% [*Mn]	Disinfection and Oxidation	179
Sodium Permanganate, 26% - 30% [*Mn]	Disinfection and Oxidation	149
Sodium Permanganate, 31% - 35% [*Mn]	Disinfection and Oxidation	128

Sodium Permanganate, 36% - 39% [*Mn]	Disinfection and Oxidation	115
Sodium Permanganate, 40% [*Mn]	Disinfection and Oxidation	112
Sodium Permanganate, 5% - 10% [*Mn]	Disinfection and Oxidation	448
Hydrofluosillicic Acid	Fluoridation	6.0

Plant at: Thatcher Company, Inc., Salt Lake City, UT

Trade Dsg	Category	Max Use Level (mg/L)
Ferric Sulfate, 10 - 13% Iron	Coagulation and Flocculation	500
Ferrous Sulfate Solution	Coagulation and Flocculation	50
T-Floc 1410	Coagulation and Flocculation	50
T-Floc 1417	Coagulation and Flocculation	100
T-Floc 1419	Coagulation and Flocculation	50
T-Floc 1420	Coagulation and Flocculation	25
T-Floc 2202	Coagulation and Flocculation	650
T-Floc B-41	Coagulation and Flocculation	156
T-Floc B41 [*Al]	Coagulation and Flocculation	178
T-Floc IFD-151SJ	Coagulation and Flocculation	150
Poly Phosphate Ortho Phosphate Blends - TI-XXXX-XX" [*PO4]	Corrosion and Scale Control	26
Alum, Acidified X [*Al]	Flocculation	150
Aluminum Sulfate [*Al]	Flocculation	150
Ferric Chloride	Flocculation	100
Sodium Aluminate [*Al]	Flocculation	40
T-Chem IXXXX	Flocculation	250
T-Floc 1306	Flocculation	1
T-Floc 1307	Flocculation	1
T-Floc 1310	Flocculation	1
T-Floc 1361	Flocculation	1
T-Floc 1362	Flocculation	1
T-Floc 1367	Flocculation	1
T-Floc 1368	Flocculation	3
T-Floc 1434	Flocculation	20
T-Floc 1436	Flocculation	20
T-Floc 1465	Flocculation	3
T-Floc 1474	Flocculation	3
T-Floc 1526	Flocculation	1
T-Floc 1527	Flocculation	1
T-Floc 1539	Flocculation	1
T-Floc 1551	Flocculation	1
T-Floc 2100	Flocculation	100
T-Floc 2540	Flocculation	1
T-Floc 2552	Flocculation	1
T-Floc 2645	Flocculation	1
T-Floc 2653	Flocculation	1
T-Floc 2656	Flocculation	1

T-Floc 2662	Flocculation	1
T-Floc B391 [*Al]	Flocculation	154
T-Floc IFD-151	Flocculation	183
Ferric Sulfate	Coagulation and Flocculation Products	500
T-Floc B-12-L	Coagulation and Flocculation Products	75
T-Floc B-21-L	Coagulation and Flocculation Products	150
T-Floc B135 [*Al]	Coagulation and Flocculation Products	150
T-Floc C-148	Coagulation and Flocculation Products	6.0
T-Floc IFD-201	Coagulation and Flocculation Products	194
T-Floc IFD-4211	Coagulation and Flocculation Products	139
TI-2903	Corrosion and Scale Control	27.5
TI-2904	Corrosion and Scale Control	33
TI-2906	Corrosion and Scale Control	29
TI-2907	Corrosion and Scale Control	14.9
TI-2908	Corrosion and Scale Control	24.9
TI-2909	Corrosion and Scale Control	9.59
TI-3019	Corrosion and Scale Control	15.5
TI-3020	Corrosion and Scale Control	16
TI-3021	Corrosion and Scale Control	28
Zinc Orthophosphate [*Zn]	Corrosion and Scale Control	20
Citric Acid Solution [*OL]	Membrane Cleaner	N/A
Citric Acid Solution	pH Adjustment	250
Soda ash	pH Adjustment	100
Sodium Hydroxide 18%	pH Adjustment	278
Sodium Hydroxide 20%	pH Adjustment	250
Sodium Hydroxide 25%	pH Adjustment	200
Sodium Hydroxide 30%	pH Adjustment	167
Sodium Hydroxide 33%	pH Adjustment	152
Sodium Hydroxide 50%	pH Adjustment	100
Ammonium Sulfate, 40%	Disinfection and Oxidation	62.5
Hydrogen Peroxide 11%-20%	Disinfection and Oxidation	5.2
Hydrogen Peroxide 21%-30%	Disinfection and Oxidation	3.5
Hydrogen Peroxide 31%-40%	Disinfection and Oxidation	2.6
Hydrogen Peroxide 34%	Disinfection and Oxidation	3.0
Hydrogen Peroxide 41%-49%	Disinfection and Oxidation	2.1
Hydrogen Peroxide 50%	Disinfection and Oxidation	2.1
Anhydrous Ammonia	Disinfection and Oxidation	5
Aqua Ammonia 19%	Disinfection and Oxidation	52
Aqua Ammonia 25%	Disinfection and Oxidation	40
Aqua Ammonia 28%	Disinfection and Oxidation	35
Chlorine	Disinfection and Oxidation	30
Sodium Hypochlorite [*HPH]	Disinfection and Oxidation	84
Sodium Bisulfite	Chlorine Removal, Misc.	18
Hydrofluosilicic Acid	Fluoridation	6.0

[*Al] - The finished drinking water shall be monitored to verify that the level of aluminum does not exceed 2 mg/L.

[*Cu] - This chemical contains copper and can increase the amount of copper in the finished drinking water. The finished drinking water shall be monitored to verify that levels of copper do not exceed 1.3 mg/L.

[*HPH] - Refer to AWWA B300, "Hypochlorites" for recommended storage and handling practices.

[*Mn] - The finished drinking water shall be monitored to ensure that levels of manganese do not exceed 0.05 mg/L.

[*OL] - These products are designed to be used off-line and flushed out prior to using the system for drinking water, following the manufacturer's use instructions. The pH or other water chemistry of the influent and effluent water should be monitored to ensure that all traces of the product have been removed before placing into service.

[*PO4] - Equivalent to 10 mg PO4/L, on a dry basis. This maximum use level is based on potential ecological effects of phosphates at levels exceeding 10 mg PO4/L.

[*Zn] - The finished drinking water shall be monitored to verify that the level of zinc does not exceed 2 mg/L.

Last Updated on 2016-02-29

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THATCHER COMPANY P.O. BOX 27407 SALT LAKE CITY, UTAH 84127
 (801) 972-4587 PHONE
 (801) 972-4604 FAX

CERTIFICATE OF ANALYSIS

SODIUM BISULFITE 40%

This is to certify that the listed shipment of Sodium Bisulfite 40% was assayed with the following results:

Lot No: 16-00005
 Date: February 1, 2016
 Ship To: Univar
 Invoice No: 1394082
 Railcar No: FURX 120581
 Seal No: C4507358, C4507359, C4507360

Analysis	Specifications	Results
Turbidity	Record	6.21
pH @ 25C:	5.0-5.4	5.3
Specific Gravity @ 15C:	1.345-1.365	1.350
% Sodium Bisulfite	37.95%-38.95%	38.80%
% SO ₂	23.4%-24.0%	24.0%

Authorized Signature
 Thatcher Company
Karen Greenig
 Karen Greenig



DRINKING WATER TREATMENT CHEMICAL
 ANSI/NSF 60
 <35Y2>

COMPANY IDENTITY: Univar
 PRODUCT IDENTITY: SODIUM BISULFITE SOLUTION

SDS DATE: 01/09/2015
 REPLACES: 07/18/2014

SAFETY DATA SHEET

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements and the International Chemical Safety Cards of the Global Harmonizing System.

THIS SDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)

IMPORTANT: Read this SDS before handling & disposing of this product.

Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT IDENTITY: SODIUM BISULFITE SOLUTION
 SDS NUMBER: CDS-2115
 COMPANY IDENTITY: Univar
 COMPANY ADDRESS: 17425 NE Union Hill Road
 COMPANY CITY: Redmond, WA 98052
 COMPANY PHONE: 1-425-889-3400
 EMERGENCY PHONES: CHEMTREC: 1-800-424-9300 (USA)
 CANUTEC: 1-613-996-6666 (CANADA)



SECTION 2. HAZARDS IDENTIFICATION

WARNING!

2.1 HAZARD STATEMENTS:

H100s = General, H200s = Physical, H300s = Health, H400s = Environmental

H290 May be corrosive to metals.
 H314 Causes severe skin burns and eye damage.
 H335 May cause respiratory irritation.

2.2 PRECAUTIONARY STATEMENTS:

P100s = General, P200s = Prevention, P300s = Response, P400s = Storage, P500s = Disposal

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 P262 Do not get in eyes, on skin, or on clothing.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	CAS#	EINECS#	WT %
Water	7732-18-5	231-791-2	58-73
Sodium Bisulfite	7631-90-5	-	27-42

Trace components: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Materials Identification System Standard (CPR 4).

SEE SECTIONS 8, 11 & 12 FOR TOXICOLOGICAL INFORMATION.

COMPANY IDENTITY: Univar
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SDS DATE: 01/09/2015
REPLACES: 07/18/2014

SECTION 4. FIRST AID MEASURES

4.1 GENERAL ADVICE:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists, refer to Section 8 for specific personal protective equipment.

4.2 EYE CONTACT:

If this product enters the eyes, open eyes while under gently running water. Use sufficient force to open eyelids. "Roll" eyes to expose more surface. Minimum flushing is for 15 minutes. Seek immediate medical attention.

4.3 SKIN CONTACT:

If the product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove contaminated clothing, taking care not to contaminate eyes. If skin becomes irritated and irritation persists, medical attention may be necessary. Wash contaminated clothing before reuse, discard contaminated shoes.

4.4 INHALATION:

After high vapor exposure, remove to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. breathing is difficult, give oxygen. If breathing has stopped, trained personnel should immediately begin artificial respiration. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If the heart has stopped, trained personnel should immediately begin cardiopulmonary resuscitation (CPR). Seek immediate medical attention. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

4.5 SWALLOWING:

If swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, give two glasses of water to drink. DO NOT INDUCE VOMITING. Never induce vomiting or give liquids to someone who is unconscious, having convulsions, or unable to swallow. Seek immediate medical attention.

4.6 NOTES TO PHYSICIAN:

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (such as: Gastric lavage after endotracheal intubation).

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take a copy of label and SDS to physician or health professional with victim.

SECTION 5. FIRE FIGHTING MEASURES

5.1 FIRE & EXPLOSION PREVENTIVE MEASURES

Isolate from oxidizers, acids, and extreme heat.

5.2 EXTINGUISHING MEDIA

Use appropriate extinguishing media for surrounding fire.

5.3 SPECIAL FIRE FIGHTING PROCEDURES

Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used. Do not enter confined fire-space without full bunker gear. (Helmet with face shield, bunker coats, gloves & rubber boots). Use NIOSH approved positive-pressure self-contained breathing apparatus.

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SECTION 5. FIRE FIGHTING MEASURES (CONTINUED)

5.4 UNUSUAL EXPLOSION AND FIRE PROCEDURES

Noncombustible.

Thermal decomposition produces toxic fumes.

Closed containers may explode if exposed to extreme heat.

Applying to hot surfaces requires special precautions.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 SPILL AND LEAK RESPONSE AND ENVIRONMENTAL PRECAUTIONS:

Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel.

6.2 PERSONAL PROTECTIVE EQUIPMENT

The proper personal protective equipment for incidental releases (such as: 1 Liter of the product released in a well-ventilated area), use impermeable gloves (triple-gloves (rubber gloves and nitrile gloves, over latex gloves), goggles, face shield, and appropriate body protection. In the event of a large release, use impermeable gloves, specific for the material handled, chemically resistant suit and boots, and hard hat. Self-Contained Breathing Apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, select NIOSH/MSHA approved based on actual or potential airborne concentrations in accordance with latest OSHA and/or ANSI recommendations.

6.3 ENVIRONMENTAL PRECAUTIONS:

Stop spill at source. Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of the material. Close or cap valves and/or block or plug hole in leaking container and transfer to another container. Keep from entering storm sewers and ditches which lead to waterways, and if necessary, call the local fire or police department for immediate emergency assistance.

6.4 CONTAINMENT AND CLEAN-UP MEASURES:

Absorb spilled liquid with polypads or other suitable absorbent materials. If necessary, neutralize using suitable buffering material, (acid with soda ash or base with phosphoric acid), and test area with litmus paper to confirm neutralization. Clean up with non-combustible absorbent (such as: sand, soil, and so on). Shovel up and place all spill residue in suitable containers. dispose of at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal (see Section 13 - Disposal Considerations).

SECTION 7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Isolate from oxidizers, heat, & open flame. Use only with adequate ventilation. Avoid breathing of vapor or spray mist. Avoid contact with skin & eyes. Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse. Empty container very hazardous! Continue all label precautions!

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

Isolate from acids, strong oxidants. Do not store above 49 C/120 F. Keep container tightly closed & upright when not in use to prevent leakage.

7.3 NONBULK: CONTAINERS:

Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Empty containers should be handled with care. Never store food, feed, or drinking water in containers which held this product.

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SECTION 7. HANDLING AND STORAGE (CONTINUED)

7.4 BULK CONTAINERS:

All tanks and pipelines which contain this material must be labeled. Perform routine maintenance on tanks or pipelines which contain this product. Report all leaks immediately to the proper personnel.

7.5 TANK CAR SHIPMENTS:

Tank cars carrying this product should be loaded and unloaded in strict accordance with tank-car manufacturer's recommendation and all established on-site safety procedures. Appropriate personal protective equipment must be used (see Section 8, Engineering Controls and Personal Protective Equipment.). All loading and unloading equipment must be inspected, prior to each use. Loading and unloading operations must be attended, at all times. Tank cars must be level, brakes must be set or wheels must be locked or blocked prior to loading or unloading. Tank car (for loading) or storage tanks (for unloading) must be verified to be correct for receiving this product and be properly prepared, prior to starting the transfer operations. Hoses must be verified to be in the correct positions, before starting transfer operations. A sample (if required) must be taken and verified (if required) prior to starting transfer operations. All lines must be blown-down and purged before disconnecting them from the tank car or vessel.

7.6 PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:

Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Collect all rinsates and dispose of according to applicable Federal, State, Provincial, or local procedures.

7.7 EMPTY CONTAINER WARNING:

Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. **DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY BURST AND CAUSE INJURY OR DEATH.**

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

MATERIAL	CAS#	EINECS#	TWA (OSHA)	TLV (ACGIH)
Water	7732-18-5	231-791-2	None Known	None Known
Sodium Bisulfite	7631-90-5	-	None Known	None Known

This product contains no EPA Hazardous Air Pollutants (HAP) in amounts > 0.1%.

8.2 APPROPRIATE ENGINEERING CONTROLS:

RESPIRATORY EXPOSURE CONTROLS

Airborne concentrations should be kept to lowest levels possible. If vapor, dust or mist is generated and the occupational exposure limit of the product, or any component of the product, is exceeded, use appropriate NIOSH or MSHA approved air purifying or air-supplied respirator authorized in 29 CFR 1910.134, European Standard EN 149, or applicable State regulations, after determining the airborne concentration of the contaminant. Air supplied respirators should always be worn when airborne concentration of the contaminant or oxygen content is unknown. Maintain airborne contaminant concentrations below exposure limits. If adequate ventilation is not available or there is potential for airborne exposure above the exposure limits, a respirator may be worn up to the respirator exposure limitations, check with respirator equipment manufacturer's recommendations/limitations. For particulates, a particulate respirator (NIOSH Type N95 or better filters) may be worn. If oil particles (such as: lubricants, cutting fluids, glycerine, and so on) are present, use a NIOSH Type R or P filter. For a higher level of protection, use positive pressure supplied air respiration protection or Self-Contained Breathing Apparatus or if oxygen levels are below 19.5% or are unknown.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS

Positive pressure, full-face piece Self-Contained Breathing Apparatus; or positive pressure, full-face piece Self-Contained Breathing Apparatus with an auxilliary positive pressure Self-Contained Breathing Apparatus.

VENTILATION

LOCAL EXHAUST: Necessary MECHANICAL (GENERAL): Necessary
 SPECIAL: None OTHER: None
 Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

8.3 INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, chemical splash goggles should be worn, when a higher degree of protection is necessary, use splash goggles or safety glasses. Face-shields are recommended when the operation can generate splashes, sprays or mists.

HAND PROTECTION:

Use gloves chemically resistant to this material. Preferred examples: Butyl rubber, Chlorinated Polyethylene, Polyethylene, Ethyl vinyl alcohol laminate ("EVAL"), Polyvinyl alcohol ("PVA"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"), Neoprene, Nitrile/butadiene rubber ("nitril" or "NBR"), Polyvinyl chloride ("PVC" or "vinyl"), Viton. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

BODY PROTECTION:

Use body protection appropriate for task. Cover-all, rubber aprons, or chemical protective clothing made from impervious materials are generally acceptable, depending on the task.

WORK & HYGIENIC PRACTICES:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using toilet facilities and at the end of the working period. Provide readily accessible eye wash stations & safety showers. Remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

BODY PROTECTION:

Use body protection appropriate for task. Cover-all, rubber aprons, or chemical protective clothing made from impervious materials are generally acceptable, depending on the task.

WORK & HYGIENIC PRACTICES:

Provide readily accessible eye wash stations & safety showers. Wash at end of each shift & before eating, smoking or using the toilet. Remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

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SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE:	Liquid, Straw Yellow
ODOR:	Sharp, Pungent
ODOR THRESHOLD:	Not Available
pH (Neutrality):	4.1 - 4.6
BOILING RANGE (IBP,50%,Dry Point):	> 100 C / > 212 F
FLASH POINT (TEST METHOD):	Not Applicable
EVAPORATION RATE (n-BUTYL ACETATE=1):	Not Applicable
FLAMMABILITY CLASSIFICATION:	Non-Combustible
LOWER FLAMMABLE LIMIT IN AIR (% by vol):	Not Applicable
UPPER FLAMMABLE LIMIT IN AIR (% by vol):	Not Available
VAPOR PRESSURE (mm of Hg)@20 C	9
VAPOR DENSITY (air=1):	0.670
GRAVITY @ 68/68 F / 20/20 C:	
SPECIFIC GRAVITY (Water=1):	1.320
POUNDS/GALLON:	10.996
WATER SOLUBILITY:	Complete
PARTITION COEFFICIENT (n-Octane/Water):	Not Available
AUTO IGNITION TEMPERATURE:	Not Applicable
DECOMPOSITION TEMPERATURE:	Not Available
VOCs (>0.044 Lbs/Sq In) :	0.0 Vol% / 0.0 g/L / 0.000 Lbs/Gal
TOTAL VOC'S (TVOC)*:	0.0 Vol% / 0.0 g/L / 0.000 Lbs/Gal
NONEXEMPT VOC'S (CVOC)*:	0.0 Vol% / 0.0 g/L / 0.000 Lbs/Gal
HAZARDOUS AIR POLLUTANTS (HAPS):	0.0 Wt% / 0.0 g/L / 0.000 Lbs/Gal
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C)	0.0

* Using California Air Resources Board (CARB) Rule 310.

SECTION 10. STABILITY & REACTIVITY

10.1 STABILITY

Stable under normal conditions.

10.2 CONDITIONS TO AVOID

Gradually oxidizes to sodium sulfate on exposure to air. Temperatures at or near boiling point causes evolution of toxic and corrosive sulfur dioxide.

10.3 MATERIALS TO AVOID

Mineral acids, oxidizing agents. Contact with acid liberates irritating sulfur dioxide gas. Corrosive to steel, carbon steel, and other common materials of construction at ambient temperatures.

10.4 HAZARDOUS DECOMPOSITION PRODUCTS

Sodium Oxide & Hydroxide, Sulfur Dioxide from heating.

10.5 HAZARDOUS POLYMERIZATION

Will not occur.

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SECTION 11. TOXICOLOGICAL INFORMATION

11.1 ACUTE HAZARDS

11.11 EYE & SKIN CONTACT:
 CORROSIVE! Causes severe skin burns.
 Causes severe eye damage.
 Wash thoroughly after handling.

11.12 INHALATION:
 Mist irritating to respiratory tract.

11.13 SWALLOWING:
 Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.

11.2 SUBCHRONIC HAZARDS/CONDITIONS AGGRAVATED

CONDITIONS AGGRAVATED
 None Known.

11.3 CHRONIC HAZARDS

11.31 CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:
 This product has no carcinogens listed by IARC, NTP, NIOSH,
 OSHA or ACGIH, as of this date, greater or equal to 0.1%.

11.32 IRRITANCY OF PRODUCT: This product is irritating to contaminated tissue.

11.33 SENSITIZATION TO THE PRODUCT: No component of this product is known to be a sensitizer.

11.34 MUTAGENICITY: This product is not reported to produce mutagenic effects in humans.

11.35 EMBRYOTOXICITY: This product is not reported to produce embryotoxic effects in humans.

11/36 TERATOGENICITY: This product is not reported to produce teratogenic effects in humans.

11.37 REPRODUCTIVE TOXICITY: This product is not reported to cause reproductive effects in humans.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (such as: within the eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

MAMMALIAN TOXICITY INFORMATION

LD50 (Oral): 820 mg/kg (Mouse)

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SECTION 12. ECOLOGICAL INFORMATION

12.1 ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

12.2 EFFECT OF MATERIAL ON PLANTS AND ANIMALS:

This product may be harmful or fatal to plant and animal life if released into the environment. Refer to Section 11 (Toxicological Information) for further data on the effects of this product's components on test animals.

12.3 EFFECT OF MATERIAL ON AQUATIC LIFE:

No aquatic environmental information is available on this product.

12.4 MOBILITY IN SOIL

Mobility of this material has not been determined.

12.5 DEGRADABILITY

This product is completely biodegradable.

12.6 ACCUMULATION

Bioaccumulation of this product has not been determined.

SECTION 13. DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers and liners may retain some product residues. Vapor from some product residues may create a highly flammable or explosive atmosphere inside the container. **DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE USED CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY BURST AND CAUSE INJURY OR DEATH.** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Processing, use or contamination may change the waste management options. Recycle / dispose of observing national, regional, state, provincial and local health, safety & pollution laws. If in doubt, contact appropriate agencies. Deactivating Chemicals: Soda Ash, Lime or Limestone. EPA Waste Number: D002.

SECTION 14. TRANSPORT INFORMATION

DOT/TDG SHIP NAME: UN2693, Bisulfites, aqueous solutions, n.o.s.
 (contains: Sodium Bisulfite), 8, PG-III
 DRUM LABEL: Corrosive (8)
 IATA / ICAO: UN2693, Bisulfites, aqueous solutions, n.o.s.
 (contains: Sodium Bisulfite), 8, PG-III
 IMO / IMDG: UN2693, Bisulfites, aqueous solutions, n.o.s.
 (contains: Sodium Bisulfite), 8, PG-III
 EMERGENCY RESPONSE GUIDEBOOK NUMBER: 154



SECTION 15. REGULATORY INFORMATION

15.1 EPA REGULATION:

SARA SECTION 311/312 HAZARDS: Acute Health, Chronic Health, Reactivity

All components of this product are on the TSCA list.
 SARA Title III Section 313 Supplier Notification
 This product contains the indicated <*> toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372. This information must be

COMPANY IDENTITY: Univar
 PRODUCT IDENTITY: SODIUM BISULFITE SOLUTION

SDS DATE: 01/09/2015
 REPLACES: 07/18/2014

included in all MSDSs that are copied and distributed for this material.

EPA CLEAN WATER ACT

Sodium Bisulfite is listed as a hazardous substance which, if discharged to the water, may require immediate response to mitigate dangers to human health and the environment.

SARA TITLE III INGREDIENTS	CAS#	EINECS#	WT%	(REG.SECTION)	RQ(LBS)
Sodium Bisulfite	7631-90-5	-	27-42	(311,312)	5000

SECTION 15. REGULATORY INFORMATION (CONTINUED)

15.2 STATE REGULATIONS:

CALIFORNIA SAFE DRINKING WATER & TOXIC ENFORCEMENT ACT (PROPOSITION 65):

This product contains no chemicals known to the State of California to cause cancer or reproductive toxicity.

15.3 INTERNATIONAL REGULATIONS

The components of this product are listed on the chemical inventories of the following countries:

Australia (AICS), Canada (DSL or NDSL), China (IECSC), Europe (EINECS, ELINCS)G
 Japan (METI/CSCL, MHLW/ISHL), South Korea (KECI), New Zealand (NZIoC),
 Philippines (PICCS), Switzerland (SWISS), Taiwan (NECSI), USA (TSCA).

15.4 CANADA: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

D2B: Irritating to skin / eyes.

E: Corrosive

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

14.5 SDS DATE: 07/18/2014

SECTION 16. OTHER INFORMATION

16.1 HAZARD RATINGS:

HEALTH (NFPA): 2, HEALTH (HMIS): 2, FLAMMABILITY: 0, PHYSICAL HAZARD: 0
 (Personal Protection Rating to be supplied by user based on use conditions.)

This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating systems.

AGENCY CUSTOMER ID: 570000014538

LOC #:



ADDITIONAL REMARKS SCHEDULE

Page _ of _

AGENCY Aon Risk Services Central, Inc.		NAMED INSURED Univar Inc.	
POLICY NUMBER See Certificate Number: 570061257189		EFFECTIVE DATE:	
CARRIER See Certificate Number: 570061257189	NAIC CODE		

ADDITIONAL REMARKS

**THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance**

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER	
INSURER	
INSURER	
INSURER	

ADDITIONAL POLICIES If a policy below does not include limit information, refer to the corresponding policy on the ACORD certificate form for policy limits.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS	
	AUTOMOBILE LIABILITY							
B				CA 4806893 Commercial Auto (AOS)	03/01/2015	06/01/2016	Combined Single Limi	\$5,000,000
B				CA 4806894 Commercial Auto (MA)	03/01/2015	06/01/2016		
B				CA 4806895 Commercial Auto (VA)	03/01/2015	06/01/2016		
	WORKERS COMPENSATION							
C		N/A		WC021569600 MA, ND, WI, WY	03/01/2016	06/01/2016		
C		N/A		WC021569597 FL	03/01/2016	06/01/2016		
C		N/A		WC021569599 IL, KY, NC, NH, UT	03/01/2016	06/01/2016		
C		N/A		WC021569601 AK, AZ, GA	03/01/2016	06/01/2016		
C		N/A		WC021569598 NJ, PA	03/01/2016	06/01/2016		

EXHIBIT B
Insurance Requirements
(Chemical Vendor - Sodium Bisulfite)

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

MINIMUM SCOPE AND LIMIT OF INSURANCE

Coverage shall be at least as broad as:

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

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

Other Insurance Provisions

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

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

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

- **Primary Coverage**

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

- **Notice of Cancellation**

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

- **Waiver of Subrogation**

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

- **Deductibles and Self-Insured Retentions**

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

- **Acceptability of Insurers**

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

- **Claims Made Policies**

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

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

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

- **Verification of Coverage**

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

- **Special Risks or Circumstances**

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

- **Certificate holder address**

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

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

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

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

- **Maintenance of Insurance**

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

- **Subcontractors**

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