



24COR-017

**Wastewater Treatment Chemicals, Related Services, and
Supplies**

Issue Date: 9/21/2025

Response Deadline: 10/30/2025 01:00 PM (CT)

Little Rock Water Reclamation Authority

Contact Information

Contact: Blane Ridings Procurement Administrator

Address: Procurement Department

Little Rock Water Reclamation Authority

11 Clearwater Drive

Little Rock, AR 72204

Phone: (501) 688-1444

Email: Procurement@lrwra.com

Event Information

Number: 24COR-017
Title: Wastewater Treatment Chemicals, Related Services, and Supplies
Type: Request for Proposal
Issue Date: 9/21/2025
Response Deadline: 10/30/2025 01:00 PM (CT)
Notes: Little Rock Water Reclamation Authority "LRWRA", serving as the Lead Agency in partnership with CoreTrust Purchasing Group, is issuing this solicitation for Wastewater Treatment Chemicals, Related Services, and Supplies on behalf of a nationwide cooperative purchasing contract. This solicitation is a Best Value RFP, meaning proposals will be evaluated not solely on cost but on the overall value, including quality, technical capability, past performance, and the ability to meet cooperative contract needs.

The official posting can be found on the AR Bid website at <https://ARBid.net>. Please note, it is the vendor's responsibility to ensure compliance with the official solicitation and all addenda as posted on the AR Bid website. Little Rock Water Reclamation Authority shall have the right to reject any and all responses and to waive any and all informalities.

If you have any questions, please feel free to contact the LRWRA Procurement Department at Procurement@lrwra.com.

The LRWRA Procurement Department, as the issuing office, is the sole point of contact throughout this procurement process. Vendor's questions regarding this solicitation should be made through the LRWRA buyer listed for this solicitation.

Bid Activities

PRE-PROPOSAL CONFERENCE

10/2/2025 1:00:00 PM (CT)

All prospective bidders may attend the Pre-Proposal Conference scheduled by LRWRA via Microsoft Teams. Please note that LRWRA will not schedule additional Pre-Proposal Conferences.

Date and Start Time

- October 2, 2025, at 1:00 p.m. (Central Time)

Registration

Registration to attend the Pre-Proposal Conference is not required, however, it is recommended.

To receive the Microsoft Teams link, please register by emailing or calling the LRWRA Procurement Department:

- Email: procurement@lrwa.com
- Phone: Ashley Suggs at (501) 688-1465

Alternatively, you may dial in by phone:

- Phone: 1-501-547-3261
- Conference ID: 471 685 772#

General Information

- Vendor representatives are strongly encouraged to review the solicitation in its entirety, including all attachments and addenda, if applicable, prior to the Pre-Proposal Conference.
- LRWRA will contact registered vendors to advise of any changes.

CLARIFICATION OF RFP AND QUESTIONS

10/9/2025 4:00:00 PM (CT)

- A. Vendors may submit written questions requesting clarification of information contained in this solicitation or questions resulting from the Pre-Proposal Conference.
1. Written questions should be submitted by 4:00 p.m., Central Time on October 9, 2025. Submit written questions by email to the LRWRA buyer as shown on page one (1) of this solicitation.
 2. For each question submitted, vendor should reference the specific solicitation item number to which the question refers.
 3. Vendors’ written questions will be consolidated and responded to by LRWRA. LRWRA's consolidated written response is anticipated to be posted to the LRWRA website by the close of business on October 16, 2025.
- B. Vendors may contact the LRWRA Procurement Department with procurement-related questions at any time prior to the bid opening date and time. Answers to verbal questions may be given as a matter of courtesy and **must** be evaluated at vendor’s risk.

Bid Attachments

24COR-017 Wastewater Chemicals.pdf	Download
24COR-017 Wastewater Chemicals	
Section N - Technical Proposal - Water Treatment Chemicals.pdf	Download
Section N - Technical Proposal - Water Treatment Chemicals	
Section O - Wastewater Treatment Chemicals.xlsx	Download
Section O - Wastewater Treatment Chemicals	

Bid Attributes

1 PROPOSAL SIGNATURE

A. An official authorized to bind the vendor to a resultant contract **must** sign the proposal in ink or by electronic signature. The LRWRA required signature page is included as the last page of the ARBid Bid Invitation document. The Bid Invitation document can be found by clicking on the document icon located in the top right corner of the website. Proposals that do not include the LRWRA required signature page will be disqualified and **shall not** be considered.

B. Vendor's signature **shall** represent and warrant

1. Vendor's agreement that either of the following may cause the vendor's bid to be disqualified

- additional terms or conditions submitted intentionally or inadvertently.
- any exception that conflicts with a requirement of this solicitation.

2. Vendor has completely reviewed this solicitation and any addenda.

3. Vendor's agreement to and compliance with all requirements, specifications, and terms and conditions within this solicitation, including all attachments and addenda, if applicable. (See *Definition of Requirement*.)

4. Vendor's agreement to and compliance with all laws relating to State and Federal Equal Opportunity and Non-Discrimination requirements and conditions of employment, in addition to all federal, state, and local laws.

5. Vendor's agreement and certification that it does not, and shall not for the remaining aggregate term of the contract, participate in a

- boycott of Israel (*applicable to contracts valued at \$1,000 or greater*)
- boycott of Energy, Fossil Fuel, Firearms, or Ammunition Industry (*applicable to contracts valued at \$75,000 or greater*)

6. Vendor has provided information in response to this solicitation that is both accurate and true.

2 BID OPENING LOCATION

Sealed bid responses submitted by the bid opening date and time as a traditional sealed hard copy, **shall** be opened at the following location

Little Rock Water Reclamation Authority
11 Clearwater Drive
Little Rock, AR 72204

3 SUBMISSION DEADLINE FOR BID RESPONSE

Proposals **shall not** be accepted after the established response deadline (a.k.a., "bid opening") date and time. It is the responsibility of vendors to submit proposals by traditional sealed hard copy at 11 Clearwater Drive on or before the response deadline and time. Proposals received after the designated response deadline date and time **shall** be considered late and **shall not** be reviewed. It is not necessary to return "no bids" to LRWRA.

4 CONE OF SILENCE

All communication(s) pertaining to this solicitation **shall** be directed to the LRWRA Buyer listed for this solicitation, or the Buyer's designee. LRWRA has imposed an absolute prohibition against any communication or contact ("Cone of Silence") with any other LRWRA personnel, LRWRA consultant, or Little Rock Water Reclamation Commission (LRWRC) member regarding this solicitation process.

The prohibition begins with the publication of this solicitation document, remains in place through the LRWRA solicitation and award process, and ends only after LRWRA has executed a contract with the successful vendor. The prohibition is suspended only when the LRWRA Buyer, or Buyer's designee, initiates or consents to a meeting or communications for the purpose of clarifying a solicitation or another solicitation-related action.

A violation of this policy may result in the disqualification of an offending vendor's response.

5 BUSINESS DESIGNATION

☐ C - Corporation ☒ S - Corporation ☐ Individual ☐ Nonprofit ☐ Partnership
☐ Public Service Corporation ☐ Sole Proprietorship

(Optional: Check only one)

6 SERVICE DISABLED VETERAN CERTIFICATION NUMBER

N/A

(Optional: Maximum 25 characters allowed)

7 DUN & BRADSTREET NUMBER

04-130-7356

(Optional: Maximum 25 characters allowed)

8 CONFLICT OF INTEREST DISCLOSURE

A. Vendor should indicate below if at the present time, and to the best of the vendor's knowledge, any known possible conflicts of interest exist with LRWRA.

B. Vendor **must** disclose all known possible conflicts of interest, which exist at the time of vendor's bid submission. Conflicts of interest include, but are not limited to the following

- Relationships between vendor's employees, principals, officers, and agents and the employees of LRWRA.
- Relationships between vendor's employees, principals, officers, and agents and the LRWRC.
- Those resulting from material adverse matters, as distinguished from the conduct of business as usual.

C. Vendor's failure to disclose such a relationship may result in LRWRA's rejection of vendor's bid response or LRWRA's cancellation of any resultant contract.

☒ No known possible conflicts of interest exist. ☐ Yes, a possible conflict of interest exists.

(Optional: Check only one)

9 CONFLICT OF INTEREST DISCLOSURE, if yes provide an explanation

(Optional: Maximum 1000 characters allowed)

1 0	REQUIREMENT OF ADDENDUM This solicitation shall be modified only by an addendum written and authorized by LRWRA. The vendor shall be responsible for checking the AR Bid website at https://ARBid.net for any and all addenda up to the established bid opening date and time.
1 1	DEFINITION OF TERMS A. LRWRA has made every effort to use industry-accepted terminology in this solicitation. B. "Little Rock Water Reclamation Authority", "LRWRA", "agency", "the Utility", and the "the Authority" are used synonymously in this document. C. The words "bidder" and "vendor" are used synonymously in this document. D. The terms "Invitation to Bid", "ITB", and "Solicitation" are used synonymously in this document.
1 2	NONCOLLUSION Vendor's signature shall represent and warrant that in connection to a response to this solicitation: A. The vendor has not been a party to any collusion among vendor(s) in the restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding. B. The vendor has not been a party to any collusion with any official or employee of LRWRA as to quantity, quality, or price in the prospective contract, or any other terms of said prospective contract. C. The vendor has not been a party in any discussion between bidders and any official of LRWRA concerning exchange of money or other things of value for special consideration in the letting of a contract.
1 3	PRIME CONTRACTOR RESPONSIBILITY A. A joint bid response submitted by two or more vendors is acceptable. However, a single vendor must be identified as the prime contractor. B. The prime contractor shall be held responsible for the contract and shall be the sole point of contact. C. The prime contractor shall give LRWRA immediate notice, in writing, by certified mail of any action which, in the opinion of the contractor, may result in litigation related in any way to this contract or LRWRA.

1 CAUTION TO VENDORS

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- A. Vendor **must not** alter any language in any solicitation document provided by LRWRA.
- B. Vendor represents and warrants that the product and/or service offered **shall** meet or exceed specifications identified in this solicitation.
- C. All official documents and correspondence related to this solicitation **shall** be included as part of the resultant contract.
- D. Bid responses **must** be submitted in the English language only.
- E. LRWRA **shall** have the right to award or not award a contract, if it is in the best interest of LRWRA to do so.
- F. LRWRA **shall** have the right to accept or reject all or any part of a bid response, if it is in the best interest of LRWRA to do so.
- G. Vendor **must** provide clarification of any information in their bid response documents as requested by LRWRA.
- H. Vendor may withdraw their bid response.
- To withdraw a traditional hardcopy bid response, vendor **must** provide a written request to the LRWRA Procurement Department.
 - To withdraw an electronic response, vendor **must** follow the required steps in the AR Bid system.
- I. Reference to handbooks or other technical materials as part of a bid response **must not** constitute the entire bid and vendor **must** identify the specific page and paragraph being referenced.

1 RESERVATION

5

This solicitation **shall not** commit LRWRA to issue an award or contract. LRWRA **shall not** pay costs incurred in the preparation of a bid response.

1 ISRAEL BOYCOTT NOTICE

6

Pursuant to Arkansas Code Annotated § 25-1-503, a public entity **shall not** enter into a contract valued at \$1,000 or greater with a company unless the contract includes a written certification that the person or company is not currently engaged in, and agrees for the duration of the contract not to engage in, a boycott of Israel.

Vendor's signature on bid response **shall** represent and warrant they do not boycott Israel and will not boycott Israel during the remaining aggregate term of the contract.

1 ENERGY, FOSSIL FUEL, FIREARMS, AND AMMUNITION INDUSTRIES BOYCOTT RESTRICTION

7

Pursuant to Arkansas Code Annotated § 25-1-1102, a public entity **shall not** enter into a contract valued at \$75,000 or greater with a company unless the contract includes a written certification that the person or company is not currently engaged in, and agrees for the duration of the contract not to engage in, a boycott of an Energy, Fossil Fuel, Firearms, or Ammunition Industry.

Vendor's signature on bid response **shall** represent and warrant they do not boycott Energy, Fossil Fuel, Firearms, or Ammunition Industry and will not boycott these industries during the remaining aggregate term of the contract.

Supplier Information

Company Name: Thatcher Company, Inc

Contact Name: Rob Dubel

Address: 1905 Fortune Road

Salt Lake City, UT 84104

Phone: (801) 972-4587

Fax: _____

Email: bids@tchem.com

Supplier Notes

By submitting your response, you certify that you are authorized to represent and bind your company.

Diane Barlow

Print Name


Signature



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

UL LLC

333 Pfingsten Road, Northbrook, IL 60062, United States

ACCREDITATION ID#0198

Fulfills the requirements of

**ISO/IEC 17065:2012 Conformity assessment - Requirements for
bodies certifying products, processes and services**

LIST OF CERTIFICATION SCHEME(S)

US Safety Scheme

Equipment Sanitation Scheme

Water Systems Scheme

Accredited Elevator/Escalator Certification Organization (AECO): Elevator systems, subsystems, components, and functions for issuance of Certificates of Conformance and Marks according to ASME A17.7/CSA B44.

EPA WaterSense – WaterSense® Product Certification System

This certificate is valid only when accompanied by a current scope of accreditation document. The current scope of accreditation can be verified at www.anab.org.

Lori Gillespie, Vice President, MVP SBU
Expiry Date: 01 December 2027



Drinking Water Treatment Chemicals

COMPANY

Thatcher Group, Inc.
1905 FORTUNE RD
PO BOX 27407
SALT LAKE CITY, UT 84127-0407 United States

MH17003

NSF/ANSI 60

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

Trade Dsg	Conditions of Acceptability	Category	Max Use Level (mg/L)
Compliance Fe 3500	-	Coagulation and Flocculation Products	500
Compliance Fe 3600	+	Coagulation and Flocculation Products	500
Compliance Fe 3625	+	Coagulation and Flocculation Products	500
Compliance Fe 3650	+	Coagulation and Flocculation Products	500
Ferric Sulfate 10% IMG	-	Coagulation and Flocculation Products	500
Ferric Sulfate 10% WTG	+	Coagulation and Flocculation Products	500
Ferric Sulfate 10-13% Iron	-	Coagulation and Flocculation Products	500
Ferric Sulfate 12% IMG	+	Coagulation and Flocculation Products	500
Ferric Sulfate 12% WTG	+	Coagulation and Flocculation Products	500
Ferric Sulfate 13% IMG	+	Coagulation and Flocculation Products	500
Ferric Sulfate 13% WTG	-	Coagulation and Flocculation Products	500
Ferric Sulfate 13% WTG-M	+	Coagulation and Flocculation Products	500
Aluminum Sulfate (*Al)	[Al]	Coagulation and Flocculation Chemicals	150
Compliance GT	[Al]	Coagulation and Flocculation Chemicals	40
Ferric Chloride	+	Coagulation and Flocculation Chemicals	100
Poly Phosphate Ortho Phosphate Blends	-	Coagulation and Flocculation Chemicals	26
Sodium Aluminate (*Al)	[Al]	Coagulation and Flocculation Chemicals	40
T-Floc 1307	+	Coagulation and Flocculation Chemicals	1
T-Floc 1361	+	Coagulation and Flocculation Chemicals	1
T-Floc 1362	+	Coagulation and Flocculation Chemicals	1
T-Floc 1367	+	Coagulation and Flocculation Chemicals	1
T-Floc 1368	+	Coagulation and Flocculation Chemicals	3
T-Floc 1434	+	Coagulation and Flocculation Chemicals	20
T-Floc 1436	+	Coagulation and Flocculation Chemicals	20
T-Floc 1465	+	Coagulation and Flocculation Chemicals	3
T-Floc 1474	+	Coagulation and Flocculation Chemicals	3
T-Floc 1526	-	Coagulation and Flocculation Chemicals	1
T-Floc 1527	+	Coagulation and Flocculation Chemicals	1
T-Floc 1539	+	Coagulation and Flocculation Chemicals	1
T-Floc 1551	+	Coagulation and Flocculation Chemicals	1
T-Floc 2540	+	Coagulation and Flocculation Chemicals	1
T-Floc 2552	+	Coagulation and Flocculation Chemicals	1
T-Floc 2645	-	Coagulation and Flocculation Chemicals	1
T-Floc 2656	-	Coagulation and Flocculation Chemicals	1
T-Floc B135 (*Al)	[Al]	Coagulation and Flocculation Chemicals	150
T-Floc C-148	+	Coagulation and Flocculation Chemicals	6
T-PAC 1301	[Al]	Coagulation and Flocculation Chemicals	152
T-Floc B41 (*Al)	+	Coagulation and Flocculation	178
T-Floc IFD-151SJ	+	Coagulation and Flocculation	150
Alum, Addifed X (*Al)	+	Flocculation	150
T-Chem D000X	-	Flocculation	250
T-Floc B391 (*Al)	+	Flocculation	154
T-Floc 1306	+	Coagulation and Flocculation Products	1
T-Floc 1310	+	Coagulation and Flocculation Products	1
TI-3020	+	Corrosion and Scale Control	16

Soda Ash	+	pH Adjustment	100
Ammonium Sulfate, 40%	+	Disinfection and Oxidation	62.5
Anhydrous Ammonia	+	Disinfection and Oxidation Chemicals	5
Aqua Ammonia 28%	+	Disinfection and Oxidation Chemicals	35
Chlorine	+	Disinfection and Oxidation Chemicals	30
Hydrogen Peroxide 11%-20%	+	Disinfection and Oxidation Chemicals	5.2
Hydrogen Peroxide 21%-30%	+	Disinfection and Oxidation Chemicals	3.5
Hydrogen Peroxide 31%-40%	+	Disinfection and Oxidation Chemicals	2.6
Hydrogen Peroxide 34%	+	Disinfection and Oxidation Chemicals	3
Hydrogen Peroxide 41%-49%	+	Disinfection and Oxidation Chemicals	2.1
Hydrogen Peroxide 50%	+	Disinfection and Oxidation Chemicals	2.1
T-Chlor 10.0 [*HPH]	+	Disinfection and Oxidation Chemicals	105
T-Chlor 12.5 [*HPH]	+	Disinfection and Oxidation Chemicals	84
T-Chlor 5.25 [*HPH]	+	Disinfection and Oxidation Chemicals	199
Sodium Bisulfite 38-40%	+	Miscellaneous Treatment Chemicals	50
Citric Acid Solution	+	Miscellaneous Treatment Chemicals	3.3
Sodium Bisulfite 25%	+	Miscellaneous Treatment Chemicals	72
Ammonium Bisulfite Solution	+	Miscellaneous Treatment Chemicals	50
Hydrofluosilicic Acid	+	Miscellaneous Treatment Chemicals	6
Citric Acid Solution [*OL]	+	Membrane Cleaner	+
Hydrochloric Acid			
Hydrochloric Acid 20 Be	+	Corrosion/Scale Control, pH Adjustment	40
Muriatic Acid	+	Corrosion/Scale Control, pH Adjustment	40
TI-2903	+	Softening, Precipitation, Sequestering, pH adjustment, and Corrosion/Scale Control Chemicals	27.5
TI-2904	+	Softening, Precipitation, Sequestering, pH adjustment, and Corrosion/Scale Control Chemicals	33
TI-2906	+	Softening, Precipitation, Sequestering, pH adjustment, and Corrosion/Scale Control Chemicals	29
TI-2907	[Zn]	Softening, Precipitation, Sequestering, pH adjustment, and Corrosion/Scale Control Chemicals	14.9
TI-2908	[Zn]	Softening, Precipitation, Sequestering, pH adjustment, and Corrosion/Scale Control Chemicals	24.9
TI-2909	[Zn]	Softening, Precipitation, Sequestering, pH adjustment, and Corrosion/Scale Control Chemicals	9.59
TI-3019	+	Softening, Precipitation, Sequestering, pH adjustment, and Corrosion/Scale Control Chemicals	15.5
TI-3021	+	Softening, Precipitation, Sequestering, pH adjustment, and Corrosion/Scale Control Chemicals	28
Zinc Orthophosphate [*Zn]	[Zn]	Softening, Precipitation, Sequestering, pH adjustment, and Corrosion/Scale Control Chemicals	20
Sodium Hydroxide - 1%-5%	+	Corrosion and Scale Control, Softening, Sequestering, Precipitation and pH adjustment	1000
Sodium Hydroxide -11%-15%	+	Corrosion and Scale Control, Softening, Sequestering, Precipitation and pH adjustment	333
Sodium Hydroxide -16%-20%	+	Corrosion and Scale Control, Softening, Sequestering, Precipitation and pH adjustment	250
Sodium Hydroxide -21%-25%	+	Corrosion and Scale Control, Softening, Sequestering, Precipitation and pH adjustment	200
Sodium Hydroxide -26%-30%	+	Corrosion and Scale Control, Softening, Sequestering, Precipitation and pH adjustment	167
Sodium Hydroxide -31%-35%	+	Corrosion and Scale Control, Softening, Sequestering, Precipitation and pH adjustment	142
Sodium Hydroxide -36%-40%	+	Corrosion and Scale Control, Softening, Sequestering, Precipitation and pH adjustment	125
Sodium Hydroxide -41%-45%	+	Corrosion and Scale Control, Softening, Sequestering, Precipitation and pH adjustment	111
Sodium Hydroxide -46%-50%	+	Corrosion and Scale Control, Softening, Sequestering, Precipitation and pH adjustment	100
Sodium Hydroxide - 6%-10%	+	Corrosion and Scale Control, Softening, Sequestering, Precipitation and pH adjustment	500

Trade Dsg	Conditions of Acceptability	Category	Max Use Level (mg/L)
Aluminum Sulfate [*Al]	–	Coagulation and Flocculation Chemicals	400
Aluminum Sulfate [*Al]	+	Coagulation and Flocculation Chemicals	400
T-Floc 1410	–	Coagulation and Flocculation Chemicals	50
T-Floc 1410	+	Coagulation and Flocculation Chemicals	50
T-Floc 1417	–	Coagulation and Flocculation Chemicals	100
T-Floc 1417	–	Coagulation and Flocculation Chemicals	100
T-Floc 1419	–	Coagulation and Flocculation Chemicals	50
T-Floc 1419	–	Coagulation and Flocculation Chemicals	50
T-Floc 1420	+	Coagulation and Flocculation Chemicals	25
T-Floc 1420	+	Coagulation and Flocculation Chemicals	25
T-Floc 2100	–	Coagulation and Flocculation Chemicals	100
T-Floc 2202	–	Coagulation and Flocculation Chemicals	650
T-Floc 2653	–	Coagulation and Flocculation Chemicals	1
T-Floc 2662	+	Coagulation and Flocculation Chemicals	1
T-Floc B-12-L	–	Coagulation and Flocculation Chemicals	75
T-Floc B-21-L	+	Coagulation and Flocculation Chemicals	150
T-Floc IFD-201	+	Coagulation and Flocculation Chemicals	194
T-Floc IFD-4211	–	Coagulation and Flocculation Chemicals	139
Aqua Ammonia 19%	–	Disinfection and Oxidation Chemicals	52
Aqua Ammonia 25%	–	Disinfection and Oxidation Chemicals	40
Sulfuric Acid, 98%	+	Softening, Precipitation, Sequestering, pH adjustment, and Corrosion/Scale Control Chemicals	50
Sulfuric Acid, 98%	+	Softening, Precipitation, Sequestering, pH adjustment, and Corrosion/Scale Control Chemicals	50
Sulfuric Acid, 98%	+	Softening, Precipitation, Sequestering, pH adjustment, and Corrosion/Scale Control Chemicals	50
Zinc Orthophosphate	[Zn]	Softening, Precipitation, Sequestering, pH adjustment, and Corrosion/Scale Control Chemicals	16.5

[Al] - The finished drinking water shall be monitored to verify that the level of aluminum does not exceed 2 mg/L.[Cu] - The finished drinking water shall be monitored to verify that the level of copper does not exceed 1.3 mg/L.[HPH] - Refer to AWWA B300, "Hypochlorites" for recommended storage and handling practices

[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.

[PA] - Complies with 40 CFR 141.111 requirements for percent monomer and dose when used at or below the MUL.

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

[*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.

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

Last Updated on 2025-02-27

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product.

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**THATCHER COMPANY, INC.**

1905 Fortune Rd
Salt Lake City, UT 84104-3724
801-972-4587
801-972-4606

PRODUCT SPECIFICATION**Alum (Aluminum Sulfate Solution)**

CAS NUMBER: 10043-01-3
CHEMICAL FORMULA: $\text{Al}_2(\text{SO}_4)_3$
MOLECULAR WEIGHT: 342.14

PRODUCT DESCRIPTION:	Colorless solution free of suspended solids	
CERTIFICATIONS:	Certified by UL to meet ANSI 60 Standard for Drinking Water Additives (UL ref.: MH 17003) Product meets AWWA B-403 Specifications	
SPECIFICATIONS:	Clarity:	Clear with no visible matter present
	Color:	APHA 20 (max)
	Assay (Typ.):	27.6-27.9% as $\text{Al}_2(\text{SO}_4)_3$ 47.8-48.4% as $\text{Al}_2(\text{SO}_4)_3 \cdot 14\text{H}_2\text{O}$ 8.2-8.3% as Al_2O_3
	Free Acidity (as H_2SO_4)	0.0% (max)
	Free Alkalinity (as Al_2O_3):	0.20%
	Specific Gravity (Typ., 20C):	1.329-1.337
	Iron (as Fe):	50 ppm (max)
	Arsenic (as As):	Non Detect (<0.5 ppm)
	Total Heavy Metals (as Pb):	100 ppm (max)
	Total Halides (as Cl):	500 ppm (max)

CERTIFICATIONS:

ALUMINUM SULFATE
ANSI/NSF 60
<35Y2>
MUL: 150 mg/L

WARRANTY

This information is, to the best of our knowledge, accurate, but may not be complete. Thatcher Company furnishes this information in good faith, but without warranty, representation or guarantee of its accuracy, completeness or reliability.

6/1/2021

SAFETY DATA SHEET

1. Identification

Product identifier	Aluminum Sulfate - Liquid	
Other means of identification	None.	
Recommended use	Not available.	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	Thatcher Company, Inc.	
Address	1905 Fortune Road Salt Lake City, UT 84104 United States	
Telephone	General Assistance 8-5	(801) 972-4587
E-mail	Not available.	
Emergency phone number	Chemtrec (CCN 22106)	(800) 424-9300

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
OSHA defined hazards	Not classified.	
Label elements		

Signal word Danger

Hazard statement Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation. May cause cancer. Toxic to aquatic life.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response

If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse.

Storage

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

73% of the mixture consists of component(s) of unknown acute oral toxicity. 73% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Water		7732-18-5	70 - < 80
Aluminum Sulfate		10043-01-3	20 - < 30

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

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Not applicable.
Special protective equipment and precautions for firefighters	Wear suitable protective equipment.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Provide adequate ventilation. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum Sulfate (CAS 10043-01-3)	TWA	1 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Aluminum Sulfate (CAS 10043-01-3)	TWA	2 mg/m3

Biological limit values

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

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron or protective suit is recommended.

Respiratory protection

Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state

Liquid.

Form

Liquid.

Color

Not available.

Odor

Not available.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

Not available.

Initial boiling point and boiling range

Not available.

Flash point

Not available.

Evaporation rate

Not available.

Flammability (solid, gas)

Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0.00001 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.32 - 1.34 g/cm3
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Percent volatile	73 % estimated
Specific gravity	1.32 - 1.34

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	None known.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns. Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity	Harmful if swallowed. May cause respiratory irritation.
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Components	Species	Test Results
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Aluminum Sulfate (CAS 10043-01-3)

Acute

Oral

LD50	Guinea pig	490 mg/kg
	Mouse	> 730 mg/kg

Components	Species	Test Results
	Rat	1930 mg/kg
* Estimates for product may be based on additional component data not shown.		
Skin corrosion/irritation	Causes severe skin burns and eye damage.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	May cause cancer.	
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	May cause respiratory irritation.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not an aspiration hazard.	
Chronic effects	Prolonged inhalation may be harmful.	

12. Ecological information

Ecotoxicity		Toxic to aquatic life.	
Components		Species	Test Results
Aluminum Sulfate (CAS 10043-01-3)			
Aquatic			
Crustacea	EC50	Amphipod (<i>Crangonyx pseudogracilis</i>)	11.8 - 14 mg/l, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	3.4 - 5.6 mg/l, 96 hours

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

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT	
UN number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s. (Aluminum Sulfate RQ = 18519 LBS)

Material name: Aluminum Sulfate - Liquid

0100853, 0100859, 0100830, 0102850, 0100850, 0119180, 0100851, 0100852, 0100854, 01008585, 0100856, 0100857, 0100858, 01191

SDS US

5 / 8

Transport hazard class(es)

Class	8
Subsidiary risk	-
Label(s)	8
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B2, IB2, T11, TP2, TP27
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242

DOT BULK**BULK**

UN number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s. (Aluminum Sulfate RQ = 18519 LBS)
Transport hazard class(es)	
Class	8
Label(s)	8
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B2, IB2, T11, TP2, TP27
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242

IATA

UN number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s. (Aluminum Sulfate)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	8L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN3264
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Aluminum Sulfate)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

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

DOT; DOT Bulk packaging type



IATA; IMDG



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Aluminum Sulfate (CAS 10043-01-3)

Listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

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

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

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

Not regulated.

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

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

US - New Jersey RTK - Substances: Listed substance

Aluminum Sulfate (CAS 10043-01-3)

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

Not listed.

US. Massachusetts RTK - Substance List

Aluminum Sulfate (CAS 10043-01-3)

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

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Aluminum Sulfate (CAS 10043-01-3)

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

Aluminum Sulfate (CAS 10043-01-3)

US. Rhode Island RTK

Aluminum Sulfate (CAS 10043-01-3)

US. California Proposition 65

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

International Inventories

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

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

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

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

Issue date	09-24-2018
Revision date	02-27-2024
Version #	13
NFPA ratings	Health: 3 Flammability: 0 Instability: 0

NFPA ratings**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**THATCHER COMPANY, INC.**

1905 Fortune Rd
Salt Lake City, UT 84104-3724
801-972-4587
801-972-4606

PRODUCT SPECIFICATION**FERRIC SULFATE (12% Fe), WATER TREATMENT GRADE**

CAS NUMBER:	10028-22-5
CHEMICAL FORMULA:	$\text{Fe}_2(\text{SO}_4)_3$
MOLECULAR WEIGHT:	399.88 (anhydrous)
PRODUCT DESCRIPTION:	Reddish-brown liquid with no sediment
MANUFACTURING LOCATION:	Salt Lake City, UT

CERTIFICATIONS:	Certified by UL to meet ANSI 60 Standard for Drinking Water Additives (UL ref.: MH 17003)
	Product meets AWWA B-406 Specifications

SPECIFICATIONS:	Total Iron (%):	11.8-12.2
	Ferrous Iron (%):	<0.2
	Free Acid (%):	<0.5
	% Insolubles:	<0.1
	Density (g/ml):	1.58
	Chloride (ppm):	<100
	Manganese (ppm):	<100



FERRIC SULFATE
ANSI/NSF 60
<35Y2>
MUL: 500 mg/L

WARRANTY

This information is, to the best of our knowledge, accurate, but may not be complete. Thatcher Company furnishes this information in good faith, but without warranty, representation or guarantee of its accuracy, completeness or reliability.

Rev 2/10/2023

SAFETY DATA SHEET

1. Identification

Product identifier Ferric Sulfate 12% Iron

Other means of identification None.

Recommended use Not available.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Thatcher Company, Inc.
Address 1905 Fortune Road
Salt Lake City, UT 84104
United States
Telephone General Assistance 8-5 (801) 972-4587
E-mail Not available.
Emergency phone number Chemtrec (CCN 22106) (800) 424-9300

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Skin corrosion/irritation Category 1C
Serious eye damage/eye irritation Category 1

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Causes severe skin burns and eye damage. Causes serious eye damage.

Precautionary statement

Prevention Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Ferric Sulfate		10028-22-5	59 - < 61
Water		7732-18-5	- < 41

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

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Abdominal pain. Burning pain and severe corrosive skin damage. Nausea, vomiting. Diarrhea. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Not applicable.
Special protective equipment and precautions for firefighters	Wear suitable protective equipment.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Provide adequate ventilation. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values Material

Ferric Sulfate 12% Iron

Type

TWA

Value

1 mg/m³

US. ACGIH Threshold Limit Values

Components	Type	Value
Ferric Sulfate (CAS 10028-22-5)	TWA	1 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
Ferric Sulfate 12% Iron	TWA	1 mg/m3
Components	Type	Value
Ferric Sulfate (CAS 10028-22-5)	TWA	1 mg/m3

Biological limit values

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

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

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

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection**Hand protection**

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Uniform Red-brown
Physical state	Liquid.
Form	Liquid.
Color	Red-brown.
Odor	Not available.
Odor threshold	Not available.
pH	< 2
Melting point/freezing point	< -40 °F (< -40 °C)
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.

Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	13.19 lbs/gal
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	None known.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics	Abdominal pain. Burning pain and severe corrosive skin damage. Nausea, vomiting. Diarrhea. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
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Information on toxicological effects

Acute toxicity	Not available.
Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Ferric Sulfate (CAS 10028-22-5)		
Aquatic		
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>) 37.2 mg/l, 96 hours

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

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

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

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

14. Transport information

DOT

UN number	UN1760
UN proper shipping name	Corrosive liquids, n.o.s. (ferric sulfate RQ = 1667 LBS)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB3, T7, TP1, TP28
Packaging exceptions	154
Packaging non bulk	203
Packaging bulk	241

DOT BULK

BULK

UN number	UN1760
UN proper shipping name	Corrosive liquids, n.o.s. (ferric sulfate RQ = 1667 LBS)
Transport hazard class(es)	
Class	8
Label(s)	8
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB3, T7, TP1, TP28
Packaging exceptions	154
Packaging non bulk	203
Packaging bulk	241

IATA

UN number	UN1760
UN proper shipping name	Corrosive liquid, n.o.s.

Transport hazard class(es)

Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	8L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1760
UN proper shipping name	CORROSIVE LIQUID, N.O.S.
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

DOT; DOT Bulk packaging type**IATA; IMDG****15. Regulatory information**

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Ferric Sulfate (CAS 10028-22-5) Listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)
Not regulated.

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

Not regulated.

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

Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Hazardous substance

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Total food additive
Direct food additive
GRAS food additive

US state regulations**US - New Jersey RTK - Substances: Listed substance**

Ferric Sulfate (CAS 10028-22-5)

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

Not listed.

US. Massachusetts RTK - Substance List

Ferric Sulfate (CAS 10028-22-5)

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

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Ferric Sulfate (CAS 10028-22-5)

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

Ferric Sulfate (CAS 10028-22-5)

US. Rhode Island RTK

Ferric Sulfate (CAS 10028-22-5)

US. California Proposition 65

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

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes

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

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

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

Issue date	06-10-2024
Revision date	09-04-2025
Version #	03
NFPA ratings	Health: 3 Flammability: 0 Instability: 0

NFPA ratings	
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Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
Revision Information	Product and Company Identification: Product and Company Identification Composition / Information on Ingredients: Ingredients Physical & Chemical Properties: Multiple Properties

**THATCHER COMPANY, INC.**

1905 Fortune Rd
Salt Lake City, UT 84104-3724
801-972-4587
801-972-4606

PRODUCT SPECIFICATION**Alum (Aluminum Sulfate Solution)**

CAS NUMBER: 10043-01-3
CHEMICAL FORMULA: $\text{Al}_2(\text{SO}_4)_3$
MOLECULAR WEIGHT: 342.14

PRODUCT DESCRIPTION:	Colorless solution free of suspended solids	
CERTIFICATIONS:	Certified by UL to meet ANSI 60 Standard for Drinking Water Additives (UL ref.: MH 17003) Product meets AWWA B-403 Specifications	
SPECIFICATIONS:	Clarity:	Clear with no visible matter present
	Color:	APHA 20 (max)
	Assay (Typ.):	27.6-27.9% as $\text{Al}_2(\text{SO}_4)_3$ 47.8-48.4% as $\text{Al}_2(\text{SO}_4)_3 \cdot 14\text{H}_2\text{O}$ 8.2-8.3% as Al_2O_3
	Free Acidity (as H_2SO_4)	0.0% (max)
	Free Alkalinity (as Al_2O_3):	0.20%
	Specific Gravity (Typ., 20C):	1.329-1.337
	Iron (as Fe):	50 ppm (max)
	Arsenic (as As):	Non Detect (<0.5 ppm)
	Total Heavy Metals (as Pb):	100 ppm (max)
	Total Halides (as Cl):	500 ppm (max)

CERTIFICATIONS:

ALUMINUM SULFATE
ANSI/NSF 60
<35Y2>
MUL: 150 mg/L

WARRANTY

This information is, to the best of our knowledge, accurate, but may not be complete. Thatcher Company furnishes this information in good faith, but without warranty, representation or guarantee of its accuracy, completeness or reliability.

6/1/2021

**THATCHER COMPANY, INC.**

1905 Fortune Rd
Salt Lake City, UT 84104-3724
801-972-4587
801-972-4606

PRODUCT SPECIFICATION**SODIUM BISULFITE 38-40**

CAS NUMBER: Mixture
CHEMICAL FORMULA: NaHSO_3
MOLECULAR WEIGHT: 104.06

PRODUCT DESCRIPTION: Clear to hazy, colorless to pale yellow solution with characteristic odor

SPECIFICATIONS:	Appearance:	Uniform, slightly hazy, yellow solution
	Turbidity:	Report
	Sodium Bisulfite (%):	38-40
	SO_2 (%):	23-25
	pH:	3.0-5.4
	Fe (ppm, max):	4.5

REGISTRATIONS/CERTIFICATIONS:

SODIUM BISULFITE
ANSI/NSF 60
<35Y2>
MUL: 18 mg/L

WARRANTY

This information is, to the best of our knowledge, accurate, but may not be complete. Thatcher Company furnishes this information in good faith, but without warranty, representation or guarantee of its accuracy, completeness or reliability.

Rev 5/23/2023

SAFETY DATA SHEET

1. Identification

Product identifier Sodium Bisulfite 38-40%

Other means of identification None.

Recommended use Not available.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Thatcher Company, Inc.		
Address	1905 Fortune Road Salt Lake City, UT 84104 United States		
Telephone	General Assistance 8-5	(801) 972-4587	
E-mail	Not available.		
Emergency phone number	Chemtrec (CCN 22106)	(800) 424-9300	

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 1C
	Serious eye damage/eye irritation	Category 1
	Sensitization, respiratory	Category 1
	Sensitization, skin	Category 1

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statement

Prevention Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information 60% of the mixture consists of component(s) of unknown acute oral toxicity.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Sodium Bisulfite (aqueous Solution)		7631-90-5	40
Other components below reportable levels			60

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

4. First-aid measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Difficulty in breathing.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Not applicable.
Special protective equipment and precautions for firefighters	Wear suitable protective equipment.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Provide adequate ventilation. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Material	Type	Value
Sodium Bisulfite 38-40%	TWA	5 mg/m ³
Components	Type	Value
Sodium Bisulfite (aqueous Solution) (CAS 7631-90-5)	TWA	5 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
Sodium Bisulfite 38-40%	TWA	5 mg/m ³
Components	Type	Value
Sodium Bisulfite (aqueous Solution) (CAS 7631-90-5)	TWA	5 mg/m ³

Biological limit values

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

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. General ventilation normally adequate. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles). In the absence of engineering controls, wear 3M 6000 Series Full-Face Respirator or NIOSH approved equivalent. Utilize multi-purpose organic vapor and acid gas cartridge (3M 6006) or NIOSH approved equivalent. Label color on cartridge should be olive green.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron or protective suit is recommended.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. In case of insufficient ventilation, wear suitable respiratory equipment. Where risk assessment shows air-purifying respirators are appropriate, as a back-up to or in the absence of engineering controls, use 3M 6000 Series Full-Face Respirator or NIOSH approved equivalent. Utilize multi-purpose organic vapor and acid gas cartridge (3M 6006) or NIOSH approved equivalent. Label color on approved cartridges is universally olive color. If the respirator is the sole means of protection, a full-face-respirator is mandatory.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Liquid.
Color	Colorless to light yellow.

Odor	Sulphurous.
Odor threshold	Not available.
pH	3.5 - 5.5
Melting point/freezing point	3.2 °F (-16 °C)
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.33 - 1.35 g/cm3
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	1.33 - 1.35

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	None known.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns. Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Difficulty in breathing.

Information on toxicological effects

Acute toxicity Harmful if swallowed. May cause an allergic skin reaction.

Product	Species	Test Results
Sodium Bisulfite 38-40%		
Acute		
Oral		
LD50	Rat	2 g/kg
Components	Species	Test Results
Sodium Bisulfite (aqueous Solution) (CAS 7631-90-5)		
Acute		
Oral		
LD50	Rat	2 g/kg

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

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Sodium Bisulfite (aqueous Solution) (CAS 7631-90-5) 3 Not classifiable as to carcinogenicity to humans.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Sodium Bisulfite (aqueous Solution) (CAS 7631-90-5)		
Aquatic		
Fish	LC50 Western mosquitofish (Gambusia affinis)	240 mg/l, 96 hours

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

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN2693
UN proper shipping name	Bisulfites, aqueous solutions, n.o.s. (Sodium Bisulfite (aqueous Solution) RQ = 12500 LBS)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB3, T7, TP1, TP28
Packaging exceptions	154
Packaging non bulk	203
Packaging bulk	241

DOT BULK

BULK

UN number	UN2693
UN proper shipping name	Bisulfites, aqueous solutions, n.o.s. (Sodium Bisulfite (aqueous Solution) RQ = 12500 LBS)
Transport hazard class(es)	
Class	8
Label(s)	8
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB3, T7, TP1, TP28
Packaging exceptions	154
Packaging non bulk	203
Packaging bulk	241

IATA

UN number	UN2693
UN proper shipping name	Bisulphites, aqueous solution, n.o.s. (Sodium Bisulfite (aqueous Solution))
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	8L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN2693
UN proper shipping name	BISULPHITES, AQUEOUS SOLUTION, N.O.S. (Sodium Bisulfite (aqueous Solution))
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

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

Not established.

DOT; DOT Bulk packaging type



IATA; IMDG



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components of the mixture on the TSCA 8(b) inventory are designated "active".

None of the chemicals used in the product are listed as a Priority Pollutant in Appendix A to 40 CFR, Part 423—126 Priority Pollutants.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Sodium Bisulfite (aqueous Solution) (CAS 7631-90-5) Listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

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

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

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

Not regulated.

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

Not regulated.

Clean Water Act (CWA) Hazardous substance
Section 112(r) (40 CFR 68.130)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US - New Jersey RTK - Substances: Listed substance

Sodium Bisulfite (aqueous Solution) (CAS 7631-90-5)

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

Not listed.

US. Massachusetts RTK - Substance List

Sodium Bisulfite (aqueous Solution) (CAS 7631-90-5)

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

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Sodium Bisulfite (aqueous Solution) (CAS 7631-90-5)

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

Sodium Bisulfite (aqueous Solution) (CAS 7631-90-5)

US. Rhode Island RTK

Sodium Bisulfite (aqueous Solution) (CAS 7631-90-5)

US. California Proposition 65

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

International Inventories

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

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

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

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

Issue date 02-07-2019
Revision date 01-02-2025
Version # 09
NFPA ratings Health: 3
 Flammability: 0
 Instability: 0

NFPA ratings



Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Information

Product and Company Identification: Product Codes



APPENDIX A

FORCE MAJEURE

PERFORMANCE

- (a) Performance of any obligation under this contract may be suspended by the party so affected without liability in the event of an Act of God; war; fire; flood; strike; explosion; labor trouble; mechanical breakdown; accident, riot, governmental action, laws, regulations or orders (including, but not limited to, pollution, health, ecology or environmental matters); Seller's inability to obtain fuel, power, raw materials, or equipment used in connection therewith on terms it deems practicable; or any other cause beyond the reasonable control of either party interfering with the production, supply, transportation or consumption practice of the party at the time which delays, prevents, restricts, limits or renders commercially infeasible, the performance of this contract or the consumption, sale or use of the goods, except as to the goods already in transit.
- (b) The affected party may invoke subparagraph (a) or (b) by promptly notifying the other party in writing of the nature and the estimated duration of the suspension or cancellation of the party's performance. The total quantity hereunder shall be reduced by the quantity not delivered during the term of the suspension or cancellation without liability, and the contract shall otherwise remain unaffected. In no event shall Seller be required to ship the goods from Seller's or, if applicable, its affiliates' other locations or to purchase the goods or components thereof from other sources to fulfill the contract requirements. Seller may, without liability, allocate its supply of such goods or raw materials among its own uses, or distribute it among its customers upon such basis and in such manner as Seller deems fair and reasonable, provided that any goods or raw materials obtained by Seller from a third party solely for Seller's internal use are not subject to allocation.



APPENDIX B

PRODUCT WARRANTY

SELLER'S LIMITED WARRANTY: SUBJECT TO THE LIMITATIONS LISTED BELOW, Seller warrants that at the time of delivery the goods will conform to the attached specifications, that Seller will convey good title thereto, and that the goods will be delivered free from any lawful security interest, lien or encumbrance.

EXCLUSION AND DISCLAIMER OF ALL OTHER WARRANTIES: THE LIMITED WARRANTIES LISTED ABOVE ARE SELLERS SOLE AND EXCLUSIVE WARRANTIES WITH RESPECT TO THE GOODS. SELLER MAKES NO OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, WHETHER WITH RESPECT TO ITS RECOMMENDATIONS, INSTRUCTIONS, GOODS, APPARATUS, PROCESS OR OTHERWISE, AND SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES, WHETHER OF MERCHANTABILITY, SUITABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.

LIMITATIONS OF REMEDIES AND SELLER'S LIABILITY:

- (a) BUYER'S EXCLUSIVE REMEDY AND SELLER'S TOTAL LIABILITY TO BUYER FOR CLAIMS, AS DEFINED IN SUBPARAGRAPHS (b) BELOW, IS EXPRESSLY LIMITED AS FOLLOWS: BUYER HAS THE OPTION OF REPAYMENT OF THE PURCHASE PRICE PAID OR REPLACEMENT OF THE GOODS SUPPLIED HEREUNDER WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. BUYER WAIVES ALL OTHER CLAIMS BY BUYER AGAINST SELLER AND SELLER SHALL NOT BE LIABLE TO BUYER FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL, EXEMPLARY OR PUNITIVE DAMAGES, EXCEPT IN CASES OF GROSS NEGLIGENCE. THE PRICE STATED FOR THE GOODS IS A CONSIDERATION IN LIMITING SELLERS AND ITS AFFILIATES' LIABILITY.
- (b) "CLAIMS" MEANS ALL ASSERTIONS OF ANY LEGAL, EQUITABLE, AND/OR ADMIRALTY CAUSES OF ACTION, INCLUDING, BUT NOT LIMITED TO, NEGLIGENCE; STRICT LIABILITY; OTHER TORT; EXPRESS OR IMPLIED WARRANTIES, INDEMNITY OR CONTRACT; CONTRIBUTION; OR SUBROGATION RELATED TO OR ARISING OUT OF THE PERFORMANCE OR NONPERFORMANCE OF THIS CONTRACT.
- (c) ALL LIMITATIONS ON BUYER'S REMEDIES AND SELLER'S LIABILITY SHALL SURVIVE THE EXPIRATION, TERMINATION OR CANCELLATION OF THIS CONTRACT.



NOTICE OF CLAIMS: All product claims by Buyer shall be deemed waived unless made by Buyer in writing and received by Seller within thirty (30) days of receipt of the goods; provided that for any claim which is not readily discoverable within such 30 day period such claim shall be deemed waived unless made by Buyer in writing and received by Seller within 90 days after receipt of the goods or within 30 days after Buyer learns or should have been reasonably aware of facts which should have given rise to such claim, whichever first occurs.

BUYER'S WARRANTIES AND ASSUMPTION OF DUTIES REGARDING SAFETY, HEALTH, UNLOADING, USE, HANDLING, AND DISPOSAL OF THE GOODS.

- (a) Buyer warrants that it has used its own independent skill and expertise in connection with the selection and use of the goods and that it possesses skill and expertise in handling, storage, transportation, treatment, use and disposal of the goods. Seller's recommendations, instructions, or information as to safety, health, handling, use, unloading or disposal of the goods are based upon information believed to be reliable, but Seller shall have no liability with respect thereto.
- (b) Buyer hereby acknowledges receipt of Seller's Material Safety Data Sheet (MSDS). Buyer assumes the following duties and obligations:
 - (1) Buyer shall promptly and carefully inspect the goods upon receipt. Buyer will adopt and maintain safe handling, storage, transportation, use treatment and disposal practices with respect to the goods, and further agrees to follow such special care and best manufacturing practices as Buyer's use of the goods require including, but not limited to, all such practices required by federal, state, and local government statutes, rules, regulations or ordinances;
 - (2) Buyer shall instruct its employees, independent contractors, agents and customers of the precautions and safe use practices required in connection with the unloading, handling, storage, use, transportation and disposal of the goods, including, but not limited to, information contained in Seller's most current MSDS; and
 - (3) Buyer shall comply with the OSHA Hazard Communication Standard, all applicable safety and environmental laws, and all other applicable government statutes, rules, regulations or ordinances, and shall take action necessary to avoid spills, emissions, leaks or other dangers to persons, property, or the environment.



MAILING ADDRESSES

Address Then E-mail Contracts and Agreements To:

Michael T. Mitchell, President
Thatcher Company, Inc.
P. O. Box 27407
Salt Lake City, UT 84127-0407
E-mail To: mike.mitchell@tchem.com
Copy To: bids@tchem.com

Address Requests For Bids and Quotations to Michael T. Mitchell, President, Then E-mail To:

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