

CITY OF ANN ARBOR
INVITATION TO BID



Water Treatment Chemical - Liquid Oxygen (LOX)

ITB No. 4785

Due Date: April 14, 2026 by 1:00 P.M. (Local Time)

Water Treatment Services

Issued By:

City of Ann Arbor
Procurement Unit
301 E. Huron Street
Ann Arbor, MI 48104

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City of Ann Arbor Vendor Conflict of Interest Disclosure Form

City of Ann Arbor Non-Discrimination Ordinance Declaration Form and Notice

INSTRUCTIONS TO BIDDERS

General

The City of Ann Arbor's Procurement Office is soliciting bids for the purchase of the chemical liquid oxygen (LOX) for use by the City's Water Treatment system based on the specifications provided herein. At this time, estimated start date is on or before July 1, 2026.

The pricing provided for this ITB shall be firm for one (1) year. Upon mutual agreement between the City and the vendor the pricing provided in this ITB may be extended for three (3) additional one (1) year periods not to exceed four (4) years in total. Any price adjustments in shall be tied to the producer price index for basic chemical manufacturing (PPI code 325120325120A) and renewals will be evaluated if they are in the best interest of the City.

LOX must be supplied to the City Water Treatment Plant, freight on board (FOB) destination, freight prepaid. The selected bidder will be responsible for transferring the product from the transport vehicle to the City storage vessel.

Each bidder shall provide the City of Ann Arbor with a complete copy of the U.S. Department of Occupational Safety & Health Administration Safety Data Sheet (SDS), a typical product specifications sheet, and an affidavit from the manufacturer or vendor that the product furnished under the purchaser's orders meets or exceeds the specifications of this standard, ANSI/NSF Standard 60, and the AWWA Standard B304-21.

Any Bid which does not conform fully to these instructions may be rejected.

Preparation of Bids

Bids should be prepared providing a straight-forward, concise description of the Bidder's ability to meet the requirements of the ITB. Bids shall be written in ink or typewritten. No erasures are permitted. Mistakes may be crossed out and corrected and must be initialed and dated in ink by the person signing the Bid.

Bids must be submitted on the "Bid Forms" provided with each blank properly filled in. If forms are not fully completed it may disqualify the bid. No alternative bid will be considered unless alternative bids are specifically requested. If alternatives are requested, any deviation from the specification must be fully described, in detail on a clearly marked "Alternate" section of Bid form.

Each person signing the Bid certifies that he/she is the person in the Bidder's firm/organization responsible for the decision as to the fees being offered in the Bid and has not and will not participated in any action contrary to the terms of this provision.

Questions or Clarifications / Designated City Contacts

All questions regarding this ITB shall be submitted via email. Emailed questions and inquires will be accepted from any and all prospective Bidders in accordance with the terms and conditions of the ITB.

All questions shall be due on or before **April 6, 2026 by 5:00 P.M. (local time)** and should be addressed as follows:

Specification/Scope of Work questions emailed to Becky Lahr, Drinking Water Quality Manager, Water Treatment Services Unit at RLahr@a2gov.org

Bid Process and Compliance questions emailed to Colin Spencer, CSpencer@a2gov.org

Any error, omissions or discrepancies in the specification discovered by a prospective contractor and/or service provider shall be brought to the attention of Colin Spencer at cspencer@a2gov.org after discovery as possible. Further, the contractor and/or service provider shall not be allowed to take advantage of errors, omissions or discrepancies in the specifications.

Site Inspection

On or prior to April 6, 2026, a bidder may inspect the City's site and equipment. Inspections are highly encouraged and are by appointment only during business hours (9:00 a.m. to 3:00 p.m). Appointments can be scheduled by email to Becky Lahr, Drinking Water Quality Manager, Water Treatment Services Unit at RLahr@a2gov.org. No appointments will be scheduled after the deadline.

Addenda

If it becomes necessary to revise any part of the ITB, notice of the Addendum will be posted to Michigan Inter-governmental Trade Network (MITN) www.mitn.info and/or City of Ann Arbor web site www.A2gov.org for all parties to download.

Each Bidder must in its Bid, to avoid any miscommunications, acknowledge all addenda which it has received, but the failure of a Bidder to receive, or acknowledge receipt of; any addenda shall not relieve the Bidder of the responsibility for complying with the terms thereof.

The City will not be bound by oral responses to inquiries or written responses other than written addenda.

Bid Submission

All Bids are due and must be delivered to the City of Ann Arbor Procurement Unit on or before **April 14, 2026 by 1:00 P.M. (Local time)**. Bids submitted late or via oral, telephonic, telegraphic, electronic mail or facsimile **will not** be considered or accepted.

Each Bidder must submit one (1) original printed bid and one (1) bid copy in a sealed envelope clearly marked: ITB No. 4785 – Water Treatment Chemical – Liquid Oxygen (LOX).

Bids must be addressed and delivered to:

City of Ann Arbor
Procurement Unit,
c/o Customer Services, 1st Floor
301 East Huron Street
Ann Arbor, MI 48104

All Bids received on or before the Due Date will be publicly opened and recorded immediately. No immediate decisions are rendered.

The following forms provided within this ITB Document should be included in submitted bids.

- **Vendor Conflict of Interest Disclosure Form**
- **City of Ann Arbor Non-Discrimination Ordinance Declaration of Compliance**

Bids that fail to provide these forms listed above upon bid opening may be rejected as non-responsive and may not be considered for award.

Hand delivered bids may be dropped off in the Purchasing drop box located in the Ann Street (north) vestibule/entrance of City Hall which is open to the public Monday through Friday from 8am to 5pm (except holidays). The City will not be liable to any Bidder for any unforeseen circumstances, delivery or postal delays. Postmarking to the Due Date will not substitute for receipt of the Bid. Each Bidder is responsible for submission of their Bid.

Additional time for submission of bids past the stated due date and time will not be granted to a single Bidder; however, additional time may be granted to all Bidders when the City determines in its sole discretion that circumstances warrant it.

Award

The City intends to award a Contract/Purchase Order to the lowest responsible Bidder(s) providing the best value to the City. The City may, at its sole discretion, award line-by-line in the best interest of value to the City.

Responsible bidder means a bid submitted, which conforms in all aspects of the requirements set forth in the invitation to bid. All aspects could include references, past experience, past performance, and qualifications.

Official Documents

The City of Ann Arbor officially distributes bid documents from the Procurement Unit or through the Michigan Intergovernmental Trade Network (MITN). Copies of the bid documents obtained from any other source are not Official copies. Addenda and other bid information will only be posted to these official distribution sites. If you obtained City of Ann Arbor Bid documents from other sources, it is recommended that you register on www.MITN.info and obtain an official Bid.

Taxes

Municipalities are exempt from Michigan State Sales and Federal Excise taxes. Do not include such taxes in the bid figure(s). The City will furnish the successful bidder with tax exemption certificates when requested.

Withdrawal of Bids

After the time of opening, no Bid may be withdrawn for the period of one-hundred and twenty (120) days.

Non-Discrimination Requirements

All contractors proposing to do business with the City shall satisfy the non-discrimination administrative policy adopted by the City Administrator in accordance with the Section 9:158 of the Ann Arbor City Code. Breach of the obligation not to discriminate shall be a material breach of the contract. Contractors are required to post a copy of Ann Arbor's Non-Discrimination Ordinance attached at all work locations where its employees provide services under a contract with the City.

Conflict Of Interest Disclosure

The City of Ann Arbor Purchasing Policy requires that prospective Vendors complete a Conflict of Interest Disclosure form. A contract may not be awarded to the selected Vendor unless and until the Procurement Unit and the City Administrator have reviewed the Disclosure form and determined that no conflict exists under applicable federal, state, or local law or administrative regulation. Not every relationship or situation disclosed on the Disclosure Form may be a disqualifying conflict. Depending on applicable law and regulations, some contracts may awarded on the recommendation of the City Administrator after full disclosure, where such action is allowed by law, if demonstrated competitive pricing exists and/or it is determined the award is in the best interest of the City. A copy of the Vendor Conflict of Interest Disclosure Form is attached.

Debarment

Submission of a Bid in response to this ITB is certification that the Bidder is not currently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from participation in this transaction by any State or Federal departments or agency. Submission is also agreement that the City will be notified of any changes in this status.

Disclosures

After bids are opened, all information in a submitter's bid is subjected to disclosure under the provisions of Michigan Public Act No. 442 of 1976, as amended (MCL 15.231 et seq.) known as the "Freedom of Information Act." The Freedom of Information Act also provides for the complete disclosure of contracts and attachments thereto except where specifically exempted.

Bid Protest

All Bid protests must be in writing and filed with the Purchasing Agent within five (5) business days of the award action. The bidder must clearly state the reasons for the protest. If a bidder contacts a City Service Area/Unit and indicates a desire to protest an award, the Service Area/Unit shall refer the bidder to the Purchasing Agent. The Purchasing Agent will provide the bidder with the appropriate instructions for filing the protest. The protest shall be reviewed by the City Administrator or designee whose decision shall be final.

Any inquiries or requests regarding this procurement should be only submitted in writing to the Designated City Contacts provided herein. Attempts by the Offeror to initiate contact with anyone other than the Designated City Contacts provided herein that the prospective Offeror believes can influence the procurement decision, e.g., Elected Officials, City Administrator, Selection Committee Members, Appointed Committee Members, etc., may lead to immediate elimination from further consideration.

Cost Liability

The City of Ann Arbor assumes no responsibility or liability for costs incurred by the Bidder prior to the execution of a contract with the City. By submitting a bid, a bidder agrees to bear all costs incurred or related to the preparation, submission and selection process for the bid.

Reservation of Rights

The City of Ann Arbor reserves the right to accept any bid or alternative bid proposed in whole or in part, to reject any or all bids or alternatives bids in whole or in part and to waive irregularity and/or informalities in any bid and to make the award in any manner deemed in the best interest of the City.

Environmental Commitment

The City of Ann Arbor recognizes its responsibility to minimize negative impacts on human health and the environment while supporting a vibrant community and economy. The City further recognizes that the products and services the City buys have inherent environmental and economic impacts and that the City should make procurement decisions that embody, promote and encourage the City's commitment to the environment.

The City strongly encourages potential vendors to bring forward tested, emerging, innovative, and environmentally preferable products and services that are best suited to the City's environmental principles. This includes products and services such as those with lower greenhouse gas emissions, high recycled content, without toxic substances, those with high reusability or recyclability, those that reduce the consumption of virgin materials, and those with low energy intensity.

As part of its environmental commitment, the City reserves the right to award a contract to the most responsive and responsible bidder, which includes bids that bring forward products or services that

help advance the City's environmental commitment. In addition, the City reserves the right to request that all vendors report their annual greenhouse gas emissions, energy consumption, miles traveled, or other relevant criteria in order to help the City more fully understand the environmental impact of its procurement decisions.

Chemical Delivery or Supply Insurance Requirements

Insurance: Vendor shall procure and maintain the following insurance during the term of this contract and its performance:

(1) Worker's compensation insurance as required by law; and automobile insurance (for all owned, hired, and non-owned vehicles) with \$1,000,000 limit;

(2) Commercial general liability insurance, written on a per occurrence basis with \$1,000,000 in coverage per occurrence and \$2,000,000 aggregate;

(3) Umbrella liability insurance over all other required insurance, written on a per occurrence basis with \$5,000,000 limit;

(4) Contractor pollution liability insurance, written on a per occurrence basis, with \$5,000,000 limit including products pollution liability and transportation pollution liability for all deliveries.

For all required insurance, the City shall be named an additional insured without added exclusions or limiting endorsements that diminish the City's protections. Further, all insurers shall be authorized to do business in Michigan, and shall carry and maintain a minimum rating of "A-" from A.M. Best and Co., with a minimum financial size category of "V." All required insurance shall be primary to any insurance the City has (including self-insured retention), and any insurance or retention the City has shall not be required to contribute. For itself and all of its insurers, vendor waives its right to recover against the City for liabilities for which the City has insurance. Vendor shall furnish to the City endorsements from its insurers unconditionally entitling the City to 30-days' notice of cancellation or non-renewal, except that in the case of cancellation or non-renewal due to non-payment of premiums, 10-days' notice is sufficient. Vendor shall furnish the City proof of its compliance with these insurance requirements upon demand, through City-approved means (currently MyCOI). Compliance with this section is a condition of City's payment to vendor. Vendor should add registration@mycoitracking.com to its safe-senders list.

INVITATION TO BID

City of Ann Arbor
Guy C. Larcom Municipal Building
Ann Arbor, Michigan 48107

Ladies and Gentlemen:

The undersigned, as Bidder, declares that this Bid is made in good faith, without fraud or collusion with any person or persons bidding on the same Contract; that this Bidder has carefully read and examined the bid documents, including City Nondiscrimination requirements, Vendor Conflict of Interest Form, Instructions to Bidders, Bid Forms, Purchase Order Terms and Conditions, General Conditions, Detailed Specifications, and all Addenda, and understands them. The Bidder declares that it conducted a full investigation of the work proposed and is fully informed as to the nature of the work and the conditions relating to the work's performance.

The Bidder acknowledges that it has not received or relied upon any representations or warrants of any nature whatsoever from the City of Ann Arbor, its agents or employees, and that this Bid is based solely upon the Bidder's own independent business judgment.

In accordance with these bid documents, and Addenda numbered _____, the undersigned, as Bidder, proposes to deliver to the City all product/services herein described for the amounts set forth in the Bid Forms.

The Bidder declares that it has become fully familiar with the liquidated damage clauses for completion times and for compliance with City Code Chapter 112, understands and agrees that the liquidated damages are for the non-quantifiable aspects of non-compliance and do not cover actual damages that may be shown and agrees that if awarded the Contract, all liquidated damage clauses form part of the Contract.

Bidder further agrees that the cited provisions of Chapter 14 form a part of this Contract.

The Bidder declares that it has become familiar with the City Conflict of Interest Disclosure Form and certifies that the statement contained therein is true and correct.

In submitting this Bid, it is understood that the right is reserved by the City to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, and to make the award in any manner the City believes to be in its best interest.

SIGNED THIS TUES DAY APRIL 14 OF , 20226.

Ryan Murphy
Bidder's Name

Ryan Murphy
Authorized Signature of Bidder

21348 Telegraph Road Southfield, MI 48033

Ryan Murphy
(Print Name of Signer Above)

Official Address

313-883-6969

ryan.murphy@rscmain.com

Telephone Number

Email Address for Award Notice

LEGAL STATUS OF BIDDER

(The Bidder shall fill out the appropriate form and strike out the other three.)

Bidder declares that it is:

* A corporation organized and doing business under the laws of the State of Michigan, for whom Ryan Murphy, bearing the office title of President, whose signature is affixed to this Bid, is authorized to execute contracts.

NOTE: If not incorporated in Michigan, please attach the corporation's Certificate of Authority

~~* A limited liability company doing business under the laws of the State of _____; whom _____ bearing the title of _____ whose signature is affixed to this proposal, is authorized to execute contract on behalf of the LLC.~~

~~* A partnership, organized under the laws of the state of _____ and filed in the county of _____, whose members are (list all members and the street and mailing address of each) (attach separate sheet if necessary):~~

* An individual, whose signature with address, is affixed to this Bid: _____ (initial here)

Authorized Official

Ryan Murphy Date April 14, 2026

(Print) Name Ryan Murphy Title President

Company: Roy Smith Company

Address: 21348 Telegraph Road Southfield, MI 48033

Contact Phone () 313-883-6969 Fax () _____

Email ryan.murphy@rscmain.com

SPECIFICATIONS

CITY OF ANN ARBOR STANDARD SPECIFICATIONS FOR LIQUID OXYGEN (LOX)

This specification pertains to liquid oxygen (O₂, LOX) used as feedstock in the production of ozone for the treatment of municipal water supplies.

PART 1: General Information

Part 1.1 Definitions

The following definitions shall apply in this specification:

Manufacturer: *Any party that produces liquid oxygen as covered by this specification.*

Purchaser: *Any party that enters into a contract, either written or verbal, to purchase liquid oxygen in accordance with the provisions of this specification.*

Vendor: *Any party that enters into a contract, either written or verbal, to supply liquid oxygen for purchase in accordance with this specification.*

Part 1.2 Affidavit of Compliance

The purchaser requires a certificate of analysis or an affidavit from the manufacturer or vendor that the LOX furnished under the purchaser's orders meets or exceeds these specifications as well as AWWA B304-21. The Bidder shall supply with each load of LOX a certificate of analysis or an affidavit that the LOX complies with the applicable requirements of this standard.

Part 1.3 Rejection

Notice of Nonconformance. If the liquid oxygen does not meet the requirements of this specification, a notice of nonconformance shall be provided by the purchaser to the vendor within 10 working days of receipt of the shipment at its point of destination. The results of the purchaser's test shall prevail unless the vendor notifies the purchaser within five working days of receipt of the notice of nonconformance that a retest is desired. On receipt of the request for a retest, the purchaser shall forward to the vendor one of the sealed samples taken in accordance to section 3.2 of this standard. In the event that the retest results do not agree with the test results of the purchaser, the other sealed sample shall be forwarded to a referee laboratory agreed upon by both parties for analysis. The results of the referee laboratory's analysis shall be considered final. If the shipment is found to be in compliance with this standard, then the cost of the referee laboratory shall be assumed by the purchaser. If the shipment is found not to meet the specifications of this standard, the cost of the referee laboratory shall be assumed by the vendor.

If the material delivered is found to not meet the requirements of this standard, the responsibility of removal from the point of destination shall fall wholly on the vendor. An exception to this point may be made if a price adjustment is made between the vendor and the purchaser.

PART 2: Specifications

Part 2.1 Description

Liquid oxygen is a slightly bluish cryogenic liquid. Oxygen gas is colorless, odorless, tasteless and liquifies at -183°C. Liquid oxygen has a density, at -183°C, of 1.14 g/cc.

Part 2.2 Physical and Chemical Requirements

Liquid oxygen as supplied under this specification shall meet AWWA B304-21 standards, with a minimum 99.5% oxygen. For the water/moisture content, the product shall not exceed a dew point of -82°F or better at the time of delivery.

Part 2.3 Impurities

The total hydrocarbon content of the liquid oxygen shall be less than 25 ppm (note that this value is more restrictive than the AWWA standard). The LOX provided under this standard shall contain no material, either organic or inorganic, capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with ozone prepared from this liquid oxygen. The LOX shall not impart to the water at its rate of feed any contaminants that exceed the limits established by appropriate governing agencies, when the concentration of the impurity imparted by the liquid oxygen is combined with the concentration of that impurity already present in the water to be treated.

PART 3: Marking and Shipping

Part 3.1 Marking

All shipment containers, cylinders or bulk, shall have markings, tags, labels, or serial numbers as required by the United States Department of Transportation (USDOT).

Part 3.2 Sampling

Samples shall be representative of the oxygen supply. Samples shall be obtained by either filling the sample container and delivery container at the same time, on the same manifold and in the same manner or by withdrawing a sample from the supply container through a suitable connection into the sample container (no regulator is to be used between the supply and the sample container but a suitable purge valve is permissible).

PART 4: Testing Procedures

All testing shall be done in accordance with CGA G-4.3 from the Compressed Gas Association. The following is a partial list of chemical and physical characteristics that may be tested for:

- 1. Percent oxygen concentration**
- 2. Water content**
- 3. Total hydrocarbon content**

BID FORM

VENDOR NAME: ROY SMITH COMPANY

All Bidders shall submit pricing in the format requested

| | | |
|----------------------|------------------|-----|
| LIQUID OXYGEN BULK | \$ <u>\$0.40</u> | HCF |
| FREIGHT | \$ _____ | HCF |
| TOTAL DELIVERED COST | \$ <u>\$0.40</u> | HCF |

OTHER COSTS: All costs to the City must be specified on this bid form. Any fees identified at a later date will result in the bid being rejected.

INVOICE TERMS: Discount of 0 % or \$0 will be allowed for payment of invoice thirty (30) days from day of delivery and acceptance.

OTHER TERMS: Less than 30 days, E.O.M., Proximo, etc., will not be considered in determining award of contract.

SHIPPING: Liquid Oxygen shall be supplied to the City of Ann Arbor Water Treatment Plant, f.o.b. destination, freight prepaid. Contractor shall be responsible for transferring the product from transport vehicle to the City of Ann Arbor storage vessel. Bidder shall specify minimum shipping amount if any:

QUANTITY: The annual quantity is approximately **200,000 HCF**. This quantity is for estimating purposes only, not a guarantee of actual usage. Product will be ordered on an "as needed" basis. All prices are to remain firm.

MONITORING: The provider will be responsible for using telemetry to monitor the tank level and keeping the tank above 50% capacity. Therefore, ordering product will not be necessary and resupply will be managed by the supplier according to the needs of the Water Treatment Plant. The successful Provider must provide a telemetry device or use and maintain the existing telemetry **at no cost to the City of Ann Arbor**. Failure to maintain 50% capacity could result in breach of contract.

SPECIFICATIONS: Please include the typical specifications of your product with your bid to demonstrate your product quality, especially pertaining to minimum purity, percent oxygen content, dew point, water concentration, hydrocarbon concentration, and other impurities.

REFERENCES: Please list at least three (3) entities for which you have done similar work:

| <u>Organization</u> | <u>Address</u> | <u>Contact Person</u> | <u>Telephone</u> |
|--|---|-----------------------|---------------------|
| 1. <u>Holland BPW</u> | <u>625 HASTINGS HOLLAND, MI 48423</u> | <u>STEVE DYKE</u> | <u>616-355-1253</u> |
| 2. <u>TAHOE TRUCKEE SANITATION</u> | <u>13720 BUTTERFIELD DRIVE TRUCKEE CA</u> | <u>KEVIN DEMM</u> | <u>530-587-2525</u> |
| 3. <u>RICHARD B RUSSELL DAM- US ARMY</u> | <u>4144 RBR DR ELBERTON, GA 30653</u> | <u>JAMES SYKES</u> | <u>706-567-2894</u> |

GENERAL CONDITIONS

ESTIMATED QUANTITIES

Quantities stated are estimated and not guaranteed. The quantities stated will be used for award purposes only and are based up an average of actual annual usage.

DOWN PAYMENTS

Any bid proposal submitted which requires a down payment or prepayment of any kind prior to delivery and acceptance of the item, as being in conformance with the specifications will not be considered for award.

PURCHASE ORDER

The successful bidder will be issued a purchase order from the City of Ann Arbor, which will create a bilateral contract between the City and the successful bidder. The purchase order shall commit the bidder to perform the contract in accordance with the specifications and the terms and conditions of the purchase order.

The terms and conditions of the Purchase Order are provided herein.

CONTRACT TERM

The pricing provided for this ITB shall be firm for one (1) year. Upon mutual agreement between the City and the vendor the pricing provided in this ITB may be extended for three (3) additional one (1) year periods not to exceed four (4) years in total. Price increases shall be tied to the producer price index for basic chemical manufacturing (code 325120325120A . The vendor shall provide written notice upon renewal that they intend to exercise the price escalation provision and provide documentation of the calculation of price increase.

The price increase shall be calculated as follows:

Price Increase =

Current Bid Price x

Percentage Difference between PPI Data at Month/Year of ITB Acceptance and Month/Year of Price Increase

PPI Source:

<https://data.bls.gov/PDQWeb/pc>

Example:

Bid Price = \$10/ton

PPI at ITB acceptance (1/1/2015) = 272.8

PPI at Increase Request Date (1/1/2017) = 292.3

Difference as a percentage = 7.1%

New acceptable price = \$10.71

City of Ann Arbor: General Terms and Conditions

The following General Terms and Conditions shall apply to all purchases by or on behalf of the City of Ann Arbor unless specifically provided otherwise on the front of this document:

Tax Exemption: The City of Ann Arbor ("City") is tax exempt: FEIN # 38-6004534.

Acceptance of Contract: This purchase order is the City's contract to purchase the goods or services attached to this document from the Vendor. The City's placement of this order is expressly conditioned upon the Vendor's acceptance of all the terms and conditions on or attached to this purchase order. All specifications, drawings, and data submitted to the Vendor with this order are hereby incorporated and made part hereof.

Amendments: No agreement or understanding to modify this contract shall be binding upon the City unless in writing and signed by the City's authorized agent.

Delivery: All prices must be F.O.B. delivery point. Time is of the essence on this contract. If delivery dates cannot be met, the Vendor agrees to advise the City in writing of the earliest possible shipping date. The City reserves the right to cancel or purchase elsewhere and hold the Vendor accountable.

Risk of Loss: Regardless of F.O.B. point, the Vendor agrees to bear all risk of loss, injury, or destruction of goods or materials ordered herein that occur prior to delivery or acceptance by the City, whichever is later. No such loss, injury, or destruction shall release the Vendor from any obligations hereunder.

Inspection: Vendor must properly package goods to prevent damage. The City will not accept damaged goods. The City reserves the right to inspect goods at a reasonable time subsequent to delivery where circumstances or conditions prevent effective inspection of the goods at the time of delivery. All rejected goods shall be returned to the Vendor at Vendor's cost, with no cost to the City, whether the damage is readily apparent at the time of delivery or later. The City's acceptance is conditioned on such inspection.

Patents and Copyrights: If goods sold and delivered to the City hereunder are protected by an applicable patent or copyright, the Vendor agrees to indemnify and save harmless the City from and against any and all suits, claims, judgments, and costs instituted or recovered against the City by any person on account of the use or sale of such goods by the City in violation of such patent or copyright.

Uniform Commercial Code: All applicable portions of the Michigan Uniform Commercial Code shall govern contracts for goods with the City of Ann Arbor; except as modified by contract documents.

Non-waiver of Rights: No failure of either party to exercise any right given to it hereunder or to insist upon strict compliance by the other party with its obligations hereunder, and no custom or practice of the parties at variance with the terms hereof, nor any payment under this contract shall constitute a waiver of either party's right to demand exact compliance with the terms hereof.

Material Safety Data Sheets: Applicable Material Safety Data Sheets, in compliance with OSHA/MIOSHA hazard communication regulations and standards, must be provided by the Vendor to the City at the time of purchase.

Assignments: The Vendor agrees not to assign or transfer any part of this contract without the written consent of the City, acting through an authorized agent. Any unauthorized assignment may subject the Vendor to immediate termination.

Laws Governing, Severability: This contract shall be governed by and construed according to the laws of the State of Michigan. Vendor agrees to submit to the jurisdiction and venue of the Circuit Court of Washtenaw County, MI, or if original jurisdiction is established, the U.S. District Ct. for Eastern District of MI, Southern Division. The Vendor stipulates venues referenced are convenient and waives any claim of non-convenience. If any term herein is found to be ineffective, unenforceable or illegal under any present or future law, such term shall be fully severable, and the remaining terms shall not be affected and shall remain in full force and effect.

Prevailing Wage: Vendor must comply with applicable prevailing wage requirements, including the Davis-Bacon Act.

Living Wage: Vendor must comply, when applicable, with the City's Living Wage Ordinance (Chapter 23, City Code).

Non-Discrimination: Vendor must comply with all applicable state, federal, and local non-discrimination laws, including MCL 37.2209 and Chapter 112 of City Code.

Indemnification: To the fullest extent permitted by law, the Vendor shall indemnify, defend, and hold the City, its officers, employees, and agents harmless from all suits, claims, judgments, and expenses, including attorney fees, resulting or alleged to result from any act or omission associated with the performance of this contract by the Vendor or anyone acting on the Vendor's behalf under this contract. The Vendor shall not be responsible to indemnify the City for losses or damages caused by or resulting from the City's sole negligence. This indemnity survives delivery and acceptance of the Vendor's goods and services.

Warranty: The Vendor warrants to the City that all goods and services furnished hereunder will conform in all respects to the terms of this contract, including any drawings, specifications and standards incorporated herein. In addition, the Vendor warrants the goods and services are suitable for and will perform in accordance with the purposes for which they were intended.

Payment Terms: The City's payment terms are "net 30." The payment date will be calculated based on the invoice receipt date or delivery date, whichever is later.

Payments: All invoices under this contract shall be emailed to accountspayable@a2gov.org. Mailed invoices shall be addressed to the City of Ann Arbor, Accounts Payable, P.O. Box 8647, Ann Arbor, MI 48107, as indicated on the front of this purchase order. Invoices must include the Vendor's name, phone number, and clearly list item descriptions, quantities, and units of measure. The Vendor acknowledges and understands that invoices not addressed as stated above shall have the "net 30" begin once the invoice is received by City Accounts Payable.

Compliance with Laws: The Vendor certifies that in performing this contract it will comply with all applicable laws, regulations, rules, and orders.

Termination for Cause: In the event the Vendor fails, at any time, to comply with, fully perform, or strictly adhere to any covenant, condition or representation contained within this contract, the City shall have the right to give written notice to Vendor of such failure. If such failure is not cured to the City's satisfaction within 10 business days from the time of delivery to Vendor of such notice, the City shall have the right to terminate this contract immediately without the requirement of further notice.



Vendor Conflict of Interest Disclosure Form

All vendors interested in conducting business with the City of Ann Arbor must complete and return the Vendor Conflict of Interest Disclosure Form in order to be eligible to be awarded a contract. Please note that all vendors are subject to comply with the City of Ann Arbor's conflict of interest policies as stated within the certification section below.

If a vendor has a relationship with a City of Ann Arbor official or employee, an immediate family member of a City of Ann Arbor official or employee, the vendor shall disclose the information required below.

1. No City official or employee or City employee's immediate family member has an ownership interest in vendor's company or is deriving personal financial gain from this contract.
2. No retired or separated City official or employee who has been retired or separated from the City for less than one (1) year has an ownership interest in vendor's Company.
3. No City employee is contemporaneously employed or prospectively to be employed with the vendor.
4. Vendor hereby declares it has not and will not provide gifts or hospitality of any dollar value or any other gratuities to any City employee or elected official to obtain or maintain a contract.
5. Please note any exceptions below:

| Conflict of Interest Disclosure* | |
|---|---|
| Name of City of Ann Arbor employees, elected officials or immediate family members with whom there may be a potential conflict of interest. | <input type="checkbox"/> Relationship to employee <input type="checkbox"/> Interest in vendor's company <input type="checkbox"/> Other (please describe in box below) |
| | |

*Disclosing a potential conflict of interest does not disqualify vendors. In the event vendors do not disclose potential conflicts of interest and they are detected by the City, vendor will be exempt from doing business with the City.

| | | |
|--|----------------------------|---|
| I certify that this Conflict of Interest Disclosure has been examined by me and that its contents are true and correct to my knowledge and belief and I have the authority to so certify on behalf of the Vendor by my signature below: | | |
| ROY SMITH COMPANY | 313-883-6969 | |
| Vendor Name | Vendor Phone Number | |
| <i>Ryan Murphy</i> | 4/14/2026 | Ryan Murphy |
| Signature of Vendor Authorized Representative | Date | Printed Name of Vendor Authorized Representative |

**CITY OF ANN ARBOR
DECLARATION OF COMPLIANCE**

Non-Discrimination Ordinance

The "non discrimination by city contractors" provision of the City of Ann Arbor Non-Discrimination Ordinance (Ann Arbor City Code Chapter 112, Section 9:158) requires all contractors proposing to do business with the City to treat employees in a manner which provides equal employment opportunity and does not discriminate against any of their employees, any City employee working with them, or any applicant for employment on the basis of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight. It also requires that the contractors include a similar provision in all subcontracts that they execute for City work or programs.

In addition the City Non-Discrimination Ordinance requires that all contractors proposing to do business with the City of Ann Arbor must satisfy the contract compliance administrative policy adopted by the City Administrator. A copy of that policy may be obtained from the Purchasing Manager

The Contractor agrees:

- (a) To comply with the terms of the City of Ann Arbor's Non-Discrimination Ordinance and contract compliance administrative policy, including but not limited to an acceptable affirmative action program if applicable.
- (b) To post the City of Ann Arbor's Non-Discrimination Ordinance Notice in every work place or other location in which employees or other persons are contracted to provide services under a contract with the City.
- (c) To provide documentation within the specified time frame in connection with any workforce verification, compliance review or complaint investigation.
- (d) To permit access to employees and work sites to City representatives for the purposes of monitoring compliance, or investigating complaints of non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the Ann Arbor Non-Discrimination Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Non-Discrimination Ordinance, obligates the Contractor to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract.

ROY SMITH COMPANY

Company Name

Ryan Murphy

4/14/2026

Signature of Authorized Representative

Date

RYAN MURPHY, PRESIDENT

Print Name and Title

21348 Telegraph Road Southfield, MI 48033

Address, City, State, Zip

313-883-6969 ryan.murphy@rscmain.com

Phone/Email Address

Questions about the Notice or the City Administrative Policy, Please contact:
Procurement Office of the City of Ann Arbor
(734) 794-6500

CITY OF ANN ARBOR NON-DISCRIMINATION ORDINANCE

Relevant provisions of Chapter 112, Nondiscrimination, of the Ann Arbor City Code are included below.
You can review the entire ordinance at www.a2gov.org/humanrights.

Intent: It is the intent of the city that no individual be denied equal protection of the laws; nor shall any individual be denied the enjoyment of his or her civil or political rights or be discriminated against because of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight.

Discriminatory Employment Practices: No person shall discriminate in the hire, employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any individual. No person shall discriminate in limiting membership, conditions of membership or termination of membership in any labor union or apprenticeship program.

Discriminatory Effects: No person shall adopt, enforce or employ any policy or requirement which has the effect of creating unequal opportunities according to actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight for an individual to obtain housing, employment or public accommodation, except for a bona fide business necessity. Such a necessity does not arise due to a mere inconvenience or because of suspected objection to such a person by neighbors, customers or other persons.

Nondiscrimination by City Contractors: All contractors proposing to do business with the City of Ann Arbor shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the guidelines of this section. All city contractors shall ensure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate inequality based upon any classification protected by this chapter. All contractors shall agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of any applicable protected classification. All contractors shall be required to post a copy of Ann Arbor's Non-Discrimination Ordinance at all work locations where its employees provide services under a contract with the city.

Complaint Procedure: If any individual believes there has been a violation of this chapter, he/she may file a complaint with the City's Human Rights Commission. The complaint must be filed within 180 calendar days from the date of the individual's knowledge of the allegedly discriminatory action or 180 calendar days from the date when the individual should have known of the allegedly discriminatory action. A complaint that is not filed within this timeframe cannot be considered by the Human Rights Commission. To file a complaint, first complete the complaint form, which is available at www.a2gov.org/humanrights. Then submit it to the Human Rights Commission by e-mail (hrc@a2gov.org), by mail (Ann Arbor Human Rights Commission, PO Box 8647, Ann Arbor, MI 48107), or in person (City Clerk's Office). For further information, please call the commission at 734-794-6141 or e-mail the commission at hrc@a2gov.org.

Private Actions For Damages or Injunctive Relief: To the extent allowed by law, an individual who is the victim of discriminatory action in violation of this chapter may bring a civil action for appropriate injunctive relief or damages or both against the person(s) who acted in violation of this chapter.

THIS IS AN OFFICIAL GOVERNMENT NOTICE AND
MUST BE DISPLAYED WHERE EMPLOYEES CAN READILY SEE IT.

OXYGEN, REFRIGERATED LIQUID

Safety Data Sheet



1. IDENTIFICATION

Product identifier

Product Name OXYGEN, REFRIGERATED LIQUID

Other means of identification

Safety data sheet number LIND-P098
UN/ID no. UN1073
Synonyms Liquid Oxygen; Oxygen Liquid, LOX

Recommended use of the chemical and restrictions on use

Recommended Use Industrial and professional use. Medical.
Uses advised against Consumer use

Details of the supplier of the safety data sheet

Messer North America, Inc. - Messer LLC - Messer Merchant Production LLC
200 Somerset Corporate Blvd, Suite 7000
Bridgewater, NJ 08807
Phone: 908-464-8100
www.messer-us.com

Messer Gas Puerto Rico, Inc.
Road 869, Km 1.8
Barrio Palmas, Catano, PR 00962
Phone: 787-641-7445

* May include subsidiaries or affiliate companies/divisions.

For additional product information contact your local customer service.

Emergency telephone number

Company Phone Number +1 800-232-4726 (Messer National Operations Center, US)

CHEMTREC: 1-800-424-9300 (North America) +1-703-527-3887 (International)

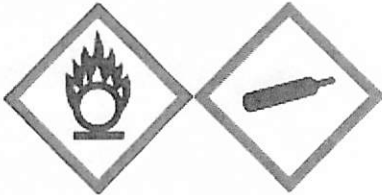
2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

| | |
|----------------------|----------------------------|
| Oxidizing gases | Category 1 |
| Gases under pressure | Refrigerated liquefied gas |

Label elements



Signal word

Danger

Hazard Statements

- May cause or intensify fire; oxidizer
- Contains refrigerated gas; may cause cryogenic burns or injury
- Combustibles in contact with liquid oxygen may explode on ignition or impact

Precautionary Statements - Prevention

- Do not handle until all safety precautions have been read and understood
- Keep and store away from clothing and other combustible materials
- Keep valves and fittings free from oil and grease
- Use and store only outdoors or in a well ventilated place
- Wear cold insulating gloves, face shield, and eye protection
- Use a backflow preventive device in piping
- Use only with equipment of compatible materials of construction and rated for cylinder pressure
- Use only with equipment cleaned for oxygen service
- Do NOT change or force fit connections
- Avoid spills. Do not walk on or roll equipment over spills
- Close valve after each use and when empty
- Always keep container in upright position

Precautionary Statements - Response

IF ON SKIN: Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.
 In case of fire: Stop leak if safe to do so.

Hazards not otherwise classified (HNOC)

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure Gas

| Chemical Name | CAS No. | Volume % | Chemical Formula |
|---------------|---------|----------|------------------|
|---------------|---------|----------|------------------|

| | | | |
|--------|-----------|-----|----------------|
| OXYGEN | 7782-44-7 | >99 | O ₂ |
|--------|-----------|-----|----------------|

4. FIRST AID MEASURES

Description of first aid measures

| | |
|-----------------------|--|
| General advice | Show this safety data sheet to the doctor in attendance. |
| Inhalation | Move victim to fresh air. Seek immediate medical attention/advice. |
| Skin contact | For dermal contact or suspected frostbite, remove contaminated clothing and flush affected areas with lukewarm water. DO NOT USE HOT WATER. A physician should see the patient promptly if contact with the product has resulted in blistering of the dermal surface or in deep tissue freezing. |
| Eye contact | If frostbite is suspected, flush eyes with cool water for 15 minutes and obtain immediate medical attention. |
| Ingestion | Not an expected route of exposure. |

Most important symptoms and effects, both acute and delayed

| | |
|-----------------|---|
| Symptoms | Oxygen is not acutely toxic under normal pressure. Oxygen is more toxic when inhaled at elevated pressures. Depending upon pressure and duration of exposure, pure oxygen at elevated pressures may cause cramps, dizziness, difficulty breathing, convulsions, edema and death. Direct contact with liquid can cause severe frostbite. |
|-----------------|---|

Indication of any immediate medical attention and special treatment needed

| | |
|---------------------------|------------------------|
| Note to physicians | Treat symptomatically. |
|---------------------------|------------------------|

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media None.

Specific extinguishing methods

Continue to cool fire exposed cylinders until flames are extinguished. Damaged cylinders should be handled only by specialists.

Specific hazards arising from the chemical

May cause or intensify fire; oxidizer. Combustibles in contact with liquid oxygen may explode on ignition or impact. Will support and accelerate combustion of combustible materials (wood, paper, oil, debris, etc). Cylinders may rupture under extreme heat. Cryogenic liquids and vapors will rapidly freeze water. Do not direct water at source of leak or safety devices; icing may occur.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

| | |
|-----------------------------|---|
| Personal precautions | Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Avoid spills. Do not walk on or roll equipment over spills. Monitor oxygen level. Eliminate all ignition sources if safe to do so. Use personal protection recommended in Section 8. |
| Other Information | Liquid spill will vaporize and expand rapidly forming an oxygen enriched vapor cloud that |

may obscure visibility. When in contact with refrigerated/cryogenic liquids, many materials become brittle and are likely to break without warning.

Environmental precautions

Environmental precautions Prevent spreading of vapors through sewers, ventilation systems and confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop the flow of gas or remove cylinder to outdoor location if this can be done without risk. If leak is in container or container valve, contact the appropriate emergency telephone number in Section 1 or call your closest Messer location. If system leak, close source valves and safely vent pressure before attempting any repairs.

Methods for cleaning up Return Portable Cryogenic Container to Messer or an authorized distributor.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Liquid oxygen cannot be handled in carbon or low alloy steel, 18-8 and 18-10 stainless steel are acceptable as are copper and its alloys, brass bronze, silicon alloys, Monel®, Inconel®, and beryllium. Teflon®, Teflon® composites, or Kel-F® are preferred non-metallic gasket materials. Oxygen should not be used as a substitute for compressed air in pneumatic equipment since they generally contain flammable lubricants. Equipment able to use oxygen must be "cleaned for oxygen service". Check with the equipment supplier to verify oxygen compatibility for the service conditions. Keep valves and fittings free from oil and grease Use only equipment of compatible materials of construction Do NOT change or force fit connections Open valve slowly "NO SMOKING" signs should be posted in storage and use areas. Separate flammable gas cylinders from oxygen and other oxidizers by a minimum distance of 20 ft. or by a 5 ft. high barrier with a minimum fire resistance rating of a half an hour.

Cryogenic liquids must be handled and stored only in containers, systems and piping specifically designed for them and constructed of compatible materials for the product. Containers, systems, and piping must be equipped with pressure relief devices to prevent excessive pressure buildup due to vaporization of the liquid as it warms. System vents should be piped to a safe location exterior of the building.

Liquid product is delivered into stationary vacuum jacketed vessels at the customer's location or in portable vacuum-jacketed "liquid" cylinders requiring special handling methods. Consult manufacturer's instructions. Under normal conditions, portable cryogenic containers will periodically vent product to limit pressure buildup. Ensure that the container is in a well-ventilated area.

Never allow any unprotected part of the body to touch uninsulated pipes or vessels that contain cold fluids. The extremely cold metal will cause moist flesh to stick fast and tear when one attempts to withdraw from it.

Protect cylinders from physical damage; do not drag, roll, slide or drop. Never attempt to lift a cylinder by its valve protection cap. When moving cylinders, even for short distance, use a cart designed to transport cylinders. Never insert an object (e.g. wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage valve, causing leak to occur. Use an adjustable strap wrench to remove over-tight or rusted caps. Use only with adequate ventilation. Use a backflow preventive device in piping. Close valve after each use and when empty. If user experiences any difficulty operating cylinder valve discontinue use and contact supplier. Ensure the complete gas system has been checked for leaks before use.

Never put cylinders into trunks of cars or unventilated areas of passenger vehicles. Never attempt to refill a compressed gas cylinder without the owner's written consent. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit.

Only experienced and properly instructed persons should handle gases under pressure. Always store and handle compressed gas cylinders in accordance with Compressed Gas

Association, publication CGA-P1, Safe Handling of Compressed Gases in Containers.

For additional recommendations, consult Compressed Gas Association's publications G-4.1, G-4.3, G-4.4, G-4.9, P-2.5, P-45, P-70 and NFPA 55.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store in cool, dry, well-ventilated area of non-combustible construction away from heavily trafficked areas and emergency exits. Keep at temperatures below 52°C / 125°F. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Stored containers should be periodically checked for general condition and leakage. Do not store near combustible materials.

Incompatible materials Combustible materials. Organic material. Reducing agents. Oil. Grease.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering Controls Use local exhaust in combination with general ventilation as necessary to keep oxygen concentrations above 19.5% and below 23.5%. Consider installation of leak detection systems in areas of use and storage. Systems under pressure should be regularly checked for leakages.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). If there is potential for exposure to liquid, wear Goggles face-shield over either safety glasses with side shields or safety goggles.

Skin and body protection Work gloves and safety shoes are recommended when handling cylinders. Gloves must be clean and free from grease or oil. Wear loose fitting, cold insulating gloves and suitable clothing to prevent skin contact with liquid, cold gas and cold equipment or piping.

Respiratory protection No special protective equipment required.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Do not get in eyes, on skin, or on clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|-------------------------------|----------------------------|
| Physical state | Refrigerated liquefied gas |
| Appearance | Pale blue |
| Odor | Odorless |
| Odor threshold | No information available |
| pH | Not applicable |
| Melting/freezing point | -218.8 °C / -361.8 °F |
| Boiling point / boiling range | -183 °C / -297 °F |
| Evaporation rate | Not applicable |
| Flammability (solid, gas) | Non-flammable gas |
| Lower flammability limit: | Not applicable |
| Upper flammability limit: | Not applicable |
| Flash point | Not applicable |

| | |
|---------------------------|---------------------------------------|
| Autoignition temperature | No data available |
| Decomposition temperature | No data available |
| Oxidizing properties | May cause or intensify fire; oxidizer |
| Water solubility | Slightly soluble |
| Partition coefficient | No data available |
| Kinematic viscosity | Not applicable |

Component Level Information:

| Chemical Name | Molecular weight | Boiling point/range | Vapor Pressure | Vapor density (air =1) | Gas Density kg/m ³ @20°C | Critical Temperature |
|---------------|------------------|---------------------|----------------------------|------------------------|-------------------------------------|----------------------|
| OXYGEN | 31.99 | -182.9 °C | Above critical temperature | 1.11 | 1.331 | -118.6 °C |

10. STABILITY AND REACTIVITY**Reactivity**

Not reactive under normal conditions

Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Possibility of Hazardous Reactions

May cause or intensify fire; oxidizer. Will support and accelerate combustion of combustible materials (wood, paper, oil, debris, etc).

Conditions to avoid

None under recommended storage and handling conditions (see Section 7).

Incompatible materials

Combustible materials. Organic material. Reducing agents. Oil. Grease.

Hazardous Decomposition Products

None known.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

| | |
|--------------|--|
| Inhalation | No data available |
| Skin contact | Direct contact with extremely cold liquid will cause severe and immediate burns to unprotected skin. Contact with evaporating liquid may cause cold burns/frostbite. |
| Eye contact | Direct contact with extremely cold liquid will cause severe and immediate burns to unprotected eyes. Contact with evaporating liquid may cause cold burns/frostbite. |
| Ingestion | Not an expected route of exposure. |

Information on toxicological effects

| | |
|----------|--|
| Symptoms | Oxygen is not acutely toxic under normal pressure. Oxygen is more toxic when inhaled at elevated pressures. Depending upon pressure and duration of exposure, pure oxygen at |
|----------|--|

elevated pressures may cause cramps, dizziness, difficulty breathing, convulsions, edema and death.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|---------------------------------|--|
| Irritation | Not classified. |
| Sensitization | Not classified. |
| Germ cell mutagenicity | Not classified. |
| Carcinogenicity | This product does not contain any carcinogens or potential carcinogens listed by OSHA, IARC or NTP. |
| Reproductive toxicity | Not classified. |
| STOT - single exposure | Not classified. |
| STOT - repeated exposure | Not classified. |
| Chronic toxicity | Prolonged inhalation of high oxygen concentrations (>75%) may affect coordination, attention, and cause tiredness of respiratory irritation. |
| Target Organ Effects | None known. |
| Aspiration hazard | Not applicable. |

Numerical measures of toxicity

| | |
|----------------------------|--------------------------|
| Product Information | |
| Oral LD50 | No information available |
| Dermal LD50 | No information available |
| Inhalation LC50 | No information available |

12. ECOLOGICAL INFORMATION

Ecotoxicity

No known acute aquatic toxicity.

Persistence and degradability

No information available.

Bioaccumulation

Will not bioconcentrate.

Other adverse effects

Can cause frost damage to vegetation.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container PROPERLY LABELED WITH ANY VALVE OUTLET PLUGS OR CAPS SECURED AND VALVE PROTECTION CAP IN PLACE to Messer for proper disposal.

14. TRANSPORT INFORMATION**DOT**

| | |
|--|--|
| UN/ID no. | UN1073 |
| Proper shipping name | Oxygen, refrigerated liquid |
| Hazard Class | 2.2 |
| Subsidiary class | 5.1 |
| Special Provisions | T75, TP5, TP22 |
| Description | UN1073, Oxygen, refrigerated liquid, 2.2 (5.1) |
| Emergency Response Guide Number | 122 |

TDG

| | |
|-----------------------------|--|
| UN/ID no. | UN1073 |
| Proper shipping name | Oxygen, refrigerated liquid |
| Hazard Class | 2.2 |
| Subsidiary class | 5.1 |
| Description | UN1073, Oxygen, refrigerated liquid, 2.2 (5.1) |

IATA

| | |
|--------------------|----------------------------|
| Description | Forbidden by Passenger Air |
|--------------------|----------------------------|

| | |
|--|-----------|
| | Forbidden |
|--|-----------|

IMDG

| | |
|--------------------------------|--|
| UN/ID no. | UN1073 |
| Proper shipping name | Oxygen, refrigerated liquid |
| Hazard Class | 2.2 |
| Subsidiary hazard class | 5.1 |
| EmS-No. | F-C, S-W |
| Description | UN1073, Oxygen, refrigerated liquid, 2.2 (5.1) |

15. REGULATORY INFORMATION

INTERNATIONAL INVENTORIES

| | |
|----------------------|----------|
| TSCA | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Complies |

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

US FEDERAL REGULATIONS

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Risk and Process Safety Management Programs

This material, as supplied, does not contain any regulated substances with specified thresholds under 40 CFR Part 68. This product does not contain any substances regulated as Highly Hazardous Chemicals pursuant to the 29 CFR Part 1910.110.

US STATE REGULATIONS

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|---------------------|------------|---------------|--------------|
| Oxygen 7782-44-7 | X | X | X |

16. OTHER INFORMATION

NFPA **Health hazards** 3 **Flammability** 0 **Instability** 0 **Physical and Chemical Properties** OX

Note: Ratings were assigned in accordance with Compressed Gas Association (CGA) guidelines as published in CGA Pamphlet P-19-2019, CGA Recommended Hazard Ratings for Compressed Gases, 4th Edition.

Issue Date 24-Feb-2015
Revision Date 16-Mar-2021
Revision Note SDS sections updated; 1; 4; 5; 6; 7; 8

LIND-P098

General Disclaimer

For terms and conditions, including limitation of liability, please refer to the purchase agreement in effect between Messer LLC, Messer Merchant Production LLC, Messer North America, Inc., Messer Gas Puerto Rico, Inc. or Messer Canada Inc. (or any of their affiliates and subsidiaries) and the purchaser.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

End of Safety Data Sheet

OXYGEN CERTIFICATE OF CONFORMANCE

2025 - 2030

Oxygen that is produced and supplied by Messer is manufactured under strict procedures and is of such quality that would meet or exceed most regulatory requirements for food gases and industry standards including the CGA G-4.3 Grades A & B commodity specifications illustrated below.

Oxygen Minimum Purity Guarantees:

| Requirement | CGA G-4.3 Grade A (Food Appropriate) | European Union | JECFA | CGA G-4.3 Grade B, (Messer Minimum Purity) |
|--------------------|---|-------------------|-------------|--|
| Assay | > 99.0% | >99.0% | >99.0% | > 99.50% |
| Odor | N/T | N/T | None | None |
| Moisture | N/T | <67 ppm | N/T | <6.6 ppm* |
| Carbon Monoxide | <10 ppm** | N/T | <10 ppm | N/A** |
| Carbon Dioxide | <300 ppm** | <300 ppm | <300 ppm | N/A** |
| Total Hydrocarbons | N/T | <100 ppm | N/T | N/T |

* Listed impurities are not always documented on individual Certificates of Analysis.

** Test not required when produced by air liquefaction. N/T: Not tested, not included in specification

The US Food Chemicals Codex does not currently include a monograph or specification for pure oxygen however the Compressed Gas Association (CGA G-4.3-2015 Grade A) and several global governing bodies including both the European Union and the Joint FAO/WHO Expert Committee on Food Additives (JECFA) have addressed the use of Oxygen as a food gas. The limits proposed by the CGA as well as the EU and JECFA in conjunction with Messer's minimum purity specification are included above. Until such time as a Food Chemicals Codex specification is developed please be assured that our validated processes ensure quality product that is oil free and meets or exceeds the strength and identity requirements outlined by the CGA, FDA, EU and JECFA.

This Certificate of Conformance (COC) does not add to nor is it intended to replace the warranty, limitations of liability or other provisions of the agreement between the parties.

Sincerely,

Pat Kollar

ASU Quality Program Manager

Messer North America

200 Somerset Corporate Blvd, Suite 7000, Bridgewater, NJ 08807

Phone 1-800-755-9277, www.messer-us.com

For updated versions of this document or general questions email us at ask.messer@meser-us.com

Request for Taxpayer Identification Number and Certification

Give Form to the requester. Do not send to the IRS.

Go to www.irs.gov/FormW9 for instructions and the latest information.

Print or type. See Specific Instructions on page 3.

1. Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
Roy Smith Company

2. Business name/disregarded entity name, if different from above

3. Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.

Individual/sole proprietor or single-member LLC

C Corporation

S Corporation

Partnership

Trust/estate

Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

Other (see Instructions) ▶

4. Exemptions (codes apply only to certain entities, not individuals; see Instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5. Address (number, street, and apt. or suite no.) See instructions.
21348 Telegraph Rd. Ste. 100

6. City, state, and ZIP code
Southfield, MI 48033

7. List account number(s) here (optional)

Requester's name and address (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

| | | | | | | | | | |
|--|--|--|---|--|--|---|--|--|--|
| | | | - | | | - | | | |
|--|--|--|---|--|--|---|--|--|--|

or

Employer identification number

| | | | | |
|----|---|----|----|-----|
| 38 | - | 17 | 17 | 852 |
|----|---|----|----|-----|

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here

Signature of U.S. person ▶ *Winters - Controller*

Date ▶ *June 2, 2023*

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
 - Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
 - Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
 - Form 1099-S (proceeds from real estate transactions)
 - Form 1099-K (merchant card and third party network transactions)
 - Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
 - Form 1099-C (canceled debt)
 - Form 1099-A (acquisition or abandonment of secured property)
- Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.
- If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.

OXYGEN CERTIFICATE OF CONFORMANCE



2025 - 2030

To Whom It May Concern:

Liquid oxygen that is produced and supplied by Messer is manufactured under strict procedures and is of such quality that would meet or exceed most industry standards including the CGA G-4.3 Grade B Commodity Specification as illustrated below.

| Components of Interest | CGA G-4.3 QVL B/Messer Minimum Product Specification | Messer LOX3 Product Specification |
|-------------------------------|---|--|
| Oxygen | ≥ 99.50% | ≥ 99.50% |
| Parameter | Specification Limit | LOX 3 Limit |
| Odor | None | None |
| Moisture | < 6.6 PPM | < 6.6 PPM |
| Total Hydrocarbon | N/A | < 25.0 PPM |
| Identification* | Pass | Pass |

**All listed impurities are not always reported on individual Certificates of Analysis documentation.*

Note, 6.6 PPM O2 is equivalent to a dew point of -82°F.

This Certificate of Conformance (COC) does not add to nor replace the warranty, limitations of liability or other provisions of the agreement between the parties.

Sincerely,

Pat Kollar

ASU Quality Program Manager

Messer North America

200 Somerset Corporate Blvd, Suite 7000, Bridgewater, NJ 08807

Phone 1-800-755-9277, www.messer-us.com

For an updated version of this document or general questions, email us at ask.messer@meser-us.com

General Letter of Validation – NSF/ANSI/ CAN 60 CO₂ and N₂

2024-2027

Dear Customer:

We have received your request and are pleased to provide a continuing guarantee (or confirmation) that the Carbon Dioxide or Oxygen offered to you by Messer is certified to NSF/ANSI/CAN 60 standard 60, Drinking Water Treatment Chemicals.

A current listing of Messer North America's certified manufacturing and distribution locations can be found at the WQA Website: <http://www.WQA.org>.

The WQA Gold-Seal Mark is the official logo of Water Quality Associates. The logo must be present in its approved form on a copy of the product delivery documentation to customers. Correct use of the WQA Gold Seal is defined by WQA publications. The certification is non-transferrable.

Please be assured that Messer's rigorous quality assurance and control procedures ensure that the liquid products supplied to you will meet the specification requirements outlined above.

Sincerely,

Joe Angeloni

Program Manager CO₂ Product Quality

Messer North America

National Operations Center

6255 Sterner's Way Suite 101

Bethlehem PA 18017

Messer North America

200 Somerset Corporate Blvd, Suite 7000, Bridgewater, NJ 08807

Phone 1-800-755-9277, www.messer-us.com

For updated versions of this document or general questions email us at ask.messer@meser-us.com



Login

Join WQA



Water Quality Association

4/15/2026



CERTIFIED WATER TREATMENT CHEMICALS

NSF/ANSI/CAN 60: Drinking Water Treatment Chemicals - Health Effects

Messer North America, Inc.

200 Somerset Corporate Blvd, Suite 7000

Bridgewater, NJ 08807

United States

Facility: Torrance, CA

Product Type: Carbon Dioxide

Trade Designation

Maximum Use (mg/L unless otherwise indicated)

Carbon Dioxide

400

Facility: Pekin, IL

Product Type: Carbon Dioxide

| Trade Designation | Maximum Use (mg/L unless otherwise indicated) |
|-------------------|---|
| Carbon Dioxide | 400 |

Facility: Brandon, MS

Product Type: Carbon Dioxide

| Trade Designation | Maximum Use (mg/L unless otherwise indicated) |
|-------------------|---|
| Carbon Dioxide | 400 |

Facility: Woodward, OK

Product Type: Carbon Dioxide

| Trade Designation | Maximum Use (mg/L unless otherwise indicated) |
|-------------------|---|
| Carbon Dioxide | 400 |

Facility: Hopewell, VA

Product Type: Carbon Dioxide

| Trade Designation | Maximum Use (mg/L unless otherwise indicated) |
|-------------------|---|
| Carbon Dioxide | 400 |

Facility: Lima, OH

Product Type: Carbon Dioxide

| Trade Designation | Maximum Use (mg/L unless otherwise indicated) |
|--------------------------|--|
| Carbon Dioxide | 400 |

Facility: Cortez, CO

Product Type: Carbon Dioxide

| Trade Designation | Maximum Use (mg/L unless otherwise indicated) |
|--------------------------|--|
| Carbon Dioxide | 400 |

Facility: Bethlehem, PA

Product Type: Oxidation

| Trade Designation | Maximum Use (mg/L unless otherwise indicated) |
|--------------------------|--|
| Oxygen ¹ | N/A |

Facility: Claymont, DE

Product Type: Oxidation

| Trade Designation | Maximum Use (mg/L unless otherwise indicated) |
|--------------------------|--|
| Oxygen ¹ | N/A |

Facility: Vancouver, WA

Product Type: Oxidation

Trade Designation**Maximum Use (mg/L unless otherwise indicated)**Oxygen ¹

N/A

¹ This product functions as an oxidant and O2 Ozone reduction. This product is certified for use in ozone generators.

**Water Quality
Association**
(<https://wqa.org>)

About Us (<https://wqa.org/about-wqa/>)

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Lisle,IL 60532-3696 USA

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