



**Lee County
Southwest Florida
Division of Procurement Management
1825 Hendry Street 3rd Floor
Fort Myers, FL 33901**

Dear Ms. Hofschneider and the Division of Procurement Management,

On behalf of Air Liquide Industrial U.S. LP, I would like to thank you for the opportunity to present a bid to Lee County Southwest Florida for the supply of bulk liquid carbon dioxide for Project No: B-150385.

Enclosed per the Bid requirements are the following:

Completed Bid Documents, Bid Bond (original being sent via separate FedEx envelope), Air Liquide's Purchase Order Acknowledgment Form, Air Liquide's Safety Statistics from the Health Safety and Environment Group, NSF Certification, Memorandum of Insurance, Bulk Product Purity Specification Sheet, Material Safety Data Sheet, Florida Division of Corporations registration.

The local Southeast Region office address is:

**Air Liquide Industrial U.S. LP
18222 East Petroleum Drive
Baton Rouge, LA 70809
(225) 754-0654 (Phone)**

Important Air Liquide Contacts for Lee County:

Air Liquide's National Scheduling Center for Product Orders(24/7): 1-800-323-1970
Abigail Greenbaum, Southeast Region Inside Sales, (225) 754-0654
Bob Watkins, Southeast Region Sales Manager, (407) 701-9212

Should you have any questions regarding the enclosed documents or need additional information, please feel free to contact: Amy Waszczak, National Municipal Business Coordinator for Air Liquide Industrial U.S. LP, at (708) 579-7977 or amy.waszczak@airliquide.com

Thank you for your review of the enclosed documents. Air Liquide is looking forward to an opportunity to provide Lee County with a reliable and safe supply of quality liquid carbon dioxide.

Sincerely,

**Amy Waszczak
National Municipal Business Coordinator
Air Liquide Industrial U.S. LP**

LEE COUNTY, FLORIDA
PROPOSAL BID FORM
FOR
Annual Purchase of Carbon Dioxide

DATE SUBMITTED: 7/2/15

VENDOR NAME: Air Liquide Industrial US LP

TO: The Board of County Commissioners
Lee County
Fort Myers, Florida

Having carefully examined the "General Conditions", and the "Detailed Specifications", all of which are contained herein, the Undersigned proposes to furnish the following which meet these specifications:

NOTE REQUIREMENT: IT IS THE SOLE RESPONSIBILITY OF THE VENDOR TO CHECK LEE COUNTY PROCUREMENT MANAGEMENT WEB SITE FOR ANY PROJECT ADDENDA ISSUED FOR THIS PROJECT. THE COUNTY WILL POST ADDENDA TO THIS WEB PAGE, BUT WILL NOT NOTIFY.

The undersigned acknowledges receipt of Addenda numbers: N/A

CARBON DIOXIDE

Specify Product Name: Liquid Carbon Dioxide

\$ 180.50 PER TON X 1,172 TONS = \$ 211,546.00 (GRAND TOTAL)

Grand Total in written words: Two hundred eleven thousand
five hundred and forty six dollars

TO BE STARTED WITHIN 15 CALENDAR DAYS AFTER RECEIPT OF AWARD AND PURCHASE ORDER.

WILL YOU DELIVER WITH YOUR OWN VEHICLE AS OPPOSED TO COMMON CARRIER?

YES ☒ NO ☐

Does your firm have a location/office/facility in Lee County?

YES _____

NO ✓

Address:

Bidders should carefully read all the terms and conditions of the specifications. Any representation of deviation or modification to the bid may be grounds to reject the bid.

Are there any modifications to the bid or specifications? YES ✓ NO _____

Failure to clearly identify any modifications in the space below or on a separate page may be grounds for the bidder being declared nonresponsive or to have the award of the bid rescinded by the County.

MODIFICATIONS:

Air Liquide's Standard Purchase Order Acknowledgement Agreement is made a part of Air Liquide's bid for the supply of carbon dioxide. (Enclosed)

Bidder shall submit his/her bid on the County's Proposal Quote Form, including the firm name and authorized signature. Any blank spaces on the Proposal Quote Form, qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County's Form may result in the Bidder/Bid being declared non-responsive by the County.

ANTI-COLLUSION STATEMENT

THE BELOW SIGNED BIDDER HAS NOT DIVULGED TO, DISCUSSED OR COMPARED HIS BID WITH OTHER BIDDERS AND HAS NOT COLLUDED WITH ANY OTHER BIDDER OR PARTIES TO A BID WHATSOEVER. NOTE: NO PREMIUMS, REBATES OR GRATUITIES TO ANY EMPLOYEE OR AGENT ARE PERMITTED EITHER WITH, PRIOR TO, OR AFTER ANY DELIVERY OF MATERIALS. ANY SUCH VIOLATION WILL RESULT IN THE CANCELLATION AND/OR RETURN OF MATERIAL (AS APPLICABLE).

FIRM NAME Air Liquide Industrial US LPBY (Printed): Amy WaszczakBY (Signature): TITLE: National Account ManagerFEDERAL ID # OR S.S.# 75-3174747ADDRESS: 18222 East Petroleum DriveBaton Rouge, LA 70809PHONE NO.: 225-754-0654 / 708-579-7977FAX NO.: 225-754-0670CELLULAR PHONE/PAGER NO.: 1-800-323-1970 (24/7) National Scheduling CenterDUNS #: 180015336

LEE COUNTY LOCAL BUSINESS TAX ACCOUNT NUMBER: _____

E-MAIL ADDRESS: amy.waszczak@airliquide.comDISADVANTAGED BUSINESS ENTERPRISE (DBE): _____ Yes ☒ No

ATTACHMENT A
LOCAL VENDOR PREFERENCE QUESTIONNAIRE
(LEE COUNTY ORDINANCE NO. 08-26)

Instructions: Please complete either Part A or B whichever is applicable to your firm

PART A: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS LOCATED WITHIN LEE/COLLIER COUNTY (Only complete Part A if your principal place of business is located within the boundaries of Lee/Collier County)

1. What is the physical location of your principal place of business that is located within the boundaries of Lee/Collier County, Florida?

N/A

2. What is the size of this facility (i.e. sales area size, warehouse, storage yard, etc.)

N/A

PART B: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS NOT LOCATED WITHIN LEE/COLLIER COUNTY OR DOES NOT HAVE A PHYSICAL LOCATION WITHIN LEE/COLLIER COUNTY (Please complete this section.)

1. How many employees are available to service this contract? Air Liquide has a dedicated logistics team to schedule and coordinate deliveries as well as a team of drivers from our Fort Meade depot to support
2. Describe the types, amount and location of equipment you have available to service this contract. Fort Myers CO2 needs.

Liquid Carbon Dioxide would be delivered from our Fort Meade, FL depot which has a 650 Ton storage capacity.

LOCAL VENDOR PREFERENCE QUESTIONNAIRE CONTINUED

3. Describe the types, amount and location of material stock that you have available to service this contract.

Fort Meade FL Depot has a storage
capacity of 650 tons of carbon dioxide .

4. Have you provided goods or services to Lee County on a regular basis for the preceding, consecutive three years?

Yes _____

No ✓

If yes, please provide your contractual history with Lee County for the past three, consecutive years. Attach additional pages if necessary.

AFFIDAVIT CERTIFICATION
IMMIGRATION LAWS

SOLICITATION NO.: B-150385 PROJECT NAME: Annual Purchase of Carbon Dioxide

LEE COUNTY WILL NOT INTENTIONALLY AWARD COUNTY CONTRACTS TO ANY CONTRACTOR WHO KNOWINGLY EMPLOYS UNAUTHORIZED ALIEN WORKERS, CONSTITUTING A VIOLATION OF THE EMPLOYMENT PROVISIONS CONTAINED IN 8 U.S.C. SECTION 1324 a(e) {SECTION 274A(e) OF THE IMMIGRATION AND NATIONALITY ACT ("INA").

LEE COUNTY MAY CONSIDER THE EMPLOYMENT BY ANY CONTRACTOR OF UNAUTHORIZED ALIENS A VIOLATION OF SECTION 274A(e) OF THE INA. **SUCH VIOLATION BY THE RECIPIENT OF THE EMPLOYMENT PROVISIONS CONTAINED IN SECTION 274A(e) OF THE INA SHALL BE GROUNDS FOR UNILATERAL CANCELLATION OF THE CONTRACT BY LEE COUNTY.**

BIDDER ATTESTS THAT THEY ARE FULLY COMPLIANT WITH ALL APPLICABLE IMMIGRATION LAWS (SPECIFICALLY TO THE 1986 IMMIGRATION ACT AND SUBSEQUENT AMENDMENTS).

Signature: [Signature] Company Name: Air Liquide Industrial US LP
Title: National Account Mgr. Date: 7/2/15

STATE OF IL
COUNTY OF DuPage

The foregoing instrument was signed and acknowledged before me this 6th day of July, 20 15, by Amy Waszczak who has produced
(Print or Type Name)
Driver's License as identification.
(Type of Identification and Number)

[Signature]
Notary Public Signature
Janice M. Sabatini
Printed Name of Notary Public



10/4/17
Notary Commission Number/Expiration

The signee of this Affidavit guarantee, as evidenced by the sworn affidavit required herein, the truth and accuracy of this affidavit to interrogatories hereinafter made. **LEE COUNTY RESERVES THE RIGHT TO REQUEST SUPPORTING DOCUMENTATION, AS EVIDENCE OF SERVICES PROVIDED, AT ANY TIME.**



AIA Document A310™ – 2010

Bid Bond

CONTRACTOR:

(Name, legal status and address)

AIR LIQUIDE INDUSTRIAL U.S. LP
2700 Post Oak Blvd., Suite 1800
Houston, TX 77056

SURETY:

(Name, legal status and principal place of business)

LIBERTY MUTUAL INSURANCE COMPANY
175 Berkeley Street
Boston, MA 02116

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

OWNER:

(Name, legal status and address)

LEE COUNTY BOARD OF COUNTY COMMISSIONERS
1825 Hendry Street, 3rd Floor, Ft. Myers, FL 33901

BOND AMOUNT: Ten Thousand and 00/100 Ten Thousand and no/100 ****
(\$ 10,000.00)

PROJECT:

(Name, location or address, and Project number, if any)

Liquid Carbon Dioxide, 1172 Tons per Year

Project Number, if any:

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 29th day of May, 2015

(Witness)

(Witness)

Lupe Tyler

AIR LIQUIDE INDUSTRIAL U.S. LP

(Principal)

(Seal)

(Title)

LIBERTY MUTUAL INSURANCE COMPANY

(Surety)

(Seal)

(Title)

Nancy Thomas, Attorney in Fact

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 6649287

American Fire and Casualty Company
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Anoop Chawla Adlakha; Donna L. Williams; Jennifer Copeland; Lisa A. Ward; Lupe Tyler; Margaret Buboltz; Michael J. Herrod; Nancy Thomas; Stephenie Whittington; Vanessa Dominguez; Wendy W. Stuckey

all of the city of Houston state of TX each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 21st day of July, 2014.



American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: David M. Carey
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 21st day of July, 2014, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.



COMMONWEALTH OF PENNSYLVANIA
Notary Public
Teresa Pastella, Notary Public
Plymouth Meeting, Montgomery County, PA
My Commission Expires: 06-25-2017
My Notary Public License Number: 00000000000000000000000000000000

By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

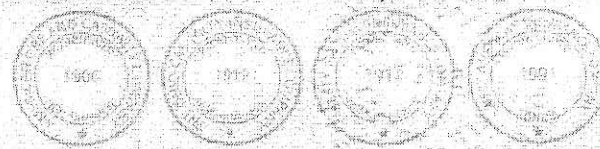
ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Gregory W. Davenport, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 29th day of May, 2015



By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.



**PURCHASE ORDER ACKNOWLEDGMENT
AGREEMENT
(for Gases)**

This Purchase Order Acknowledgment Agreement ("Agreement") dated June 5, 2015 between Supplier and Customer relates to Customer's proposed purchase agreement ("PO") under which Supplier would provide certain product and/or equipment, work and services for Customer. A copy of the PO is attached as Exhibit A. Supplier accepts the PO on the condition that Customer agrees by signing below to modify the PO as follows:

- a) The terms stated in Section A below ARE MADE part of the PO;
- b) Terms referred to in Section B below ARE REMOVED FROM the PO;
- c) Any other PO terms (whether or not mentioned here) that conflict with Section A terms ARE ALSO REMOVED.

SECTION A. The following are made part of the PO:

A.1. Warning Concerning Hazardous Nature of Products and Training Obligations. Customer acknowledges: a) that the Products are hazardous and must be handled accordingly; b) the Products are classified by the U. S. Occupational Safety and Health Administration ("OSHA") as hazardous chemicals, and that there are hazards associated with the possession and use of the Products, and that Customer must take proper account of those hazards and deal with them appropriately; c) it will warn all persons who may be exposed to any hazards relating to any of the Products and equipment and shall train them in the proper use of the Products and equipment; d) that Supplier has supplied Customer with all relevant Material Safety Data Sheets ("MSDSs") relating to the Products, and that more MSDSs are available from Supplier on request; e) that OSHA regulations require Customer to develop and implement a written chemical hazard communications program for its employees regarding all hazardous chemical Products; f) the Products must not be used without consulting the MSDSs, and Customer will ensure that all employees, customers and others who may be exposed to the Products receive and refer to the MSDSs; and g) Customer assumes all risk and liability arising out of the presence, production, storage, delivery or use of the Products after delivery thereof to Customer pursuant to this Agreement.

A.2. Product Storage/Use And Cylinders. Supplier will, at its expense, maintain any cylinders, vessels or other equipment that it provides to Customer, and Customer will keep the equipment and cylinders lien-free, pay for any damage and loss at full replacement value unless caused by Supplier's sole negligence, and otherwise abide by Supplier's standard terms and conditions relating to the cylinders and equipment. Customer will not fill or have others fill Supplier's equipment or cylinders.

A.3. Warranties. Supplier warrants that gas Products manufactured by Supplier, except for carbon dioxide Products, will comply with Compressed Gas Association (CGA) guidelines. Supplier warrants that carbon dioxide Products manufactured by Supplier will comply with Supplier's standard specification for the grade of liquid carbon dioxide Product selected in Section A.8. Any other Products manufactured by Supplier will conform to Supplier's standard specifications. Supplier makes no warranty with respect to Products manufactured by others, but will, on request, to the extent permitted, pass on to Customer any applicable manufacturer's warranty. SUPPLIER MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

A.4. Damage Limitations. SUPPLIER SHALL NOT BE LIABLE TO CUSTOMER FOR INCIDENTAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES. SUPPLIER'S SOLE LIABILITY AND CUSTOMER'S SOLE REMEDY FOR ANY DAMAGES, INCLUDING BUT NOT LIMITED TO DAMAGES RESULTING FROM PRODUCTS MANUFACTURED BY SUPPLIER OR SUPPLIER'S FAILURE TO DELIVER SUCH PRODUCTS, INSTALLATION OR MAINTENANCE OF EQUIPMENT OR EQUIPMENT MANUFACTURED BY SUPPLIER, OR SERVICES PROVIDED BY SUPPLIER SHALL BE LIMITED TO, AT SUPPLIER'S OPTION, THE REFUND OF THE PURCHASE PRICE OR REPLACEMENT OF THE PRODUCT OR SERVICE IN QUESTION. CUSTOMER MUST NOTIFY SUPPLIER OF ANY CLAIM WITHIN FIFTEEN DAYS OF THE EVENT GIVING RISE TO SUCH CLAIM OR SUCH CLAIM IS WAIVED. THE LIMITATIONS CONTAINED IN THIS SECTION SHALL APPLY REGARDLESS OF WHETHER THE CLAIM FOR DAMAGES IS BASED ON BREACH OF CONTRACT, BREACH OF WARRANTY, TORT OR OTHERWISE, AND SHALL APPLY EVEN WHERE SUCH DAMAGES ARE CAUSED IN WHOLE OR IN PART, BY THE NEGLIGENCE, GROSS NEGLIGENCE OR ACTS AND OMISSIONS OF THE PARTY CLAIMING DAMAGES OR THE PARTY FROM WHOM DAMAGES ARE SOUGHT. AS USED IN THIS SECTION, THE TERM "CUSTOMER" AND "SUPPLIER" SHALL INCLUDE NOT ONLY THE PARTY TO THIS AGREEMENT BUT ALSO ALL OF ITS AFFILIATES. THE PROVISIONS GOVERNING DAMAGE LIMITATIONS AND INDEMNITY SET FORTH IN THIS AGREEMENT SHALL SURVIVE EXPIRATION, TERMINATION, OR CANCELLATION OF THIS AGREEMENT.

A.5. Indemnity And Insurance. If there is any injury (including death), loss or damage to the person or property of any third party (including employees of either party), then, subject to any limitations set forth in this Agreement, each party agrees to indemnify the other party to the extent of the indemnifying party's negligence. Supplier has no obligation to insure Customer or its employees (or other Customer-related parties) or to provide a waiver of subrogation under Supplier's insurance.

A.6. Additional Standard Terms And Conditions. Supplier: a) will not be obligated to deliver Product in excess of one hundred and twenty percent of the lesser of Customer's average monthly purchases of each Product during the prior three months or the estimated volumes (if any) set forth in A.9., b) may reduce and apportion deliveries if there is insufficient Product from the normal supply source for any reason, and may charge extra for Product from non-normal sources, c) will not be liable for failure to perform for reasons beyond its reasonable control, d) may increase prices (including facility fees) on thirty days written notice except if and as limited or otherwise provided by Section A.9. below, and e) may collect Supplier's scheduled applicable non-price charges, including Hazardous Materials ("Hazmat") Charge for the handling of hazardous materials and for compliance with laws and regulations concerning hazardous materials, Medical Charge for the handling of medical Products and for compliance with laws and regulations concerning medical Products, delivery charge, and other special non-price charges (including temporary emergency, plant outage, fuel and energy surcharges) that Supplier may assess. These non-price charges may be amended and others may be added at Supplier's discretion. The total amount due from the customer may include various itemized charges, including: charges for the handling of hazardous materials and for compliance with laws and regulations concerning hazardous materials; charges for handling, delivery, and shipping; and/or charges for energy or fuel. None of the charges represent a tax or fee paid to or imposed by any governmental authority, and all of the charges are retained by the Supplier.

Customer will: a) provide a site, site access, and site utilities, services, and permits, and receive site equipment, on Supplier's standard terms; b) pay Supplier's standard cylinder rates except if and as limited in Section A.9. and; c) buy its total requirements of the covered Products from Supplier, d) pay all charges, including all applicable taxes, within thirty days of invoice date, and pay one and one-half percent per month (or, if less, the maximum permitted by law) on any delinquent balance, e) give reasonable advance notice of orders and allow deliveries twenty-four hours, seven days a week; and f) Customer may not terminate this Agreement for convenience.

A.7. Miscellaneous. a) Customer represents that Customer is contractually free to enter into this Agreement and to perform hereunder and shall indemnify and defend Supplier against all damages Supplier may suffer if Customer's representation is not correct. b) The laws of the state of Customer's Mailing Address shall govern this Agreement. The invalidity or unenforceability of any provision of this Agreement under the laws of any state in which this Agreement is in effect shall not affect the validity or enforceability of any other provision of this Agreement. c) Customer may not assign this Agreement, or resell Products, without Seller written consent. d) This Agreement including the PO (as modified hereby) constitutes the parties' entire agreement. e) This Agreement may be cancelled by Supplier's corporate headquarters within thirty days after signing by both parties. f) The term of the PO, and applicable Products and equipment prices, are as indicated on the face of the PO unless otherwise indicated in A.9. g) This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof. No provision of any Customer purchase order or other Customer document shall alter or add to this Agreement. Any modifications of this Agreement must be in writing, signed by both parties and dated. The parties expressly agree that terms and conditions of this Agreement may not be modified, supplemented, or amended by electronic means. h) While general information regarding this Agreement and the transactions contemplated herein may be exchanged by the parties electronically, the parties expressly agree not to conduct the transactions contemplated by this Agreement by electronic means except for notices as set forth herein. All notices shall be in writing. All notices, other than termination or cancellation notices, may be sent by prepaid mail, facsimile or e-mail. If notices are sent by mail, the notices shall be sent to the Mailing Address for the party set forth on page one or any substitute Mailing Address the party may provide to the other by notice hereunder. Notice shall be considered to be given on the date it is sent by prepaid mail or, if otherwise delivered, on the date of delivery. Notice of termination or cancellation must be sent certified mail, return receipt requested, to the Mailing Address of the receiving party; and i) The titles, captions and heading used in this Agreement and the PO are for convenience and shall not be used for construction or interpretation.

A.8. Liquid Carbon Dioxide and Dry Ice Provisions. a) If this Agreement pertains to liquid carbon dioxide Products, Supplier will provide the product grade checked below, as per Supplier's standard specifications. If none or more than one are checked, the Basic specification will apply:

<input type="checkbox"/> Basic	<input type="checkbox"/> Industrial	<input type="checkbox"/> Food	<input type="checkbox"/> Specialty	<input checked="" type="checkbox"/> Beverage	<input type="checkbox"/> USP
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b) If this Agreement pertains to Dry Ice Products the following shall also apply: i) All Products shall be delivered F.O.B. Supplier's supply source (or, if requested by Customer and acceptable to Supplier, by delivery vehicle to the Facility). Title and risk of loss shall pass to Customer upon delivery. ii) Customer shall monitor Product levels and give Supplier reasonable, advance notice when ordering Product. Customer may, at the option of Supplier, be subject to a minimum delivery and/or a Transport Container ("Box") cleaning charge. Customer shall allow Supplier to make deliveries by vehicle twenty four hours a day, seven days a week. Customer pick-ups, as applicable, may be made during Supplier's normal weekday business hours at times designated by Supplier. Customer shall promptly return to Supplier all Supplier provided dry ice Boxes. Supplier shall have the right to charge Customer a daily charge per Box. Customer shall compensate Supplier for all loss or damage to Boxes.

A.9. Other. (Add any other applicable item - type in below or attach)

Supply of bulk Liquid Carbon Dioxide to Lee County Southwest Florida. Project No: B-150289.

Estimated Annual Volume Requirement is 1,172 Tons. Product Price for Carbon Dioxide is \$180.50 per ton.

Deliveries are to be made to:

Corkscrew Water Plant 16101 Alico Road Fort Myers, FL 33913

North RO Water 18250 Durrance Road N. Fort Myers, FL 33917

SECTION B. The following terms of the Customer's PO, along with any other terms of the Customer's PO that conflict with Section A above, are hereby REMOVED from the PO (type in below or attach):

(AN AUTHORIZED SIGNATURE IS REQUIRED FROM BOTH SUPPLIER AND CUSTOMER)

Lee County Southwest Florida

Customer

AIR LIQUIDE INDUSTRIAL U.S. LP

Supplier

By: _____

By: _____

Name/Title: _____

Name/Title: _____

Date: _____

Date: _____

Amy Waszczak, National Municipal Business Coordinator

Submitted for Supplier by

Mar Safety Performance

Mar 2015 Year-To-Date sales for U.S. industrial entities are as follows:

Entity Name	MTCR	AIR	NCTR	DO	FBI/DOJ	NYT	NYD	NYE	NYF	NYG	NYH	NYI
Air Liquide America LP	0	0	0	0	7	0	1	1	46,807	0.00	5.00	0.00
Air Liquide Industrie USLP	0	0	0	0	7	0	1	15	749,407	1.50	5.50	0.00
Air Liquide Advanced Technologies USLLC	0	0	0	0	0	0	0	0	84,311	0.00	5.00	0.00
Air Liquide America Specialty Gases LLC	0	1	0	0	0	0	0	0	320,716	1.20	5.00	0.00
Subtotal	0	1	0	0	0	0	0	18	1,115,539	1.70	5.00	0.00
Air Liquide Electronics US LP	0	1	0	0	0	0	0	0	389,733	0.00	5.45	0.00
Air Liquide Large Industries USLP	0	0	0	0	0	0	0	0	380,774	0.00	0.20	0.00
Air Liquide USA LLC	0	0	0	0	0	0	0	0	314,000	0.00	0.00	0.00
Total US Entities	0	2	0	0	10	11	1	24	2,264,017	1.00	6.70	0.00
Air Liquide Process & Construction	0	0	0	0	0	0	0	0	94,818	0.00	0.00	0.00
Air Liquide Healthcare America Corp.	0	0	0	0	0	0	0	0	96,771	0.00	0.00	0.00
Air Liquide Volant LLC	0	0	0	0	2	0	0	0	125,864	0.00	0.00	0.00
Delaware Research & Technology Center	0	0	0	0	0	0	0	0	45,740	0.00	0.00	0.00
Total Mar 2015 Year-to-Date MTRs (All Entities)	0	2	0	0	12	12	1	28	2,826,250	0.00	9.00	0.00



The Public Health and Safety Organization

NSF Product and Service Listings

These NSF Official Listings are current as of **Thursday, July 02, 2015** at 12:15 a.m. Eastern Time. Please contact NSF International to confirm the status of any Listing, report errors, or make suggestions.

Alert: NSF is concerned about fraudulent downloading and manipulation of website text. Always confirm this information by clicking on the below link for the most accurate information:

<http://info.nsf.org/Certified/PwsChemicals/Listings.asp?CompanyName=Air+Liquide&>

NSF/ANSI 60 Drinking Water Treatment Chemicals - Health Effects

Air Liquide Canada Inc.

1250 Rene-Levesque Boulevard West #1700

Montreal, QC H3B 5E6

Canada

514-933-0303

Visit this company's website

(<http://www.ca.airliquide.com>)

Facility: # 1 Varennes, Quebec, Canada

Oxygen[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Oxygen - Certified for Water Treatment	Ozone Reduction Oxidant	TO
Oxygen - Certified for water treatment	Ozone Reduction Oxidant	TO

[1] Certified for use in ozone generators.

Facility : # 2 Fort Saskatchewan, Alberta, Canada

Carbon Dioxide

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Carbon Dioxide - Certified for Water Treatment	pH Adjustment	200mg/L
Carbon Dioxide - Certified for water treatment	pH Adjustment	200mg/L

Facility: # 2 Varennes, Quebec, Canada

Carbon Dioxide

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Carbon Dioxide - Certified for Water Treatment	pH Adjustment	200mg/L
Carbon Dioxide - Certified for water treatment	pH Adjustment	200mg/L

Facility : Courtright, Ontario, Canada

Carbon Dioxide

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Carbon Dioxide - Certified for Water Treatment	pH Adjustment	200mg/L
Carbon Dioxide - Certified for water treatment	pH Adjustment	200mg/L

Facility : Distribution at - Langley, British Columbia

Carbon Dioxide**Trade Designation****Product Function****Max Use**

Carbon Dioxide

pH Adjustment

200mg/L

Facility : Fort Saskatchewan, Alberta, Canada**Oxygen[1]****Trade Designation****Product Function****Max Use**

Oxygen - Certified for Water Treatment

Ozone Reduction
Oxidant

TO

Oxygen - Certified for water treatment

Ozone Reduction
Oxidant

TO

[1] Certified for use in ozone generators.

Facility : Hamilton, Ontario, Canada**Oxygen[1]****Trade Designation****Product Function****Max Use**

Oxygen - Certified for Water Treatment

Ozone Reduction
Oxidant

TO

Oxygen - Certified for water treatment

Ozone Reduction
Oxidant

TO

[1] Certified for use in ozone generators.

Facility : Medicine Hat, Alberta, Canada**Carbon Dioxide****Trade Designation****Product Function****Max Use**

Carbon Dioxide - Certified for Water

pH Adjustment

200mg/L

Treatment

Carbon Dioxide - Certified for water treatment	pH Adjustment	200mg/L
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Facility : Moncton, New Brunswick, Canada**Carbon Dioxide**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Carbon Dioxide - Certified for Water Treatment	pH Adjustment	200mg/L
Carbon Dioxide - Certified for water treatment	pH Adjustment	200mg/L

Facility : Sherwood Park, Alberta, Canada**Oxygen[1]**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Oxygen - Certified for Water Treatment	Ozone Reduction Oxidant	TO
Oxygen - Certified for water treatment	Ozone Reduction Oxidant	TO

[1] Certified for use in ozone generators.

Air Liquide Industrial US L.P.

2700 Post Oak Boulevard

Suite 1800

P.O. Box 460229

Houston, TX 77056-8229

United States

800-820-2522

713-402-2164

Visit this company's website

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

Facility : Etiwanda, CA

Oxygen[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Oxygen (Liquid)	Oxidant	TO

[1] This product is Certified for use in ozone generators.

Facility : Wilmington, CA

Carbon Dioxide

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Carbon Dioxide (CO2)	pH Adjustment	100mg/L

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

Facility : Delaware City, DE

Carbon Dioxide

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Bulk Liquid Carbon Dioxide	pH Adjustment	100mg/L

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

Facility : Distribution Center - Fort Meade, FL

Carbon Dioxide

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Carbon Dioxide	pH Adjustment	100mg/L

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

Facility : Merritts Island, FL**Oxygen[1]**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Oxygen (Liquid)	Oxidant	TO

[1] Certified for use in ozone generators.

Facility : Orlando, FL**Oxygen[1]**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Oxygen (Liquid)	Oxidant	TO

[1] This product is Certified for use in ozone generators.

Facility : Roxana, IL**Carbon Dioxide**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Carbon Dioxide	pH Adjustment	100 mg/L

NOTE: Only products bearing the NSF Mark on the product, product packaging, and/or

documentation shipped with the product are Certified.

Facility : Washington, IN

Carbon Dioxide

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
CO ₂	pH Adjustment	100mg/L
Carbon Dioxide	pH Adjustment	100mg/L

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

Facility : Madison, MS

Carbon Dioxide

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Carbon Dioxide	pH Adjustment	100 mg/L

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

Facility : Wake Forest, NC

Oxygen[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Oxygen	Oxidant	TO

[1] This product is Certified for use in ozone generators.

Facility : Holland, OH

Oxygen[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Oxygen (Liquid)	Oxidant	TO

[1] This product is Certified for use in ozone generators.

Facility : Oklahoma City, OK**Oxygen[1]**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Oxygen (Liquid)	Oxidant	TO

[1] This product is Certified for use in ozone generators.

Facility : Coatesville, PA**Oxygen[1]**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Oxygen (Liquid)	Oxidant	TO

[1] This product is Certified for use in ozone generators.

Facility : Reading, PA**Oxygen[1]**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Oxygen (Liquid)	Oxidant	TO

[1] Certified for use in ozone generators.

Facility : Borger, TX

Carbon Dioxide

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Carbon Dioxide	pH Adjustment	100 mg/L

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

Facility : Cleburne, TX

Oxygen[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Oxygen (Liquid)	Oxidant	TO

[1] This product is Certified for use in ozone generators.

Facility : West Point, VA

Oxygen

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Oxygen (Liquid)	Oxidant	TO

[1] This product is Certified for use in ozone generators.

Facility : Donaldsonville, LA - CF Plant

Carbon Dioxide**Trade Designation**

Carbon Dioxide

Product Function

pH Adjustment

Max Use

100 mg/L

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

Air Liquide Industrial US L.P.

2700 Post Oak Boulevard

Suite 1800

P.O. Box 460229

Houston, TX 77056-8229

United States

713-402-2164

Facility : Santa Fe Springs, CA**Oxygen[1]****Trade Designation**

Cryogenic Liquid Oxygen

Product Function

Oxidant

Max Use

TO

Ozone Reduction

LOX

Oxidant

TO

Ozone Reduction

O2

Oxidant

TO

Ozone Reduction

Oxygen

Oxidant

TO

Ozone Reduction

Oxygen Industrial

Oxidant

TO

Ozone Reduction

Oxygen USP

Oxidant

TO

Ozone Reduction

[1] Certified for use in ozone generators.

Memorandum of Insurance

MEMORANDUM OF INSURANCE					DATE	
					30-Jun-2015	
<p>This Memorandum is issued as a matter of information only to authorized viewers for their internal use only and confers no rights upon any viewer of this Memorandum. This Memorandum does not amend, extend or alter the coverage described below. This Memorandum may only be copied, printed and distributed within an authorized viewer and may only be used and viewed by an authorized viewer for its internal use. Any other use, duplication or distribution of this Memorandum without the consent of Marsh is prohibited. "Authorized viewer" shall mean an entity or person which is authorized by the insured named herein to access this Memorandum via https://online.marsh.com/marshconnectpublic/marsh2/public/moi?client=900000957. The information contained herein is as of the date referred to above. Marsh shall be under no obligation to update such information.</p>						
PRODUCER			COMPANIES AFFORDING COVERAGE			
Marsh USA Inc. ("Marsh")			Co. A Zurich American Insurance Company			
INSURED			Co. B American Zurich Insurance Company			
American Air Liquide Inc., Air Liquide USA LLC 2700 Post Oak Blvd. Suite 325, Houston Texas 77056 United States			Co. C			
			Co. D			
COVERAGES						
<p>THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS MEMORANDUM MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS</p>						
CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE	POLICY EXPIRATION DATE	LIMITS LIMITS IN USD UNLESS OTHERWISE INDICATED	
A	GENERAL LIABILITY Commercial General Liability Occurrence	GLO 9486556-04	01-JUN-2015	01-JUN-2016	GENERAL AGGREGATE	USD2,000,000
					PRODUCTS - COMP/OP AGG	USD2,000,000
					PERSONAL AND ADV INJURY	USD2,000,000
					EACH OCCURRENCE	USD2,000,000
					FIRE DAMAGE (ANY ONE FIRE)	USD2,000,000
					MED EXP (ANY ONE PERSON)	USD1,000
A	AUTOMOBILE LIABILITY Any Auto All Owned Autos Scheduled Autos Hired Autos Non-Owned Autos	BAP 9486555-04	01-JUN-2015	01-JUN-2016	COMBINED SINGLE LIMIT	USD2,000,000
					BODILY INJURY (PER PERSON)	
					BODILY INJURY (PER ACCIDENT)	
					PROPERTY DAMAGE	
	EXCESS LIABILITY				EACH OCCURENCE	
					AGGREGATE	

	GARAGE LIABILITY				AUTO ONLY (PER ACCIDENT)	
					OTHER THAN AUTO ONLY:	
					EACH ACCIDENT	
					AGGREGATE	
B	WORKERS	WC 9486557-	01-JUN-2015	01-JUN-2016		
B	COMPENSATION/ EMPLOYERS LIABILITY	04 (AOS) WC 9486559- 04 (WI)	01-JUN-2015	01-JUN-2016	WORKERS COMP LIMITS	Statutory
	THE PROPRIETOR / PARTNERS / EXECUTIVE OFFICERS ARE Included				EL EACH ACCIDENT	USD2,000,000
					EL DISEASE - POLICY LIMIT	USD2,000,000
					EL DISEASE - EACH EMPLOYEE	USD2,000,000

The Memorandum of Insurance serves solely to list insurance policies, limits and dates of coverage. Any modifications here to are not authorized.

MEMORANDUM OF INSURANCE		DATE 30-Jun-2015
<p>This Memorandum is issued as a matter of information only to authorized viewers for their internal use only and confers no rights upon any viewer of this Memorandum. This Memorandum does not amend, extend or alter the coverage described below. This Memorandum may only be copied, printed and distributed within an authorized viewer and may only be used and viewed by an authorized viewer for its internal use. Any other use, duplication or distribution of this Memorandum without the consent of Marsh is prohibited. "Authorized viewer" shall mean an entity or person which is authorized by the insured named herein to access this Memorandum via https://online.marsh.com/marshconnectpublic/marsh2/public/moi?client=900000957. The information contained herein is as of the date referred to above. Marsh shall be under no obligation to update such information.</p>		
PRODUCER Marsh USA Inc. ("Marsh")	INSURED American Air Liquide Inc., Air Liquide USA LLC 2700 Post Oak Blvd. Suite 325, Houston Texas 77056 United States	
ADDITIONAL INFORMATION Named Insureds on the above referenced policies include but are not limited to the following companies. American Air Liquide Inc. American Air Liquide Holdings, Inc. Air Liquide Helium America, Inc. Air Liquide America L.P. AL America Holdings, Inc. Air Liquide USA LLC Air Liquide Industrial U.S. LP		

Air Liquide Large Industries U.S. LP
Air Liquide Advanced Technologies U.S. LLC
Air Liquide Electronics U.S. LP
Air Liquide Healthcare America Corporation
Air Liquide Global E & C Solutions US Inc.
Air Liquide Technical Services LLC
Lurgi, Inc.
Air Liquide America Specialty Gases LLC
Air Liquide Global E & C Solutions Mexico LLC
Air Liquide Holdings LLC
Air Liquide LLC
Progressive Resources, Inc.
WellGen Services, LLC
Plains Nitrogen, LLC
Air Liquide Advanced Materials Inc.
Air Liquide Advanced Materials LLC

The Memorandum of Insurance serves solely to list insurance policies, limits and dates of coverage. Any modifications hereto are not authorized.



PURITY SPECIFICATIONS - BULK SALES

Beverage Grade Carbon Dioxide

2B-INDSAL-QUA-0035-S, Revision 0, Effective Date: 11/12/2012

Product grade limiting characteristics listed concentration by volume unless otherwise stated.

All test verification samples obtained from the liquid phase unless otherwise stated.

Chemical Symbol	CO ₂
Physical State in Container	Liquid
Minimum Purity	99.9 %
Maximum Dew Point	- 68 °F
Water	20 ppm
Total Hydrocarbons (as Methane)	50 ppm maximum (including 20 ppm maximum of non-methane hydrocarbons)
Oxygen	30 ppm
Carbon Monoxide	10 ppm
Total Sulfur Content	0.1 ppm
Sulfur Dioxide	1 ppm
Methanol	10 ppm
Nitric Oxide	2.5 ppm
Nitrogen Dioxide	2.5 ppm
Ammonia	2.5 ppm
Acetaldehyde	0.2 ppm
Benzene	0.02 ppm
Nonvolatile Residues	10 ppm (by weight)
Nonvolatile Organic Residues (oil / grease)	5 ppm (by weight)
Odor / Taste	Free of foreign odor or taste (in water solution)
Meets or Exceeds CGA G-6.2_2011	Quality Verification Levels G, H, I

American Air Liquide Holdings, Inc. and its US subsidiaries, as applicable ("Air Liquide") disclaim all liability in connection with the use of any Product. The Customer's sole remedy if the Product does not conform to these specifications is to return the Product for refund or replacement. WITHOUT LIMITING THE FOREGOING, AIR LIQUIDE SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE.



AIR LIQUIDE

MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

1. PRODUCT AND COMPANY INFORMATION

CHEMICAL NAME; CLASS: CARBON DIOXIDE

SYNONYMS: Carbon Anhydride; Carbonic Acid Gas; Carbonic Anhydride; Carbon Dioxide USP; Carbon Dioxide, Refrigerated Liquid; Dry Ice

CHEMICAL FAMILY NAME: Acid Anhydride

FORMULA: CO₂

PRODUCT USE:

Document Number: 10040

For carbonation, chilling and freezing, medical, inerting, pH control, fire protection, and general analytical/synthetic chemical uses.

**MANUFACTURED/SUPPLIED FOR:
ADDRESS:**



AIR LIQUIDE

2700 Post Oak Drive
Houston, TX 77056-8229

EMERGENCY PHONE:

CHEMTREC: 1-800-424-9300

BUSINESS PHONE:

General MSDS Information 1-713/896-2896
Fax on Demand: 1-800/231-1366

2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: Carbon Dioxide is a colorless, odorless gas, or a colorless, odorless liquid in a high-pressure container. Over-exposure to Carbon Dioxide can increase respiration and heart rate, possibly resulting in circulatory insufficiency, which may lead to coma and death. At concentrations between 2 and 10%, Carbon Dioxide can cause nausea, dizziness, headache, mental confusion, increased blood pressure and respiratory rate. Exposure to Carbon Dioxide can also cause asphyxiation, through displacement of oxygen. If the gas concentration reaches 10% or more, suffocation can occur within minutes. The liquid will rapidly boil to the gas at standard temperatures and pressures. Contact with the cold gas can cause freezing of exposed tissue. Moisture in the air could lead to the formation of carbonic acid which can be irritating to the eyes. All forms of Carbon Dioxide are non-combustible.

SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of over-exposure for this gas are by inhalation, and skin or eye contact. Symptoms of such exposure are as follows:

INHALATION: Carbon Dioxide is an asphyxiant and a powerful cerebral vasodilator. If the concentration of Carbon Dioxide reaches 10% or more, suffocation can occur within minutes. At concentrations between 2 and 10%, Carbon Dioxide can cause nausea, dizziness, headache, mental confusion, increased blood pressure and respiratory rate. Carbon Dioxide initially stimulates respiration and then causes respiratory depression. High concentrations result in narcosis. Repeated inhalation of low concentrations (3-5%) have no known permanent harmful effects. Symptoms in humans are as follows:

<u>CONCENTRATION</u>	<u>EFFECT</u>
1%	Slight increase in breathing rate.
2%	Breathing rate increases to 50% above normal level. Prolonged exposure can cause headache, tiredness.
3%	Breathing increases to twice normal rate and becomes labored. Weak narcotic effect. Impaired hearing, headache, increase in blood pressure and pulse rate.
4-5%	Breathing increases to approximately four times normal rate, symptoms of intoxication become evident and slight choking may be felt.
5-10%	Characteristic sharp odor noticeable. Very labored breathing, headache, visual impairment and ringing in the ears. Judgment may be impaired, followed within minutes by loss of consciousness.
50-100%	Unconsciousness occurs more rapidly above 10% level. Prolonged exposure to high concentrations may eventually result in death from asphyxiation.

High concentrations of this gas can also cause an oxygen-deficient environment. However, the asphyxiating properties of Carbon Dioxide will be reached before oxygen-deficiency is a factor.

CONTACT WITH SKIN or EYES: Contact of the cold gas with the skin can lead to frostbite or dermatitis (red, cracked, irritated skin), depending upon concentration and duration of exposure. Contact of the cold gas, or solid dry ice with the eyes can cause pain, redness, burns, and severe exposure could cause blindness.

OTHER POTENTIAL HEALTH EFFECTS: Symptoms of frostbite include change in skin color to white or grayish-yellow. The pain after contact with cold gas can quickly subside. Moisture in the air could lead to the formation of carbonic acid, which can be irritating to the eyes.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in Lay Terms. Over-exposure to Carbon Dioxide may cause the following health effects:

ACUTE: Carbon Dioxide is an asphyxiant and a powerful cerebral vasodilator. Inhaling large quantities causes rapid circulatory insufficiency, which can lead to coma or death. At low concentrations, inhalation of Carbon Dioxide can cause nausea, dizziness, visual disturbances, shaking, headache, mental confusion, sweating, increased heartbeat, and elevated blood pressure and respiratory rate. High concentrations of the gas in air may cause eye irritation. Contact with the eyes can cause damage to the retinal ganglion cells.

CHRONIC: There are currently no known adverse health effects associated with chronic exposure to this gas.

TARGET ORGANS: ACUTE: Respiratory system, central nervous system, eyes. CHRONIC: None known.

3. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	mole %	EXPOSURE LIMITS IN AIR					
			ACGIH-TLV		OSHA-PEL		NIOSH IDLH	OTHER
			TWA ppm	STEL ppm	TWA ppm	STEL ppm		
Carbon Dioxide	124-38-9	> 99.5%	5000	30,000	5000 10,000 (Vacated 1989 PEL)	30,000 (Vacated 1989 PEL)	40,000	NIOSH REL: TWA = 5000 STEL = 30,000 (ceiling) DFG-MAK: TWA = 5000 PEAK = 2•MAK, 60 min. momentary value
Maximum Impurities		< 0.5%	None of the trace impurities in this product contribute significantly to the hazards associated with the product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards and Canadian Workplace Hazardous Materials Identification System Standards (CPR 4).					

This material is classified as hazardous under OSHA regulations in the United States and the WHMIS in Canada.

NE = Not Established.

See Section 16 for Definitions of Terms Used.

NOTE (1): ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2004 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

4. FIRST-AID MEASURES

RESCUERS SHOULD NOT ATTEMPT TO RETRIEVE VICTIMS OF EXPOSURE TO THIS PRODUCT WITHOUT ADEQUATE PERSONAL PROTECTIVE EQUIPMENT. At a minimum, Self-Contained Breathing Apparatus equipment should be worn.

Remove victim(s) to fresh air, as quickly as possible. Trained personnel should administer supplemental oxygen and/or cardio-pulmonary resuscitation, if necessary. Victim(s) must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to physician or other health professional with victim(s).

SKIN EXPOSURE: Remove any clothing that may restrict circulation to any frozen area. Do not rub frozen parts as tissue damage may occur. As soon as practicable, place any affected area in warm water bath which has a temperature that does not exceed 105°F (40°C). NEVER USE HOT WATER. NEVER USE DRY HEAT. If area of frostbite is extensive, remove clothing while showering with warm water. If warm water is not available, or is impractical to use, wrap the affected parts gently in blankets. Alternatively, if the fingers or hands are frostbitten, place the affected area of the body in the armpit. Encourage victim to gently exercise the affected part while being warmed. Seek immediate medical attention.

Frozen tissue is painless and appears waxy, with a possible yellow color. Frozen tissue will become swollen, painful and prone to infection when thawed. If the frozen part of the body has been thawed by the time medical attention has been obtained, cover the area with a dry sterile dressing and a large bulky protective covering.

EYE EXPOSURE: If irritation of the eye develops after exposure to gas, open victim's eyes while under gentle running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Seek medical assistance immediately, preferably an ophthalmologist.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing respiratory conditions may be aggravated by over-exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and reduce over-exposure.

5. FIRE-FIGHTING MEASURES

FLASH POINT: Not applicable.

AUTOIGNITION TEMPERATURE: Not applicable.

FLAMMABLE LIMITS (in air by volume, %):

Lower (LEL): Not applicable.

Upper (UEL): Not applicable.

FIRE EXTINGUISHING MATERIALS: Carbon Dioxide is commonly used as an extinguishing agent for Class B and Class C fires. Use extinguishing media appropriate for the surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Carbon Dioxide does not burn; however, containers, when involved in fire, may rupture or burst in the heat of the fire. Dusts of various reactive metals (e.g., magnesium, zircon, titanium alloys), are readily ignited and explode in the presence of Carbon Dioxide. In the presence of moisture, cesium oxide ignites on contact with Carbon Dioxide. Metal acetylides or hydrides will also ignite or explode.

Liquid Carbon Dioxide will vaporize rapidly when accidentally released, forming an oxygen-deficient vapor cloud. Additionally, if large concentrations of Carbon Dioxide gas are present, the water vapor in the surrounding air will condense, creating a dense fog. Evacuate the surrounding area; visibility may be obscured in such a vapor cloud making it difficult to find fire exits or equipment. Pressure in a high pressure container can build-up due to heat and it may rupture if pressure relief devices should fail to function. Contact with cold, gaseous or solid Carbon Dioxide may cause frostbite.

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

SPECIAL FIRE-FIGHTING PROCEDURES: Structural fire-fighters must wear Self-Contained Breathing Apparatus and full protective equipment.

6. ACCIDENTAL RELEASE MEASURES

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

Minimum Personal Protective Equipment should be **Level B: protective clothing, leather or thermally insulating gloves and Self-Contained Breathing Apparatus**. Locate and seal the source of the leaking gas. Allow the gas to dissipate. Monitor the surrounding area for Carbon Dioxide and oxygen levels. The level of Carbon Dioxide must be below 3%, and the atmosphere must have at least 19.5 percent oxygen before personnel can be allowed in the area without Self-Contained Breathing Apparatus.

RESPONSE TO PRESSURIZED-LIQUID RELEASE: Clear the affected area. After the gas is formed, follow the instructions provided above. If the area must be entered by emergency personnel, SCBA, leather or insulated gloves, and safety shoes must be worn.

7. HANDLING AND STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: Be aware of any signs of dizziness or fatigue; exposures to fatal concentrations of this product could occur without any significant warning symptoms.

STORAGE AND HANDLING PRACTICES: Cylinders should be stored upright and be firmly secured to prevent falling or being knocked-over. Cylinders can be stored in the open, but in such cases, should be protected against extremes of weather and from the dampness of the ground to prevent rusting. Cylinders should be stored in dry, well-ventilated areas away from sources of heat, ignition and direct sunlight. Keep storage area clear of materials which can burn. Do not allow area where cylinders are stored to exceed 52°C (125°F). Store containers away from heavily trafficked areas and emergency exits. Store away from process and production areas, away from elevators, building and room exits or main aisles leading to exits. Protect cylinders against physical damage. Isolate from other non-compatible chemicals (refer to Section 10, Stability and Reactivity).

Storage containers and equipment should not be located in sub-surface or enclosed areas, unless engineered to maintain a concentration of Carbon Dioxide below the TLV (TLV = 5000 ppm) in the event of a release. Relief valves should be vented to a well-ventilated external location. Consider installation of leak detection and alarm for storage and use areas. Have appropriate extinguishing equipment in the storage area (i.e. sprinkler system, portable fire extinguishers).

Use a check valve in the discharge line to prevent hazardous backflow. Never tamper with pressure relief valves and cylinders. (continued on following page)

Full and empty cylinders should be segregated. Use a first-in, first-out inventory systems to prevent full containers from being stored for long periods of time.

SPECIAL PRECAUTIONS FOR HANDLING GAS CYLINDERS: Compressed gases can present significant safety hazards. The following rules are applicable to work situations in which cylinders are being used.

7. HANDLING AND STORAGE (Continued)

Before Use: Move cylinders with a suitable hand-truck. Do not drag, slide or roll cylinders. Do not drop cylinders or permit them to strike each other. Secure cylinders firmly. Leave the valve protection cap (where provided) in-place until cylinder is ready for use.

During Use: Use designated CGA fittings and other support equipment. Do not use adapters. Do not heat cylinder by any means to increase the discharge rate of the product from the cylinder. Do not use oils or grease on gas-handling fittings or equipment. Leak-check system with leak detection solution. Immediately contact the supplier if there are any difficulties associated with operating cylinder valve. Never insert an object (e.g., wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage the valve, causing a leak to occur. Use an adjustable strap wrench to remove over-tight or rusted caps. Never strike an arc, on a compressed gas cylinder or make a cylinder part of an electric circuit.

After Use: Close main cylinder valve. Replace valve protection cap. Mark empty cylinders "EMPTY".

SPECIAL PRECAUTIONS FOR HANDLING PRESSURIZED CONTAINERS OF LIQUID CARBON DIOXIDE:

Cold liquids can present significant safety hazards. Never allow any unprotected part of the body to touch uninsulated pipes or vessels which contain cold fluids. The extremely cold metal of the container will cause moist flesh to stick fast and tear when one attempts to withdraw from it. The following rules are applicable to work situations in which liquid containers are being used. Check all hoses and transfer equipment before filling them with the liquid. Replace any worn or cut hoses prior to use. Liquid Carbon Dioxide is extremely cold and is under pressure. A leak will result in the formation of "Dry Ice" particles which will be forcibly ejected from the system, possibly injuring the operator. A complete hose failure can result in a large release of Carbon Dioxide and violent movement of the hose and associated equipment, which may cause severe injury or death. Special care must be taken when depressurizing and disconnecting hoses. Releasing the contents of a liquid-filled line to atmospheric pressure may result in the formation of a solid dry ice plug in the line. This plug will prevent further removal of the liquid behind the plug, resulting in either an unexpected, rapid release of Carbon Dioxide as the line warms, or the catastrophic failure of the line as the liquid warms behind the plug. Sufficient vapor pressure must be applied and maintained behind the liquid before opening a discharge valve. This action will prevent the depressurization of the liquid to the point of solid formation before it exits the line.

High-pressure containers for liquid product are equipped with pressure relief devices to control internal pressure. Under normal conditions, these containers will periodically vent small amounts of product. Some metals such as carbon steel may become brittle at low temperatures and will easily fracture. Prevent entrapment of liquid in closed systems or piping without pressure relief devices.

NOTE: Use only DOT or ASME-approved code containers. Close valve after each use and when empty.

STANDARD CYLINDER VALVE CONNECTIONS FOR U.S. AND CANADA: Use the proper CGA connections, **DO NOT USE ADAPTERS:**

<u>THREADED:</u>	CGA 320
<u>PIN-INDEXED YOKE:</u>	CGA 940 (Medical Use)
<u>ULTRA HIGH INTEGRITY:</u>	716

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Purge gas handling equipment with inert gas (i.e. nitrogen) before attempting repairs. Always use product in areas where adequate ventilation is provided.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation. Carbon Dioxide accumulates in low-lying areas with limited air movement. Natural or mechanical ventilation should be available in the worker's breathing zone to prevent levels of Carbon Dioxide above exposure limits (see Section 2, Composition and Information on Ingredients). Local exhaust ventilation is preferred, because it prevents dispersion of this gas into the work place by eliminating it at its source. Areas of Carbon Dioxide use should be engineered to remove vapor from the lowest possible level and exhaust vapor to a well-ventilated area or to the outside. Carbon Dioxide levels should be monitored to assure levels are maintained below the TLV. If appropriate, install automatic monitoring equipment to detect the levels of Carbon Dioxide and of oxygen.

RESPIRATORY PROTECTION: Maintain Carbon Dioxide levels below those listed in Section 2 (Composition and Information on Ingredients) and oxygen levels above 19.5% in the workplace. Use supplied air respiratory protection if Carbon Dioxide levels are above the IDLH (40,000 ppm) or during emergency response to a release of this product. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29

CFR 1910.134), applicable U.S. State regulations, or the Canadian CSA Standard Z94.4-93. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory

8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

Protection Standard (1910.134-1998). Respiratory selection guidelines from NIOSH for Carbon Dioxide are provided below for information.

CONCENTRATION

Up to 40,000 ppm:

RESPIRATORY EQUIPMENT

Supplied Air Respirator (SAR); or full-facepiece Self-Contained Breathing Apparatus (SCBA).

Emergency or Planned Entry Into Unknown Concentrations or IDLH Conditions: Positive pressure, full-facepiece SCBA; or positive pressure, full-facepiece SAR with an auxiliary positive pressure SCBA.

Escape:

Escape-type SCBA.

NOTE:

The IDLH concentration for Carbon Dioxide is 40,000 ppm.

EYE PROTECTION: Safety glasses. Use faceshields when handling Liquid Carbon Dioxide in high pressure containers. If necessary, refer to U.S. OSHA 29 CFR 1910.133, or Canadian Standards.

HAND PROTECTION: Wear leather or thermally insulated gloves when handling cylinders of this product. Otherwise, wear glove protection appropriate to the specific operation for which this product is used. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

BODY PROTECTION: Use body protection appropriate for task. Safety shoes are recommended when handling cylinders. When handling the liquid in high pressure containers, long sleeve shirts and trousers are recommended. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR.

HEARING PROTECTION: Discharges of Liquid Carbon Dioxide and of the vapor can produce noise levels requiring hearing protection.

9. PHYSICAL and CHEMICAL PROPERTIES

GAS DENSITY @ 21.1°C (70°F) and 1 atm: 0.1144 lb/ft³ (1.833 kg/m³)

LIQUID DENSITY @ 21.1°C (70°F) and 838 psig (5778 kPa): 47.35 lb/ft³ (761.3 kg/m³)

FREEZING/MELTING POINT: (sublimation temperature) -78.5°C (-109.3°F)

TRIPLE POINT: -55.6°C (-69.9°F) @ 60.4 psig (416 kPa)

pH: 3.7 at 1 atm (form carbonic acid)

SPECIFIC GRAVITY (air = 1) @ 70°F (21.1°C): 1.522

MOLECULAR WEIGHT: 44.01

ODOR THRESHOLD: Odorless.

EXPANSION RATIO: Not applicable.

EVAPORATION RATE (nBuAc = 1): Not applicable.

SPECIFIC VOLUME (ft³/lb): 8.76

VAPOR PRESSURE @ 21.1°C (70°F) psig: 838 psig (5778 kPa)

SUBLIMATION POINT: -78.5°C (-109.3°F)

SOLUBILITY IN WATER vol/vol 20°C (68°F) and 1 atm: 0.90

COEFFICIENT WATER/OIL DISTRIBUTION: Not applicable.

APPEARANCE AND COLOR: This product is a colorless, odorless gas, or colorless, odorless, volatile liquid stored under high pressure. As this gas is slightly acidic, some individuals may notice a slightly pungent odor and biting taste.

HOW TO DETECT THIS SUBSTANCE (warning properties): There are no unusual warning properties associated with a release of this product, except the potential of a vapor cloud in the event of a large release.

10. STABILITY and REACTIVITY

STABILITY: Normally stable.

DECOMPOSITION PRODUCTS: Carbon Dioxide will produce Carbon Monoxide and Oxygen when heated to temperatures above 3000°F (1648°C).

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Carbon Dioxide will ignite and explode when heated with powdered aluminum, beryllium, cerium alloys, chromium, magnesium-aluminum alloys, manganese, thorium, titanium, and zirconium. In the presence of moisture, Carbon Dioxide will ignite with cesium oxide. Metal acetylides will also ignite and explode on contact with Carbon Dioxide. Carbon Dioxide will react with alkaline materials to form carbonates and bicarbonates.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid exposing cylinders or bulk storage containers of Carbon Dioxide to extremely high temperatures, which could cause the cylinders or storage containers to rupture or burst.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: Carbon Dioxide gas is an asphyxiant gas, which has physiological effects at high concentrations. High concentrations can also result in narcosis. The following toxicological information is available for Carbon Dioxide.

LCLo (Inhalation-Human) 9 pph/5 minutes
LCLo (Inhalation-Mammal-species unspecified) 90000 ppm/5 minutes

TCLo (Inhalation-Rat) 10000 ppm/24 hours/days-continuous: Blood: other changes

TCLo (Inhalation-Rat) 6 pph/24 hours: female 10 day(s) after conception: Reproductive: Specific Developmental Abnormalities: musculoskeletal system, cardiovascular (circulatory) system, respiratory system

TCLo (Inhalation-Rabbit) 27,000 ppm/24 hours/30 days-continuous: Behavioral: somnolence (general depressed activity)

TCLo (Inhalation-Rat) 6 pph/24 hours: female 10 day(s) after conception: Reproductive: Effects on Newborn: growth statistics (e.g.%, reduced weight gain)

TCLo (Inhalation-Rabbit) 13 pph/4 hours: female 9-12 day(s) after conception: Reproductive: Specific Developmental Abnormalities: musculoskeletal system

TCLo (Inhalation-Mouse) 55 pph/2 hours: male 3 day(s) pre-mating: Reproductive: Paternal Effects: spermatogenesis (incl. genetic material, sperm morphology, motility, and count)

TCLo (Inhalation-Mouse) 55 pph/4 hours: male 6 day(s) pre-mating: Reproductive: Fertility: male fertility index (e.g. # males impregnating females per # males exposed to fertile nonpregnant females)

TCLo (Inhalation-Mouse) 2 pph/8 hours: female 10 day(s) after conception: Reproductive: Fertility: post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants); Specific Developmental Abnormalities: musculoskeletal system

SUSPECTED CANCER AGENT: Carbon Dioxide is not found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC, and therefore is not considered to be, nor suspected to be a cancer-causing agent by these agencies.

IRRITANCY OF PRODUCT: Contact with rapidly expanding gases can cause frostbite and damage to exposed skin and eyes.

SENSITIZATION OF PRODUCT: Carbon Dioxide is not a skin or respiratory sensitizer.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of Carbon Dioxide on the human reproductive system.

Mutagenicity: This product is not expected to cause mutagenic effects in humans.

Embryotoxicity: This product has not been reported to cause embryotoxic effects.

Teratogenicity: This product is not expected to cause teratogenic effects in humans. Clinical studies involving test animals exposed to high concentrations of Carbon Dioxide indicate teratogenic effects.

Reproductive Toxicity: This product is not expected to cause adverse reproductive effects in humans. Clinical studies involving test animals exposed to high concentrations of Carbon Dioxide indicate reproductive effects.

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

BIOLOGICAL EXPOSURE INDICES (BEIs): Currently, Biological Exposure Indices (BEIs) have not been determined for this compound.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL STABILITY: Carbon Dioxide occurs naturally in the atmosphere. The gas will be dissipated rapidly in well-ventilated areas.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: No adverse effect is anticipated to occur to animal or plant-life, except for frost produced in the presence of rapidly expanding gases.

EFFECT OF CHEMICAL ON AQUATIC LIFE: No evidence is currently available on this product's effects on aquatic life.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. Return cylinders with any residual product to Air Liquide. Do not dispose of locally.

For emergency disposal, secure the cylinder and slowly discharge the gas to the atmosphere in a well-ventilated area or outdoors.

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

	<u>FOR GAS</u>	<u>FOR LIQUID</u>
PROPER SHIPPING NAME:	Carbon dioxide	Carbon Dioxide, refrigerated liquid
HAZARD CLASS NUMBER and DESCRIPTION:	2.2 (Non-Flammable Gas)	2.2 (Non-Flammable Gas)
UN IDENTIFICATION NUMBER:	UN 1013	UN 2187
PACKING GROUP:	Not applicable.	Not applicable.
DOT LABEL(S) REQUIRED:	Non-Flammable Gas	Non-Flammable Gas
NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (20006):	120	
MARINE POLLUTANT:	Carbon Dioxide is not classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B).	
SPECIAL SHIPPING INFORMATION:	Cylinders should be transported in a secure position, in a well-ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles present serious safety hazards and should be discouraged.	
NOTE:	Shipment of compressed gas cylinders which have not been filled with the owners consent is a violation of Federal law (49 CFR, Part 173.301 (b)).	
TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:	This material is considered as dangerous goods, per regulations of Transport Canada. Use the above U.S. DOT information for the preparation of Canadian Shipments.	

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: Carbon Dioxide is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for any component of this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. TSCA INVENTORY STATUS: Carbon Dioxide is listed on the TSCA Inventory.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.

OTHER U.S. FEDERAL REGULATIONS:

- Generally recognized as safe (GRAS) as a direct human food ingredient when used as a leavening agent, processing aid, propellant, aerating agent and gas.
- Carbon Dioxide USP is regulated by the FDA as a prescription drug.
- Carbon Dioxide is subject to the reporting requirements of CFR 29 1910.1000. Carbon Dioxide is listed on Table Z.1.
- Depending on specific operations involving the use of this product, the regulations of the Process Safety Management of Highly Hazardous Chemicals may be applicable (29 CFR 1910.119). Under this regulation Carbon Dioxide is not listed in Appendix A.
- Carbon Dioxide does not contain any Class I or Class II ozone depleting chemicals (40 CFR part 82).
- Carbon Dioxide is not listed as a Regulated Substance, per 40 CFR, Part 68, of the Risk Management for Chemical.

U.S. STATE REGULATORY INFORMATION: Carbon Dioxide is covered under the following specific State regulations:

Alaska - Designated Toxic and Hazardous Substances: Carbon Dioxide.	Michigan - Critical Materials List: No.	Pennsylvania - Hazardous Substance List: Carbon Dioxide.
California - Permissible Exposure Limits for Chemical Contaminants: Carbon Dioxide.	Minnesota - List of Hazardous Substances: Carbon Dioxide.	Rhode Island - Hazardous Substance List: Carbon Dioxide.
Florida - Substance List: Carbon Dioxide.	Missouri - Employer Information/Toxic Substance List: Carbon Dioxide.	Texas - Hazardous Substance List: No.
Illinois - Toxic Substance List: Carbon Dioxide.	New Jersey - Right to Know Hazardous Substance List: Carbon Dioxide.	West Virginia - Hazardous Substance List: Carbon Dioxide.
Kansas - Section 302/313 List: No.	North Dakota - List of Hazardous Chemicals, Reportable Quantities: No.	Wisconsin - Toxic and Hazardous Substances: Carbon Dioxide.
Massachusetts - Substance List: Carbon Dioxide.		

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): Carbon Dioxide is not on the California Proposition 65 lists.

OTHER CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: Carbon Dioxide is listed on the DSL Inventory.



15. REGULATORY INFORMATION (Continued)

CANADIAN WHMIS REGULATIONS: Carbon Dioxide is categorized as a Controlled Product, Hazard Class A as per the Controlled Product Regulations.

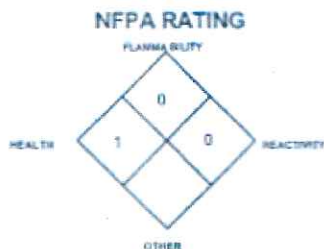
CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: Carbon Dioxide is not on the CEPA Priorities Substances Lists.

16. OTHER INFORMATION

CARBON DIOXIDE GAS

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
HEALTH		(BLUE)	1
FLAMMABILITY		(RED)	0
REACTIVITY		(YELLOW)	0
PROTECTIVE EQUIPMENT			B
EYES	RESPIRATORY	HANDS	BODY
	See Section 8		See Section 8
For routine industrial applications			

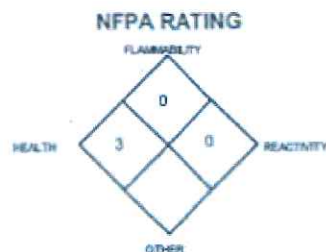
CARBON DIOXIDE GAS



CARBON DIOXIDE, LIQUEFIED

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
HEALTH		(BLUE)	3
FLAMMABILITY		(RED)	0
REACTIVITY		(YELLOW)	0
PROTECTIVE EQUIPMENT			X
EYES	RESPIRATORY	HANDS	BODY
	See Section 8		See Section 8
For routine industrial applications			

CARBON DIOXIDE, LIQUEFIED



MIXTURES: When two or more gases or liquefied gases are mixed, their hazardous properties may combine to create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an Industrial Hygienist or other trained person when you make your safety evaluation of the end product. Remember, gases and liquids have properties which can cause serious injury or death.

16. OTHER INFORMATION (Continued)

Further information about Carbon Dioxide can be found in the following pamphlets published by: Compressed Gas Association Inc. (CGA), 4221 Walney Road 5th floor, Chantilly, VA 20151-2923. Telephone: (703) 788-2700.

G-6	"Carbon Dioxide"
G-6.1	"Standard for Low Pressure Carbon Dioxide Systems at Customer Sites"
G-6.2	"Commodity Specification for Carbon Dioxide"
G-6.3	"Carbon Dioxide Cylinder Filling and Handling Procedures"
G-6.5	"Standard for Small Stationary Carbon Dioxide Systems"
G-6.6	"Standard for Elastomer-Type Bulk Transfer Hose"
P-1	"Safe Handling of Compressed Gases in Containers"
P-7	"Standard for the Re-Qualification of Cargo Tank Hose"
P-14	"Accident Prevention in Oxygen-Rich and Oxygen Deficient Atmospheres"
SB-2	"Oxygen Deficient Atmospheres"
AV-1	"Safe Handling and Storage of Compressed Gases"
AV-7	"Characteristics and Safe Handling of Carbon Dioxide"

PREPARED BY:

CHEMICAL SAFETY ASSOCIATES, Inc.
PO Box 3519, La Mesa, CA 91944-3519
619/670-0609

Fax on Demand: 1-800/231-1366



This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of Air Liquide's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this product is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.



**PURCHASE ORDER ACKNOWLEDGMENT
AGREEMENT
(for Gases)**

This Purchase Order Acknowledgment Agreement ("Agreement") dated June 5, 2015 between Supplier and Customer relates to Customer's proposed purchase agreement ("PO") under which Supplier would provide certain product and/or equipment, work and services for Customer. A copy of the PO is attached as Exhibit A. Supplier accepts the PO on the condition that Customer agrees by signing below to modify the PO as follows:

- a) The terms stated in Section A below ARE MADE part of the PO;
- b) Terms referred to in Section B below ARE REMOVED FROM the PO;
- c) Any other PO terms (whether or not mentioned here) that conflict with Section A terms ARE ALSO REMOVED.

SECTION A. The following are made part of the PO:

A.1. Warning Concerning Hazardous Nature of Products and Training Obligations. Customer acknowledges: a) that the Products are hazardous and must be handled accordingly; b) the Products are classified by the U. S. Occupational Safety and Health Administration ("OSHA") as hazardous chemicals, and that there are hazards associated with the possession and use of the Products, and that Customer must take proper account of those hazards and deal with them appropriately; c) it will warn all persons who may be exposed to any hazards relating to any of the Products and equipment and shall train them in the proper use of the Products and equipment; d) that Supplier has supplied Customer with all relevant Material Safety Data Sheets ("MSDSs") relating to the Products, and that more MSDSs are available from Supplier on request; e) that OSHA regulations require Customer to develop and implement a written chemical hazard communications program for its employees regarding all hazardous chemical Products; f) the Products must not be used without consulting the MSDSs, and Customer will ensure that all employees, customers and others who may be exposed to the Products receive and refer to the MSDSs; and g) Customer assumes all risk and liability arising out of the presence, production, storage, delivery or use of the Products after delivery thereof to Customer pursuant to this Agreement.

A.2. Product Storage/Use And Cylinders. Supplier will, at its expense, maintain any cylinders, vessels or other equipment that it provides to Customer, and Customer will keep the equipment and cylinders lien-free, pay for any damage and loss at full replacement value unless caused by Supplier's sole negligence, and otherwise abide by Supplier's standard terms and conditions relating to the cylinders and equipment. Customer will not fill or have others fill Supplier's equipment or cylinders.

A.3. Warranties. Supplier warrants that gas Products manufactured by Supplier, except for carbon dioxide Products, will comply with Compressed Gas Association (CGA) guidelines. Supplier warrants that carbon dioxide Products manufactured by Supplier will comply with Supplier's standard specification for the grade of liquid carbon dioxide Product selected in Section A.8. Any other Products manufactured by Supplier will conform to Supplier's standard specifications. Supplier makes no warranty with respect to Products manufactured by others, but will, on request, to the extent permitted, pass on to Customer any applicable manufacturer's warranty. SUPPLIER MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

A.4. Damage Limitations. SUPPLIER SHALL NOT BE LIABLE TO CUSTOMER FOR INCIDENTAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES. SUPPLIER'S SOLE LIABILITY AND CUSTOMER'S SOLE REMEDY FOR ANY DAMAGES, INCLUDING BUT NOT LIMITED TO DAMAGES RESULTING FROM PRODUCTS MANUFACTURED BY SUPPLIER OR SUPPLIER'S FAILURE TO DELIVER SUCH PRODUCTS, INSTALLATION OR MAINTENANCE OF EQUIPMENT OR EQUIPMENT MANUFACTURED BY SUPPLIER, OR SERVICES PROVIDED BY SUPPLIER SHALL BE LIMITED TO, AT SUPPLIER'S OPTION, THE REFUND OF THE PURCHASE PRICE OR REPLACEMENT OF THE PRODUCT OR SERVICE IN QUESTION. CUSTOMER MUST NOTIFY SUPPLIER OF ANY CLAIM WITHIN FIFTEEN DAYS OF THE EVENT GIVING RISE TO SUCH CLAIM OR SUCH CLAIM IS WAIVED. THE LIMITATIONS CONTAINED IN THIS SECTION SHALL APPLY REGARDLESS OF WHETHER THE CLAIM FOR DAMAGES IS BASED ON BREACH OF CONTRACT, BREACH OF WARRANTY, TORT OR OTHERWISE, AND SHALL APPLY EVEN WHERE SUCH DAMAGES ARE CAUSED IN WHOLE OR IN PART, BY THE NEGLIGENCE, GROSS NEGLIGENCE OR ACTS AND OMISSIONS OF THE PARTY CLAIMING DAMAGES OR THE PARTY FROM WHOM DAMAGES ARE SOUGHT. AS USED IN THIS SECTION, THE TERM "CUSTOMER" AND "SUPPLIER" SHALL INCLUDE NOT ONLY THE PARTY TO THIS AGREEMENT BUT ALSO ALL OF ITS AFFILIATES. THE PROVISIONS GOVERNING DAMAGE LIMITATIONS AND INDEMNITY SET FORTH IN THIS AGREEMENT SHALL SURVIVE EXPIRATION, TERMINATION, OR CANCELLATION OF THIS AGREEMENT.

A.5. Indemnity And Insurance. If there is any injury (including death), loss or damage to the person or property of any third party (including employees of either party), then, subject to any limitations set forth in this Agreement, each party agrees to indemnify the other party to the extent of the indemnifying party's negligence. Supplier has no obligation to insure Customer or its employees (or other Customer-related parties) or to provide a waiver of subrogation under Supplier's insurance.

A.6. Additional Standard Terms And Conditions. Supplier: a) will not be obligated to deliver Product in excess of one hundred and twenty percent of the lesser of Customer's average monthly purchases of each Product during the prior three months or the estimated volumes (if any) set forth in A.9., b) may reduce and apportion deliveries if there is insufficient Product from the normal supply source for any reason, and may charge extra for Product from non-normal sources, c) will not be liable for failure to perform for reasons beyond its reasonable control, d) may increase prices (including facility fees) on thirty days written notice except if and as limited or otherwise provided by Section A.9. below, and e) may collect Supplier's scheduled applicable non-price charges, including Hazardous Materials ("Hazmat") Charge for the handling of hazardous materials and for compliance with laws and regulations concerning hazardous materials, Medical Charge for the handling of medical Products and for compliance with laws and regulations concerning medical Products, delivery charge, and other special non-price charges (including temporary emergency, plant outage, fuel and energy surcharges) that Supplier may assess. These non-price charges may be amended and others may be added at Supplier's discretion. The total amount due from the customer may include various itemized charges, including: charges for the handling of hazardous materials and for compliance with laws and regulations concerning hazardous materials; charges for handling, delivery, and shipping; and/or charges for energy or fuel. None of the charges represent a tax or fee paid to or imposed by any governmental authority, and all of the charges are retained by the Supplier.

Customer will: a) provide a site, site access, and site utilities, services, and permits, and receive site equipment, on Supplier's standard terms; b) pay Supplier's standard cylinder rates except if and as limited in Section A.9. and; c) buy its total requirements of the covered Products from Supplier, d) pay all charges, including all applicable taxes, within thirty days of invoice date, and pay one and one-half percent per month (or, if less, the maximum permitted by law) on any delinquent balance, e) give reasonable advance notice of orders and allow deliveries twenty-four hours, seven days a week; and f) Customer may not terminate this Agreement for convenience.

A.7. Miscellaneous. a) Customer represents that Customer is contractually free to enter into this Agreement and to perform hereunder and shall indemnify and defend Supplier against all damages Supplier may suffer if Customer's representation is not correct. b) The laws of the state of Customer's Mailing Address shall govern this Agreement. The invalidity or unenforceability of any provision of this Agreement under the laws of any state in which this Agreement is in effect shall not affect the validity or enforceability of any other provision of this Agreement. c) Customer may not assign this Agreement, or resell Products, without Seller written consent. d) This Agreement including the PO (as modified hereby) constitutes the parties' entire agreement. e) This Agreement may be cancelled by Supplier's corporate headquarters within thirty days after signing by both parties. f) The term of the PO, and applicable Products and equipment prices, are as indicated on the face of the PO unless otherwise indicated in A.9. g) This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof. No provision of any Customer purchase order or other Customer document shall alter or add to this Agreement. Any modifications of this Agreement must be in writing, signed by both parties and dated. The parties expressly agree that terms and conditions of this Agreement may not be modified, supplemented, or amended by electronic means. h) While general information regarding this Agreement and the transactions contemplated herein may be exchanged by the parties electronically, the parties expressly agree not to conduct the transactions contemplated by this Agreement by electronic means except for notices as set forth herein. All notices shall be in writing. All notices, other than termination or cancellation notices, may be sent by prepaid mail, facsimile or e-mail. If notices are sent by mail, the notices shall be sent to the Mailing Address for the party set forth on page one or any substitute Mailing Address the party may provide to the other by notice hereunder. Notice shall be considered to be given on the date it is sent by prepaid mail or, if otherwise delivered, on the date of delivery. Notice of termination or cancellation must be sent certified mail, return receipt requested, to the Mailing Address of the receiving party; and i) The titles, captions and heading used in this Agreement and the PO are for convenience and shall not be used for construction or interpretation.

A.8. Liquid Carbon Dioxide and Dry Ice Provisions. a) If this Agreement pertains to liquid carbon dioxide Products, Supplier will provide the product grade checked below, as per Supplier's standard specifications. If none or more than one are checked, the Basic specification will apply:

<input type="checkbox"/> Basic	<input type="checkbox"/> Industrial	<input type="checkbox"/> Food	<input type="checkbox"/> Specialty	<input checked="" type="checkbox"/> Beverage	<input type="checkbox"/> USP
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b) If this Agreement pertains to Dry Ice Products the following shall also apply: i) All Products shall be delivered F.O.B. Supplier's supply source (or, if requested by Customer and acceptable to Supplier, by delivery vehicle to the Facility). Title and risk of loss shall pass to Customer upon delivery. ii) Customer shall monitor Product levels and give Supplier reasonable, advance notice when ordering Product. Customer may, at the option of Supplier, be subject to a minimum delivery and/or a Transport Container ("Box") cleaning charge. Customer shall allow Supplier to make deliveries by vehicle twenty four hours a day, seven days a week. Customer pick-ups, as applicable, may be made during Supplier's normal weekday business hours at times designated by Supplier. Customer shall promptly return to Supplier all Supplier provided dry ice Boxes. Supplier shall have the right to charge Customer a daily charge per Box. Customer shall compensate Supplier for all loss or damage to Boxes.

A.9. Other. (Add any other applicable item - type in below or attach)

Supply of bulk Liquid Carbon Dioxide to Lee County Southwest Florida. Project No: B-150289.

Estimated Annual Volume Requirement is 1,172 Tons. Product Price for Carbon Dioxide is \$180.50 per ton.

Deliveries are to be made to:

Corkscrew Water Plant 16101 Alico Road Fort Myers, FL 33913

North RO Water 18250 Durrance Road N. Fort Myers, FL 33917

SECTION B. The following terms of the Customer's PO, along with any other terms of the Customer's PO that conflict with Section A above, are hereby REMOVED from the PO (type in below or attach):

(AN AUTHORIZED SIGNATURE IS REQUIRED FROM BOTH SUPPLIER AND CUSTOMER)

Lee County Southwest Florida

Customer

AIR LIQUIDE INDUSTRIAL U.S. LP

Supplier

By: _____

By: _____

Name/Title: _____

Name/Title: _____

Date: _____

Date: _____

Amy Waszczak, National Municipal Business Coordinator

Submitted for Supplier by



LEE COUNTY
SOUTHWEST FLORIDA

BOARD OF COUNTY COMMISSIONERS

Bob Janes
District One

A. Brian Bigelow
District Two

Ray Judah
District Three

Tammy Hall
District Four

Frank Mann
District Five

Karen B. Hawes
County Manager

David M. Owen
County Attorney

Diana M. Parker
County Hearing Examiner

AIK LIQUIDE INDUSTRIAL
O U.S. LP

B-150385

15 JUL 8 PM 12:29