



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

MAY 14 2003

DOT-E 12637
(THIRD REVISION)

EXPIRATION DATE: February 28, 2005

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Island Gases Limited
St. Croix, U.S. Virgin Islands
(U.S. Agent Firestone Cryogenics Equipment,
Houston, Texas)

(See Appendix A to this document for a list of additional grantees)

2. PURPOSE AND LIMITATION:

- a. This exemption authorizes the transportation in commerce of certain cryogenic liquids listed in paragraph 6, in certain non-DOT specification vacuum insulated portable tanks. This exemption provides no relief from any Hazardous Materials Regulation (HMR) other than as specifically stated herein.

- b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.318 in that the use of a non-DOT specification portable tank is not authorized, except as specified herein.

5. BASIS: This exemption is based on the application of Island Gases Limited dated May 9, 2003, submitted in accordance with § 107.109.

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6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Argon, refrigerated liquid (cryogenic liquid)	2.2	UN1951	N/A
Nitrogen, refrigerated liquid (cryogenic liquid)	2.2	UN1977	N/A
Oxygen, refrigerated liquid (cryogenic liquid)	2.2	UN1073	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING -

(1) Packagings prescribed are five (5) non-DOT specification vacuum insulated stainless steel portable tanks designed and constructed by Gibson Cryogenics, Inc. in accordance with the DOT Specification MC-338 cargo tank motor vehicle, except as modified herein. The portable tanks must be enclosed in an ISO frame. The maximum design pressure of the inner tank may not exceed 265 psig. The design temperature is -320° F. for the inner tank and any part, valve or fitting that may come in contact with the lading. The maximum capacity may not exceed 3745 gallons. New construction is not authorized.

(2) Tanks must conform with § 178.338, except as follows:

(i) § 178.338-10 does not apply.

(ii) Lifting lugs, framework and any anchoring to the inner tank or the tank jacket must conform with § 178.338-13(a). The portable tank need not conform to §§ 178.338-13(b) or (c).

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(iii) Each tank need not be marked as required by § 178.338-18(a)(1) but instead be plainly and durably marked on both sides near the middle in letters and numbers at least two inches high, on a contrasting background, the exemption number "DOT-E 12637".

(iv) A portable tank that meets the definition of "container" must meet the requirements of 49 CFR Parts 450 through 453, and each design must be qualified in accordance with § 178.270-13(c).

b. TESTING - Each portable tank must be reinspected and retested once every five years in accordance with the procedure prescribed in § 173.32(e) for DOT Specification 51 portable tanks. The test pressure for the inner tank must be determined from the following formulas:

If there is no vacuum in the outer jacket during test:

$$P_T = 1.25 \times P_d$$

If vacuum exists in the outer jacket during test:

$$P_T = [1.25 \times P_d] - 14.7$$

Where:

P_T = Test pressure, psig

P_d = Design pressure (the sum of the maximum allowable working pressure, Static head of liquid in inner tank, psi and 14.7 psi)

c. OPERATIONAL CONTROLS -

(1) Tanks authorized by this exemption bear manufacturer's serial numbers 5044-1 through 5044-5 and owner's serial numbers VIGU 860002-3, VIGU 860005-8, VIGU 860006-6, VIGU 860001-5 and VIGU 860003-1.

(2) Each portable tank must be prepared and shipped as required in § 173.318, as applicable for the lading.

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(3) Shipments by cargo vessel must conform with the following:

(i) The package must conform with § 176.76(g). The portable tank may not be overstowed with other containers or freight.

(ii) Any road relief valve set at a pressure lower than that prescribed for the (safety) pressure relief valve must be closed during transportation by cargo vessel unless the holding time was determined based on the setting of the pressure control valve.

(iii) The legend "One-Way Travel Time _____ Hours" or "OWTT _____ Hours" must be marked on the shipping paper and on the dangerous cargo manifest immediately after the container description. The OWTT is determined by the formula:

$$\text{OWTT} = \text{MRHT} - 24 \text{ hours.}$$

(iv) A written record of the portable tank's pressure and ambient (outside) temperature at the following times must be prepared for each shipment.

- (A) At the start of each trip;
- (B) Immediately before and after any manual venting;
- (C) At least every 24 hours; and
- (D) At the destination point.

(4) No person may transport or offer for transportation a charged portable tank unless the pressure of the lading is equal to or less than that used to determine the marked rated holding time (MRHT) and the OWTT is equal to or greater than the elapsed time between the start and termination of travel.

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(5) The actual holding time for each tank must be determined after each shipment. If it is determined that the actual holding time is less than 90 percent of the (MRHT) of the tank, the tank may not be refilled until it is restored to its MRHT or the tank is re-marked with the reduced holding time determined by this examination. The holding time must be determined in accordance with § 178.338-9.

(6) The holding time and the MRHT of the first portable tank must be determined and results thereof must be submitted to OHMEA prior to initial shipment.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modification or change is made to the package or its contents and it is reoffered for transportation in conformance with this exemption and the HMR.

b. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

9. MODES OF TRANSPORTATION AUTHORIZED: Cargo vessel and motor vehicle.

10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel or motor vehicle used to transport packages covered by this exemption.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

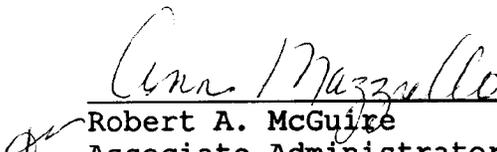
o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when this exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incident involving the package and shipments made under the terms of this exemption.

Issued in Washington, D.C.:



Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

MAY 14 2003
(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.
Attention: DHM-31.

Copies of this exemption may be obtained by accessing the Hazardous Materials Safety Homepage at <http://hazmat.dot.gov/exemptions> Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

PO: PTolson/KFW/sln

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The following are hereby granted party status to this exemption based on their application(s) submitted in accordance with § 107.107 or § 107.109, as appropriate:

Company Name City/State	Application Date	Issue Date	Expiration Date
Matheson Tri-Gas, Inc. East Rutherford, NJ	Feb 24, 2003	Mar 21, 2003	Feb 28, 2005



 Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety