



U.S. Department
of Transportation

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

**Research and
Special Programs
Administration**

MAR 15 2004

DOT-E 7274
(EIGHTH REVISION)

EXPIRATION DATE: February 28, 2006

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Praxair Inc.
Danbury, CT
2. PURPOSE AND LIMITATION:
 - a. This exemption authorizes the transportation in commerce of certain refrigerated gases in non-DOT portable tanks. This exemption provides no relief from the Hazardous Materials Regulations (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 §§ 172.101, 173.318, 173.320, 176.30 and 176.76(h), except as specified herein.
5. BASIS: This exemption is based on the application of Praxair, Inc. dated February 27, 2004, submitted in accordance with § 107.109.

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6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name/ Hazardous Materials Description	Hazard Class/ Division	Identi- fication Number	Packing Group
Argon, refrigerated liquid (<i>cryogenic liquid</i>)	2.2	UN1951	n/a
Nitrogen, refrigerated liquid (<i>cryogenic liquid</i>)	2.2	UN1977	n/a
Oxygen, refrigerated liquid (<i>cryogenic liquid</i>)	2.2	UN1073	n/a

7. SAFETY CONTROL MEASURES:

a. Prescribed packagings are non-DOT specification vacuum insulated portable tanks made to CGA proposed DOT Specification 51L, dated November 1963, and Linde model 200-VCC mounted on skids or in an ISO type frame.

b. Each tank must be prepared and shipped as required in § 173.318 as applicable for the lading. Maximum gross weight of each tank, charged with the specified lading, must be as follows:

liquid argon	32,300 lbs.
liquid nitrogen	23,600 lbs.
liquid oxygen	28,700 lbs.

c. Each portable tank must be equipped with one or more pressure control devices set-to-discharge at not over 20 psig.

d. 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:

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

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

- (1) At the start of each trip;
- (2) Immediately before and after any manual venting;

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(3) At least every 24 hours; and

(4) At the destination point.

f. Any lading 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.

g. Each pressure relief valve, pressure controlling valve and frangible disc must be arranged so that discharge will not impinge upon any part of the vessel, the tank itself or any other cargo.

h. Each portable tank must be securely installed on a flat-bed trailer or enclosed in an ISO frame. "On deck only" stowage is authorized.

i. Each tank must be plainly and durably marked on both sides near the middle in letters and numbers at least two inches high on a contrasting background, "DOT-E 7274".

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.

c. A measured holding time test described in paragraph 8d below must be performed on one tank of each design. The test may be done in conjunction with an actual shipment.

d. To determine the "One-Way travel time" (OWTT), a measured holding time test must be performed with the tank charged with the intended commodity as prescribed in paragraph 7b above. The equilibrium pressures and ambient temperatures must be recorded at 6-hour intervals until the pressure level of the contents reaches a pressure not to exceed that at which the lowest pressure relieving device is set to open. This total time lapse in hours must be noted "measured holding time at _____°F. average temperature". The measured holding time must be adjusted to the equivalent

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holding time at 80°F. to establish the rated holding time (RHT). The holding time stamped on the jacket nameplate (marked rated holding time--MRHT) may be equal to or less than the established RHT.

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

e. The time required between the loading and subsequent unloading of the tank at its final destination must not exceed the OWTT as determined above.

f. Each portable tank must be reinspected and retested once every 5 years in accordance with § 173.32(e) at a pressure (in PSIG) of 14.7 plus 1.25 times the sum of the design pressure and the static head as prescribed for DOT 51 Specification portable tanks.

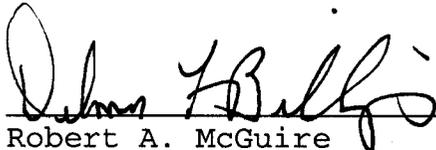
9. MODES OF TRANSPORTATION AUTHORIZED: Cargo vessel.
10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel covered by this exemption.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption 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 Persons operating under the terms of this exemption must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - 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 the 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.:

for 

Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

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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.

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