U.S. Department
of Transportation

**Research and
Special Programs
Administration**

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

DOT-E 9436 (EXTENSION)
ORIGINAL March 3, 1986

JAN 7 1997

In accordance with 49 CFR 107.109 of the Department of Transportation (DOT) Hazardous Materials Regulations DOT-E 9436 is hereby extended for the party(ies) listed below by changing the expiration date in paragraph 10 to December 31, 1998. This change is effective from the issue date of this extension. All other terms of the exemption remain unchanged.

This extension applies only to party(ies) listed below based on the application(s) received in accordance with 49 CFR 107.109. This extension constitutes a necessary part of this exemption and must be attached to it.

for Ann Mazzullo
Alan I. Roberts
Associate Administrator
for Hazardous Materials Safety

1/7/97
(DATE)

Dist: FHWA USCG

EXEMPTION HOLDER	APPLICATION DATE
Praxair, Inc. Danbury, CT	December 31, 1996

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DOT-E 9436

1. Union Carbide Corporation, Linde Division, Danbury, Connecticut, is hereby granted an exemption from those provisions of this Department's Hazardous Materials Regulations specified in paragraph 5 below to manufacture, mark and sell the packaging described in paragraph 7 below for use of the transportation of the nonflammable refrigerated liquid described in paragraph 3 below, in commerce subject to the requirements specified herein. This exemption authorizes the use of non-DOT specification portable tanks, and provides no relief from any regulation other than as specifically stated.

2. BASIS. This exemption is based on Union Carbide Corporation's application dated April 29, 1985 submitted in accordance with 49 CFR 107.103 and the public proceeding thereon.

3. HAZARDOUS MATERIALS (Descriptor and class). Liquid helium, classed as nonflammable gas.

4. PROPER SHIPPING NAME (49 CFR 172.101). Helium, refrigerated liquid.

5. REGULATION AFFECTED. 49 CFR 172.203, 173.318, 173.320, 176.30, 176.76(h)

6. MODE OF TRANSPORTATION AUTHORIZED. Motor vehicle, cargo vessel.

7. SAFETY CONTROL MEASURES. Packaging prescribed is a non-DOT specification portable tank designed and constructed in accordance with Union Carbide Corporation's drawings D-2218732 and J-2168469 Rev. A, the MC 338 specification (49 CFR 178.338) as applicable, and to the ASME Code unless otherwise specified. The portable tank is to be enclosed in an ISO type frame, or skid mounted, and is vacuum insulated with a liquid shield. Design pressure is 64 psig for inner tank, 6 psig for liquid nitrogen tank. Design temperature is minus 453°F for inner tank and any part, valve or fitting that may come in contact with helium; and minus 320°F for liquid nitrogen tank and any part, valve, or fitting that may come in contact with nitrogen. Water capacity is 10,900 gallons nominal, for inner tank, and 390 gallons for the nitrogen tank. Inner and nitrogen tank material is SA 240 Type 304. Jacket material is ASTM A516 Gr 70 or equivalent steel.

a. The portable tank must conform with 49 CFR 178.338 except as follows:

(1) Requirements for tanks used to transport oxygen or a flammable lading do not apply.

(2) Impact test is not required on SA 240 stainless steel.

(3) Manholes are not required.

(4) §178.338-10 applies only to highway transportation.

(5) §178.338-13(a) also applies to lifting lugs, framework and any anchoring to the tank. §178.338-13(b) and (c) do not apply.

(6) "DOT-E 9436" must replace the mark "MC 338".

b. Each portable tank must conform with 49 CFR 173.318 as applicable for the lading.

8. SPECIAL PROVISIONS.

a. Shippers may use the packagings covered by this exemption pursuant to 49 CFR 173.22a.

b. A copy of this exemption must be carried aboard each cargo vessel and motor vehicle used to transport packages covered by this exemption.

c. Each portable tank must be plainly marked on both sides near the middle, in letters at least 2-inches high on a contrasting background, "DOT-E 9436".

d. Each portable tank must conform with 49 CFR 173.318 except that for shipments by cargo vessel, the one way travel time OWTT must be placed on the shipping paper and the dangerous cargo manifest immediately following the container description. The OWTT is determined by the formula:

OWTT = MRHT -24

e. In addition, a written record of the portable tank lading pressure and ambient (outside) temperature at the following times must be prepared for each shipment:

(i) At the start of each trip;

(ii) Immediately before and after any manual venting; and

(iii) At least once every 24 hours; and

(iv) At the destination point.

f. Each tank must be reinspected and retested once every 5 years in accordance with 49 CFR 173.32(e) as prescribed for DOT specification 51 portable tanks at a pressure of 14.7 plus one and one-fourth times the sum of the design pressure plus static head.

g. Transportation aboard a cargo vessel must conform with the following:

(1) Each portable tank must conform with 49 CFR 176.76(h).

(2) A portable tank may not be offered for transportation unless the pressure of the lading in the tank is equal to or less than that used to determine the marked rated holding time (MRHT), and the OWTT marked on the shipping paper is equal to or greater than the elapsed time between the start and termination of travel.

(3) Each tank must be examined after each shipment to determine its actual holding time. If examination indicates 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 tank is remarked with the reduced holding time determined by this examination.

9. REPORTING REQUIREMENTS. Any incident involving loss of contents of the package must reported to the OHMR as soon as practicable. The release of a material covered by this exemption is not a reportable incident if the release is through a pressure controlling device or pressure relief device set at 25 psig or less.

10. EXPIRATION DATE. August 31, 1987.

Issued at Washington, D.C.:

MAR 3 1986
(DATE)

Alan I. Roberts
Director
Office of Hazardous Materials Transportation

Address all inquiries to: Director, Office of Hazardous Materials Transportation Research and Special Programs Administration, U. S. Department of Transportation, Washington, D.C. 20590. Attention: Exemptions Branch.

Dist: FHWA , USCG