U.S. Department
of Transportation

**Research and
Special Programs
Administration**

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

MAR 1 0 2004

DOT-E 9985
(EIGHTH REVISION)

EXPIRATION DATE: February 28, 2006

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Taylor-Wharton Gas Equipment
Theodore, Alabama

2. PURPOSE AND LIMITATIONS:

This exemption authorizes the manufacture, mark, sale and use of a DOT Specification 4L cylinder for the transportation in commerce of carbon dioxide, refrigerated liquid and provides for the filling and discharging of a DOT Specification 4L cylinder without removal from the vehicle. This exemption provides no relief from any Hazardous Materials Regulation (HMR) other than as specifically stated herein.

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

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 177.834(h) in that a DOT Specification 4L cylinder is unloaded while on a motor vehicle.

5. BASIS: This exemption is based on the application of Taylor-Wharton dated March 5, 2004, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101): MAR 1 0 2004

Proper Shipping Name/ Hazardous Material Description	Hazard Class/ Division	Identi-fication Number	Packing Group
Carbon dioxide, refrigerated liquid	2.2	UN2187	n/a

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a vacuum insulated DOT Specification 4L (§ 178.57) welded cylinder having a service pressure of 292 psi securely attached in an upright position to a skid which is secured to a motor vehicle. The skid must be as described in Taylor-Wharton drawing numbers BC04-8C40, BC04-8C39, BC04-8C34, BC06-8C27, and B-BC06-9C00-A, on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA). The liquid cylinders are securely attached in an upright position to the skid by 5/16 diameter plated steel U bolts clamped to the cylinder halo right which is integrally welded to the cylinder. In addition:

1. Each cylinder must conform with Taylor-Wharton Gas Equipment drawings and related calculations for Models XL-45 HP and XL-50 HP submitted to and on file with OHMEA.

2. Each cylinder must be protected with at least one safety relief valve and at least one frangible disc complying with §§ 173.301(f) and 173.304a(b)(2). The relieving capacity of the safety devices must be in accordance with CGA Pamphlet S-1.1 on a bare tank basis, or with the insulation space saturated with gaseous lading at atmospheric pressure.

b. OPERATIONAL CONTROLS -

1. The maximum allowable filling density must be as follows:

Setting of Safety Relief Valve	Percent Filling Density
350 psig	97.3

2. The temperature of the cargo at time of loading must not exceed 0°F. (291 psig) for carbon dioxide. Maximum travel time is not to exceed 120 hours.

3. Total delivery time during loading or unloading must not exceed one hour.

4. The skids must be secured to the motor vehicle in accordance with 49 CFR Parts 393.100 - 393.106.

5. The filling (or discharge) hose may be transported containing product subject to the following conditions:

(i) The hose is enclosed in a wire mesh housing that must provide protection to the hose in the event of collision or overturn of the vehicle. The housing must be locked during transportation.

(ii) The driver must have been instructed as to necessary safeguards and proper procedures for operating the system.

(iii) The hose is protected by a pressure relief valve set-to-discharge at 400 psig.

(iv) The burst pressure of the hose must be at least four times the service pressure.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this exemption for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this exemption.

b. A person who is not a holder of this exemption, but receives a package covered by this exemption, may reoffer it for transportation provided no modifications or changes are made to the package and it is offered for transportation in conformance with this exemption and the HMR.

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

d. Each packaging manufactured under the authority of this exemption must be marked with a registration symbol designated by the Office of Hazardous Materials Exemptions and Approvals for a specific manufacturing facility.

e. A current copy of this exemption must be maintained at each facility where the package is manufactured under this exemption. It must be made available to a DOT representative upon request.

f. MARKING - Each cylinder must be plainly marked on both sides near the middle, in letters at least two inches high on a contrasting background "DOT-E 9985".

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.

10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each 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:

- All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, Parts 171-180.
- 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.
- 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 also inform the AAHMS, in writing, as soon as practicable of any incidents involving the package and shipments made under this exemption.

Issued in Washington, D.C.

Robert A. McGuire
for Associate Administrator for
Hazardous Materials Safety

MAR 1 0 2004
(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: KFW/sln