

April 9, 2007`



U.S. Department  
of Transportation

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

**Pipeline and Hazardous  
Materials Safety Administration**

DOT-SP 14424  
(SECOND REVISION)

EXPIRATION DATE: February 28, 2009

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Chart Industries, Inc.  
Ball Ground, GA
2. PURPOSE AND LIMITATIONS:
  - a. This special permit authorizes transportation in commerce of a DOT Specification 4L cylinder containing carbon dioxide, refrigerated liquids which may be filled and discharged without removal from the motor vehicle. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.
  - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.
  - c. No party status will be granted to this special permit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: The marking requirements in §§ 172.301(b) and (c); and § 177.834(h) in that a DOT Specification 4L cylinder may not be filled or discharged without being removed from the motor vehicle, except as provided herein.

5. BASIS: This special permit is based on the application of Chart Industries, Inc., dated October 2, 2006, submitted in accordance with § 107.105 and the public proceeding thereon and additional information dated March 30, 2007.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

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 are two vacuum insulated DOT Specification 4L (§ 178.57) welded cylinders having a service pressure of 350 psig securely attached in an upright position to a steel frame enclosure which is secured to a motor vehicle. The steel frame enclosure must be as shown in Chart Industries drawing number D-13375338, on file with the Office of Hazardous Materials Special Permits and Approvals (OHMSPA). In addition:

(1) Each cylinder must conform with Chart Industries drawing number D-13394281 on file with the OHMSPA and in compliance with all requirements of the HMR (including, but not limited to design service temperatures, pressure relief devices, and filling limits) applicable to carbon dioxide, refrigerated liquid.

(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(e)(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 housing that must provide mechanical 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.

(6) The delivery hose must be relieved of pressure during transportation.

(7) All discharge valves on the DOT Specification 4L cylinders must be closed during transportation.

(8) Each motor vehicle transporting a packaged covered by this special permit must be attended at all times during loading and unloading operations by a qualified person. For the purposes of this requirement,

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"attended" and "qualified" have the meanings described in § 177.834(i)(3) and (4), respectively.

8. SPECIAL PROVISIONS:

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

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

c. The marking requirements specified in §§ 172.301(b) and (c) are waived for the cylinders; however, each frame assembly must be plainly and durably marked in locations readily visible from each side of the vehicle, in letters at least two inches high on a contrasting background "DOT-SP 14424".

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each motor vehicle used to transport packages covered by this special permit.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit 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 special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

o Persons operating under the terms of this special permit 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 special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

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

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "special permit" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Bob Richard  
Deputy Associate Administrator  
for Hazardous Materials Safety

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

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Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at

[http://hazmat.dot.gov/sp\\_app/special\\_permits/spec\\_perm\\_index.htm](http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm)

Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: SS/dl