

April 11, 2006



U.S. Department  
of Transportation

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

**Pipeline and  
Hazardous Materials  
Safety Administration**

DOT-SP 12431  
(THIRD REVISION)

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: (See individual authorization letter)
2. PURPOSE AND LIMITATIONS:
  - a. This special permit authorizes the transportation in commerce of non-DOT specification cylinders conforming with all regulations applicable to a DOT 4BA specification, except as specified herein, for the transportation in commerce of the Division 2.2 materials authorized by this special permit. 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.
  - c. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.302a, 173.304a, 175.3, in that a non-DOT specification cylinder is not authorized except as specified herein.
5. BASIS: This special permit is based on the application of 3M Center dated March 30, 2006, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

| <b>Proper Shipping Name/<br/>Hazardous Material Description</b>                       | <b>Hazard<br/>Class/<br/>Division</b> | <b>Identi-<br/>fication<br/>Number</b> | <b>Packing<br/>Group</b> |
|---|---------------------------------------|--|--------------------------|
| Dichlorodifluoromethane or Refrigerant gas R12  | 2.2                                   | UN1028                                 | N/A                      |
| Chlorodifluorobromomethane or Refrigerant gas R12B1                                   | 2.2                                   | UN1974                                 | N/A                      |
| Chlorotrifluoromethane or Refrigerant gas R13   | 2.2                                   | UN1022                                 | N/A                      |
| Tetrafluoromethane or Refrigerant gas R14   | 2.2                                   | UN1982                                 | N/A                      |
| Bromotrifluoromethane or Refrigerant gas R13B1  | 2.2                                   | UN1009                                 | N/A                      |
| Dichlorofluoromethane or Refrigerant gas R21  | 2.2                                   | UN1029                                 | N/A                      |
| Chlorodifluoromethane or Refrigerant gas R22  | 2.2                                   | UN1018                                 | N/A                      |
| 1,2-Dichloro-1,1,2,2-Tetrafluoroethane or Refrigerant gas R114                        | 2.2                                   | UN1958                                 | N/A                      |
| Chloropentafluoroethane or Refrigerant gas R115                                       | 2.2                                   | UN1020                                 | N/A                      |
| Hexafluoroethane, compressed or Refrigerant gas R116                                  | 2.2                                   | UN2193                                 | N/A                      |
| 1-Chloro-1,2,2,2-tetrafluoroethane or Refrigerant gas R124                            | 2.2                                   | UN1021                                 | N/A                      |
| 1-Chloro-2,2,2-trifluoroethane or Refrigerant gas R133a                               | 2.2                                   | UN1983                                 | N/A                      |
| 1,1,1,2-Tetrafluoroethane or Refrigerant gas R134a                                    | 2.2                                   | UN3159                                 | N/A                      |
| Dichlorodifluoromethane and Difluoroethane azeotropic mixture or Refrigerant gas R500 | 2.2                                   | UN2602                                 | N/A                      |

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| Proper Shipping Name/<br>Hazardous Material Description   | Hazard<br>Class/<br>Division | Identi-<br>fication<br>Number | Packing<br>Group |
|---|------------------------------|-------------------------------|------------------|
| Chlorodifluoromethane and<br>Chloropentafluoroethane mixture<br>or Refrigerant gas R502               | 2.2                          | UN1973                        | N/A              |
| Chlorotrifluoromethane and<br>Trifluoromethane azeotropic<br>mixture or Refrigerant gas R503          | 2.2                          | UN2599                        | N/A              |
| Hexafluoropropylene or<br>Refrigerant gas R1216   | 2.2                          | UN1858                        | N/A              |
| Refrigerant gases, n.o.s.   | 2.2                          | UN1078                        | N/A              |
| Refrigerant gases, n.o.s.<br>(Trichlorofluoromethane, R11)  | 2.2                          | UN1078                        | N/A              |
| Refrigerant gases, n.o.s.<br>(Trichlorotrifluoroethane,<br>R113)                                      | 2.2                          | UN1078                        | N/A              |
| Refrigerant gases, n.o.s.<br>(Dichlorotrifluoroethane, R123)  | 2.2                          | UN1078                        | N/A              |
| Liquefied and non-liquefied<br>compressed gases, authorized<br>for DOT 4BA specification<br>cylinders | 2.2                          | As<br>appro-<br>priate        | N/A              |

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification stainless steel cylinder conforming with DOT Specification 4BA (§§ 178.35 and 178.51) except as follows:

§ 178.35(f) Markings.

(1) Each cylinder must be marked with the following information:

(i) The cylinder must be marked "DOT-SP 12431" instead of DOT-4BA followed by the service pressure.

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§ 178.51(a) Type, size and service pressure.

Cylinder must be cylindrical in shape, with integrally formed spherical or elliptical heads. Cylinder ends closed by spinning are not authorized. Shells are to be seamless cylindrical with integrally formed heads, and joined by welding of one circumferential seam. The maximum water capacity is 90 pounds, and the maximum service pressure is 350 psig.

§ 178.51(b) Steel. Material of construction must be ASTM A 240 Type 304, Type 316, or Type 316L stainless steel. The steel analysis must conform to the following:

|                        | <u>Composition (%)</u> |            |             |
|------------------------|------------------------|------------|-------------|
|                        | <u>304</u>             | <u>316</u> | <u>316L</u> |
| <u>Stainless steel</u> |                        |            |             |
| Carbon (Max.)          | 0.08                   | 0.08       | 0.03        |
| Manganese (Max.)       | 2.00                   | 2.00       | 2.00        |
| Phosphorus (Max.)      | 0.045                  | 0.045      | 0.045       |
| Sulphur (Max.)         | 0.030                  | 0.030      | 0.030       |
| Silicon (Max.)         | 0.75                   | 0.75       | 0.75        |
| Chromium               | 18.0-20.0              | 16.0-18.0  | 16.0-18.0   |
| Nickel                 | 8.0-10.5               | 10.0-14.0  | 10.0-14.0   |
| Molybdenum             | ----                   | 2.0-3.0    | 2.0-3.0     |
| Copper (Max.)          | ----                   | ----       | ----        |
| Nitrogen (Max.)        | 0.10                   | 0.10       | 0.10        |

§ 178.51(g) Heat treatment. Heat treatment is not required.

b. TESTING - Cylinders must be requalified in accordance with the requirements of § 180.209 as applicable to DOT 4BA specification cylinders. Cylinders used in recovered refrigerant service are herein defined by DOT as being in corrosive service.

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Sections 180.209(e), 180.209(f) and 180.209(g) do not apply to cylinders used for recovered refrigerants.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this special permit, but 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 offered 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. Packages permanently marked 'DOT-E 12431', prior to October 1, 2007 may continue to be used under this special permit for the remaining service life the package or until the special permit is no longer valid. Packages marked on or after October 1, 2007 must be marked 'DOT-SP 12431'.

d. Shipping papers displaying 'DOT-E 12431' may continue to be used until October 1, 2007, provided the special permit remains valid.

e. New manufacture of the packagings under this special permit is not authorized.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo aircraft only, and passenger-carrying aircraft.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each aircraft used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.

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 'exemption' 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.

A handwritten signature in blue ink, appearing to read "R. Ryan Parker" or similar, written in a cursive style.

for Robert A. McGuire  
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.

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)  
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PO: CF/DL/KAH