



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

April 15, 2026

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 21691

EXPIRATION DATE: 2028-03-31

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Amtrol-alfa, Metalomecânica, S.A.
Guimaraes, Portugal

U.S. AGENT: Worthington Industries
Columbus, OH

2. PURPOSE AND LIMITATIONS:

a. This special permit authorizes the manufacture, mark, sale and use of a non-DOT specification refillable welded steel cylinder for the transportation in commerce of the hazardous materials authorized by this special permit. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.

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. In accordance with 49 CFR 107.107(a) party status may not be granted to a manufacturing permit. These packagings may be used in accordance with 49 CFR 173.22a.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171- 180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.304a in that non-DOT specification cylinders are not authorized, except as specified herein.

Tracking Number: 2023125143

5. **BASIS:** This special permit is based on the application of Amtrol-alfa, Metalomecânica, S.a. dated December 20, 2023, and additional information dated February 17, 2025 and June 17, 2025, submitted in accordance with § 107.105 and the public proceeding thereon.
6. **HAZARDOUS MATERIALS (49 CFR 172.101):**

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Chloropentafluoroethane <i>or</i> Refrigerant gas R 115	2.2	UN1020	N/A
Dichlorodifluoromethane <i>or</i> Refrigerant gas R 12	2.2	UN1028	N/A
Dichlorodifluoromethane and difluoroethane azeotropic mixture <i>or</i> Refrigerant gas R 500 <i>with approximately 74 percent dichlorodifluoromethane</i>	2.2	UN2602	N/A
Chlorodifluoromethane and chloropentafluoroethane mixture <i>or</i> Refrigerant gas R 502 <i>with fixed boiling point, with approximately 49 percent chlorodifluoromethane</i>	2.2	UN1973	N/A
Chlorodifluoromethane <i>or</i> Refrigerant gas R 22	2.2	UN1018	N/A
1,2-Dichloro-1,1,2,2- tetrafluoroethane <i>or</i> Refrigerant gas R 114	2.2	UN1958	N/A
1-Chloro-1,2,2,2-tetrafluoroethane <i>or</i> Refrigerant gas R 124	2.2	UN1021	N/A
Pentafluoroethane <i>or</i> Refrigerant gas R 125	2.2	UN3220	N/A
Liquefied gas, n.o.s.	2.2	UN3163	N/A
Refrigerant gases, n.o.s.	2.2	UN1078	N/A
Difluoromethane <i>or</i> Refrigerant gas R 32	2.1	UN3252	N/A

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
1,1,1,2-Tetrafluoroethane <i>or</i> Refrigerant gas R 134a	2.2	UN3159	N/A
Refrigerant gas R 404A	2.2	UN3337	N/A
Refrigerant gas R 407A	2.2	UN3338	N/A
Refrigerant gas R 407C	2.2	UN3340	N/A
Propane, <i>see also</i> Petroleum gases, liquefied	2.1	UN1978	N/A
Butane <i>see also</i> Petroleum gases, liquefied	2.1	UN1011	N/A
Liquefied gas, flammable, n.o.s.	2.1	UN3161	N/A
Environmentally hazardous substance, liquid, n.o.s.	9	UN3082	III

7. SAFETY CONTROL MEASURES:

a. PACKAGING: Prescribed packagings are non-DOT specification welded cylinders, which are designed, manufactured, and tested in accordance with the EN 14638-3:2010+AC:2012 standard on file with OHMS. Cylinders have a maximum capacity of 15.7 liters and maximum service pressure of 400 psig. In addition, cylinders must meet the following design and construction requirements:

(1) **Materials:** Steel composition shall be limited to high strength, dual phase, deep drawing quality, killed, low carbon with properties of Grade 1 steel as required in 49 CFR Appendix A of Part 178 except that the maximum silicon content must not exceed 0.5%.

(2) **Thickness:** Measured wall thickness shall not be greater than the minimum guaranteed thickness plus 5%. Minimum guaranteed thickness must be calculated by the following equation:

$$t = \frac{P_h \times D}{15 \times R_{egi} + P_h}$$

where, P_h is the hydraulic test pressure, D is the outer diameter, i is the area of the cylinder used for the calculation under consideration. R_{egi} is the minimum guaranteed value of the yield strength, in MPa, for the finished cylinder, at a determined area “ i ” of the cylinder.

Thickness of heads and bottoms shall not be less than 90% of minimum wall thickness.

(3) Openings: openings shall be fitted with a boss by welding.

b. REQUALIFICATION: Periodic inspection and testing must be in accordance with:

(1) §§ 180.209(a) and (c);

(2) Rejection criteria defined in ISO 10460, Annex C; and

(3) EN-14638-3:2010+AC:2012.

c. OPERATIONAL CONTROLS:

(1) Each cylinder must be equipped with a pressure relief device per § 173.301(f) and must not be liquid full at 55 °C (131 °F).

(2) Cylinders that are exposed to fire must be removed from service.

(3) Cylinders that are damaged in accordance with the criteria defined in ISO 10460 shall be removed from service.

d. MARKING: Each cylinder must be plainly and durably marked “DOT-SP-21691”.

8. SPECIAL PROVISIONS:

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

b. A person who is not a holder of this special permit, but receives a packaging covered by this special permit, may reoffer it for transportation provided no modification or change is made to the packaging and it is offered for transportation in conformance with this special permit and the HMR.

- c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.
- d. Each packaging manufactured under the authority of this special permit must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Safety Approvals for a specific manufacturing facility.
- e. A current copy of this special permit must be maintained at each facility where the packaging is manufactured under this special permit. It must be made available to a DOT representative upon request.
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo-only aircraft, and cargo vessel.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel, aircraft or motor vehicle 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.:



for William Quade
Acting Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, East Building PHH-13, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at <https://www.phmsa.dot.gov/approvals-and-permits/hazmat/special-permits-search>. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: AC/TG