



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

**May 10, 2024**

1200 New Jersey Avenue, SE  
Washington, DC 20590

DOT-SP 20591  
(THIRD REVISION)

**EXPIRATION DATE: 2028-04-30**

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Raytheon Company  
Tucson, AZ

2. PURPOSE AND LIMITATIONS:

a. This special permit authorizes the manufacture, mark, sale, and use of non-DOT specification stainless steel cylinders conforming with all the regulations applicable to a DOT 3A specification cylinder, except as specified herein, for the transportation of hazardous materials in commerce. 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.

Tracking Number: 2023125042

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.301(f), in that the cylinder must be equipped with a pressure relief device and § 173.302(a)(1) 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 Raytheon Company dated December 18, 2023, submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Argon, <i>compressed</i>	2.2	UN1006	N/A

7. SAFETY CONTROL MEASURES:
- a. PACKAGING: Prescribed packaging is a non-DOT specification cylinder conforming to drawing number 13317331 and the In-Flight Coolant Assembly drawing number 13223873 received on November 23, 2017, and on file with the Office of Hazardous Materials Safety (OHMS) and with the requirements for DOT Specification 3A cylinders (§§ 178.35 and 178.36), except as follows:
- § 178.35(e) *Safety devices*.
- No pressure relief device is required on the completed cylinder.
- § 178.35(f) *Markings*.
- Cylinders must be marked “DOT-SP 20591” in lieu of “DOT-3A” followed by the service pressure.
- § 178.36(a) *Type, size and service pressure*.

The cylinder bodies and components are machined from 15-5 stainless steel with electron beam welded ends to create a pressure vessel. The cylinder's water capacity is less than 1,000 pounds. The maximum service pressure shall not exceed 6,100 psig.

§ 178.36(b) *Steel.*

The authorized material of construction is Crew Bar, Type 15-5 PH, solution heat treated in accordance with AMS-5659.

§ 178.36(e) *Welding or brazing.*

The cylinder shall be constructed using welding end caps in accordance with MIL-STD 1522A.

§ 178.36(g) *Heat treatment.*

The cylinder must be heat treated in accordance with MIL-H-6875 after welding and brazing are complete.

§ 178.36(h) *Openings in cylinders and connections.*

Openings and connections must conform as shown in the drawings on file with the OHMS.

§ 178.36(i) *Hydrostatic test.*

Each cylinder must be proof pressure tested at 12,500 psi for a minimum of 30 seconds with nitrogen gas.

§ 178.36(m) *Leakage test.*

All cylinders must undergo residual gas analysis to determine if there is leakage after they have been filled and welded closed.

- b. TESTING: Requalification is not applicable.
- c. OPERATIONAL CONTROLS: This special permit authorizes transportation of the cylinder and assembly described in paragraph 7.a. as well as higher assemblies with those components installed. Shipments that include an explosive squib actuation installed in the In-Flight Coolant Assembly must have a valid EX approval letter.

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 package covered by this special permit, may reoffer it for transportation provided no modification or change is made to the package 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 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, cargo vessel, passenger-carrying aircraft, and cargo aircraft.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel, aircraft, and 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 Schoonover  
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material 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: KH