



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

March 04, 2022

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 9634
(ELEVENTH REVISION)

EXPIRATION DATE: 2026-02-28

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Luxfer Inc.
Riverside, CA
2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the manufacture, mark, sale and use of a non-DOT specification cylinder conforming with all regulations applicable to a DOT FRP-1 cylinder, except as specified herein to be used for the transportation in commerce of certain Division 2.1 or 2.2 materials. This special permit provides no relief from the Hazardous Materials Regulations 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.
 - 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 §§ 173.302a(a)(1), 173.304a(a)(1), and 173.304a(a)(4)(ii) in that the use of a non-DOT specification cylinder is not authorized, except as specified herein.
5. BASIS: This special permit is based on the application of Luxfer Inc. dated January 14, 2022, 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
Hydrogen and methane mixture, compressed	2.1	UN2034	N/A
Methane, compressed <i>or</i> Natural gas, compressed (<i>with high methane content</i>)	2.1	UN1971	N/A
Division 2.2 gases under specific commodity names (air, compressed, carbon dioxide, helium, compressed, nitrogen, compressed, nitrous oxide, oxygen and oxygen-nitrogen mixture, containing not over 39% oxygen classified as nonflammable gases).	2.2	As appropriate	N/A

7. PACKAGING(S) and SAFETY CONTROL MEASURES:

a. PACKAGING: Packaging prescribed is a non-DOT specification fiber reinforced plastic (FRP) full composite (FC) cylinder in full conformance with Luxfer Inc. drawing L45T45-6 Rev. 0 on file with the Office of Hazardous Materials Safety (OHMS), and in conformance with the requirements of DOT FRP-1 Standard, Revision 2 dated February 15, 1987 (Basic Requirements for Fiber Reinforced Plastic (FRP) Type 3FC Composite Cylinders) except as follows:

§ 178.AA-5 *Authorized material and identification of material.*

- (a) Aluminum liner must be 6061 and T6 temper.

§ 178.AA-6 *Manufacture.*

- (a) Add to end of the paragraph: Each cylinder must be a seamless cylinder and may be produced by cold or hot backward extrusion, cold drawing, or from an extruded tube with swaged or spun ends.

b. TESTING: Each cylinder must be reinspected and hydrostatically retested every three years in accordance with § 180.209 as prescribed for DOT 3HT cylinders, except that the rejection elastic expansion criteria does not apply, permanent volumetric expansion must not exceed 5 percent of total volumetric expansion at test pressure and

retest dates must be steel stamped on the outer exposed metallic surface of the cylinder neck, or marked on a label securely affixed to the cylinder and over coated with epoxy. Reheat treatment or repair of rejected cylinders is not authorized.

c. OPERATIONAL CONTROLS:

- (1) Cylinders manufactured under this special permit are not authorized for use fifteen (15) years after the date of manufacture.
- (2) Use of these cylinders for underwater breathing is not authorized.
- (3) Cylinders used in oxygen service must be in compliance with § 173.302a(b)(5)(1) through (4).
- (4) Cylinders must be packaged in accordance with § 173.301(a)(9).
- (5) Cylinders used in nitrous oxide service must conform with § 173.304(a)(4).

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 modifications or changes are 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 cylinder manufactured under the authority of this special permit must be marked with a registration symbol designated by the OHMS for a specific manufacturing facility.
- e. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.
- f. Transportation of flammable gas is not authorized aboard cargo vessel or passenger-carrying aircraft.

- g. Transportation of oxygen is only authorized when in accordance with § 175.501.
- 9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, cargo aircraft only and passenger-carrying aircraft (see paragraphs 8(f) and (g) for restriction).
- 10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel and aircraft used to transport packages covered by this special permit. The shipper must furnish a current 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 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: TG