



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

November 21, 2024

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 20681
(THIRD REVISION)

EXPIRATION DATE: 2028-10-31

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Proserv UK Ltd.
Aberdeen, Scotland, United Kingdom

US AGENT: Luxfer Gas Cylinders
Riverside, CA
2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the manufacture, mark, sale, and use of a non-DOT specification packaging conforming in part to DOT Specification 3A, except as specified herein, 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 §§ 173.201(c), 173.302(a)(1), and 173.304(a) in that non-DOT specification cylinders are not authorized, except as specified herein.

Tracking Number: 2024055385

NOTE: This does not relieve the holder of this special permit from securing an approval, if required, for manufacturing or retesting cylinders from the Associate Administrator for Hazardous Materials Safety.

5. BASIS: This special permit is based on the application of Proserv UK Ltd. dated May 27, 2024, 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, compressed	2.2	UN1006	N/A
Compressed gas, flammable, n.o.s.	2.1	UN1954	N/A
Compressed gas, toxic, flammable, n.o.s.	2.3	UN1953	Hazard Zone B, C, or D As Appropriate
Hydrocarbon gas mixture, compressed, n.o.s.	2.1	UN1964	N/A
Hydrocarbon gas mixture, liquefied, n.o.s.	2.1	UN1965	N/A
Hydrogen sulfide	2.3	UN1053	N/A
Methane, compressed <i>or</i> Natural gas, compressed (<i>with high methane content</i>)	2.1	UN1971	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Petroleum crude oil	3	UN1267	I
Petroleum gases, liquefied <i>or</i> Liquefied petroleum gas	2.1	UN1075	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING: Prescribed packaging is a non-DOT specification oilwell sampling cylinder, threaded on both ends, with a maximum design pressure of 20,000 psig and a maximum volume of 2,902 cubic centimeters. Each cylinder must comply with the design calculations, drawings, material specifications and engineering specifications submitted with Proserv UK Ltd's application on file with the Office of Hazardous Materials Safety (OHMS) and conforming to DOT Specification 3A (§§ 178.35 and 178.36), except as follows:

§ 178.35(e) *Safety devices.*

No pressure relief is required on the completed cylinder. The cylinder must be equipped with elastomeric seals that relieve pressure when subjected to a pool fire.

§ 178.35(f) *Markings.*

Cylinders must be marked in accordance with this section except that the cylinder must be marked "DOT-SP 20681" in lieu of "DOT-3A".

§ 178.36(b) *Steel.*

The materials must meet the specifications for suitability in Hydrogen Sulfide (H₂S) service that are provided in the Proserv's application on file with the OHMS and the National Association for Corrosion Engineers (NACE) Specification MR0175. The authorized materials for the oilwell sampling cylinders are Inconel 625 (UNS06625), Inconel 725 (UNS07725) and 17-4PH Stainless Steel (UNS S17400).

§ 178.36(d) *Manufacture.*

The Type12 ceramic coating may be applied to the interior surfaces of the cylinders in accordance with Proserv's application on file with OHMS. The cylinder must not be subjected to temperatures above 427 °C during the coating application process. The coating must be performed by Bodycote Surface Technologies Ltd. As an alternative, Silcotek's Dursan and Silconert coatings may be applied to both the interior and exterior surfaces of the cylinders using the Chemical Vapor Deposition process in accordance with the application temperatures and the technical specifications on file with OHMS.

§ 178.36(f) *Wall thickness.*

The minimum wall thickness for this cylinder may not be less than 0.541 inch (13.75 millimeter).

§ 178.36(g) *Heat treatment.*

No heat treatment is required for the completed cylinder.

§ 178.36(h) *Openings in cylinders and connections (valves, fuse plugs, etc.).*

Cylinder threads are as specified in the thread calculations in the Proserv UK Ltd. application on file with the OHMS.

§ 178.36(j) *Flattening test.*

No flattening test is required.

§ 178.36(l) *Acceptable results for physical tests.*

Inconel 725 (UNS N07725) in accordance with ASTM B637, B805 and Proserv UK Ltd Material Specification MS0000042:

Tensile Strength:	167,0000 psi (1,150 MPa) minimum
Yield Strength: (0.2% Offset)	121,000 psi (835 MPa) minimum
Elongation in 4D:	20% minimum
Reduction in Area:	35% minimum
Hardness:	40 HRC maximum average 42 HRC maximum single

b. TESTING:

(1) Each cylinder must be reinspected and hydrostatically retested in accordance with §§ 180.205 and 180.209 as prescribed for DOT Specification 3A cylinders.

(2) Reheat treatment or repair of rejected cylinders is not authorized.

(3) When a hydrostatic retest of a cylinder is performed due to equipment failure as authorized by § 180.205(g)(5), only two such retests are permitted.

c. OPERATIONAL CONTROLS:

(1) Each cylinder must be packaged in the transportation box as specified in the drawings and specifications on file with the OHMS.

(2) Emergency response information provided with the shipment and available via an emergency response telephone number must indicate that the cylinders are not fitted with pressure relief devices and must provide appropriate guidance in case the cylinders are exposed to fire.

(3) The cylinders must be cleaned and visually inspected after each use.

(4) After the initial application of the Dursan, Silconert or Tech12 coating material, Proserv may reapply the coating according to the following criteria:

(i) Cylinder components that are manufactured with Inconel 625 may be subjected to an unlimited number of coating reapplications using if those components do not contribute to the cylinder's structural integrity (e.g., piston).

(ii) Cylinders manufactured with Inconel 725 may be subjected to a maximum of 9 coating reapplications.

(iii) Cylinders manufactured with 17-4PH stainless steel may be subjected to only 1 coating reapplication.

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. These cylinders are only authorized for transportation in conjunction with oil well sampling service.
 - e. 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.
 - f. 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.
 - g. Transportation of Division 2.1 (flammable gases) and Division 2.3 (gases which are poisonous by inhalation) materials are not authorized aboard cargo vessel and cargo-only aircraft unless specifically authorized in the Hazardous Materials Table (§ 172.101).
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, and cargo-only aircraft (see restrictions in paragraph 8.g.).
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 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: BM/Casey Chambers