



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

**March 12, 2024**

1200 New Jersey Avenue, SE  
Washington, DC 20590

DOT-SP 12116  
(EIGHTEENTH REVISION)

**EXPIRATION DATE: 2024-11-30**

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Proserv UK Ltd  
Aberdeen, Scotland, UK  
  
U.S. AGENT: Luxfer Gas Cylinders  
Riverside, CA
2. PURPOSE AND LIMITATION:
  - a. This special permit authorizes the transportation in commerce of certain materials described in paragraph 6 below, in non-DOT specification cylinders used for oil well sampling. 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.
  - c. No party status will be granted to this special permit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.201, 173.302a, and 173.304a in that a non-DOT specification cylinder is not authorized except as specified herein § 173.301(f) in that each non-DOT specification cylinder is not equipped with a pressure relief device.
5. BASIS: This special permit is based on the application of Proserv UK Limited dated August 8, 2023, submitted in accordance in accordance with § 107.105 and the public proceeding thereon.

Tracking Number: 2023084427

6. HAZARDOUS MATERIALS (49 CFR 172.101):

<b>Hazardous Materials Description</b>			
<b>Proper Shipping Name</b>	<b>Hazard Class/ Division</b>	<b>Identification Number</b>	<b>Packing Group</b>
Compressed gas, flammable, n.o.s	2.1	UN1954	N/A
Hydrocarbon gases mixtures, compressed, n.o.s.	2.1	UN1964	N/A
Hydrocarbon gases mixtures, liquefied, n.o.s.	2.1	UN1965	N/A
Hydrogen sulphide (H <sub>2</sub> S)	2.3	UN1053	N/A
Natural gas compressed (with high methane content)	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
Argon, compressed	2.2	UN1006	N/A
Compressed gas, toxic, flammable, n.o.s, Inhalation Hazard Zone B	2.3	UN1953	N/A

7. SAFETY CONTROL MEASURES:

- a. PACKAGING: Prescribed packaging is a non-DOT specification oil well sampling cylinder, threaded on both ends, with a maximum design pressure of 15,000 psig, and a maximum volume of 1,500 cc. Each cylinder must comply with the design calculations, drawings, material specifications, and engineering specifications submitted with Proserv's application for special permit on file with the Office of Hazardous Materials Safety (OHMS). In addition, each cylinder must conform with §§ 178.35 and 178.36 except as follows:

§ 178.35(e) *Safety devices.*

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

§ 178.35(f) *Marking.*

Applies except that cylinders must be marked "DOT-SP 12116" in lieu of the DOT Specification marking.

§ 178.36(b) *Steel.*

17-4PH stainless steel (UNS S17400) double heat treated at 1150 °F, Inconel 725 (UNS N07725), Inconel 718 (UNS N07718) or Inconel 625 (UNS N06625). The materials must meet the requirements of the National Association of Corrosion Engineers (NACE) Specification MR-01-75 for suitability in hydrogen sulfide (H<sub>2</sub>S) service.

§ 178.36(d) *Manufacture.*

(ADD) Type 12 ceramic coatings may be applied to the interior surfaces of cylinders in accordance with Proserv's June 9, 2008, application on file with OHMS. The cylinder must not be subjected to temperatures above 427 °C during the coating application process. Coating must be performed by Bodycote Surface Technologies Ltd. As an alternative, Silcotek Dursan and Silconert 2000 coatings may be applied to the interior and exterior surfaces of the cylinders using a Chemical Vapor Deposition process in accordance with the application temperatures and Technical specifications in the June 10, 2014, application on file with OHMS.

§ 178.36(f) *Wall thickness.*

The minimum wall thickness must be such that the wall stress at the minimum specified test pressure may not exceed 67 percent of the minimum yield strength of the steel as determined from the physical tests required in paragraphs (k) and (l).

§ 178.36(g) *Heat treatment.*

No heat treatment required for the completed cylinder.

§ 178.36(j) *Flattening test.*

No flattening test is required.

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

Minimum Tensile strength:	135,000 psi
Minimum Yield strength:	105,000 psi
Elongation:	16% in 4D or 1 inch gage specimen

b. TESTING:

- (1) Each cylinder must be requalified hydrostatic tester via water jacket method in accordance with § 180.209(a) as prescribed for DOT 3A Specification cylinders.
- (2) Reheat treatment or repair of rejected cylinders is not permitted.
- (3) When a hydrostatic retest of a cylinder is performed due to equipment failure as authorized in § 180.209(f), only two such retests are permitted.

c. OPERATIONAL CONTROLS:

- (1) Each cylinder must be packed in the transportation box as specified in the application for special permit 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 receptacles are not fitted with pressure relief devices and provide appropriate guidance in case receptacles are exposed to fire.
- (3) The cylinders are authorized to undergo 1 recoating process after the initial treatment of Silcotek Dursan or Silconert 2000 coatings. The initial coating must be completely removed and the cylinder subjected to a second application of Dursan or Silconert 2000 using the Chemical Vapor Deposition process. Once the coating is reapplied, the cylinder must be hydrostatically pressure tested in accordance with § 178.36(i). After the cylinder coating is removed and the cylinder is recoated the cylinder must be permanently marked “May not be re-coated”.
- (4) Cylinders constructed using Inconel Alloy 725 or Alloy 718 are authorized to be recoated with Silcotek Dursan or Silconert 2000 up to a maximum of nine (9) additional recoatings, not including the initial coat. Prior to recoating the cylinder, the initial coat must be removed and the Dursan or Silconert 2000

recoating application must use the Chemical Vapor Deposition process. Once the coating is reapplied, the cylinder must be hydrostatically pressure tested in accordance with § 178.36(i).

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this special permit who 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 reoffered 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. The cylinders are authorized for oil well sampling service only.

d. Transportation of Division 2.1 (flammable gases) or Division 2.3 (toxic gases) materials are not authorized aboard cargo vessel or 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.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel or 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 the 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: AC/TG