



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

June 02, 2025

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 8131
(FIFTEENTH REVISION)

EXPIRATION DATE: 2029-05-31

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: National Aeronautics and Space Administration
Washington, DC
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of certain non-DOT specification pressure vessels for the shipment of Oxygen, compressed, Division 2.2. 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 §§ 173.301a(d), 173.301(h), and 173.302a(a) in that a non-DOT specification packaging is not authorized, except as specified herein.
5. BASIS: This special permit is based on the application of NASA dated January 27, 2025, submitted in accordance with § 107.105 and the public proceeding thereon.

Tracking Number: 2025015393

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Oxygen, compressed	2.2	UN1072	N/A

7. SAFETY CONTROL MEASURES:

PACKAGING: Prescribed packaging is a forged pressure vessel (sphere) described as "SOP Tank" made of Inconel 718 metal conforming to Hamilton Standard drawing SV 799045/2 on file with the Office of Hazardous Safety (OHMS). Maximum internal volume is 95 cubic inches. Minimum wall thickness is 0.119 inch. Minimum test pressure is 11,100 psig and minimum burst is 14,800 psig. Maximum charge pressure is 6,000 psi at 60 °F. The spheres must be shipped in strong outside packagings. The spheres may be shipped manifolded but must be packaged in such a manner that the assemblies are adequately protected during transportation. Each valve of the manifolded containers must be closed during transit. The spheres may be shipped without safety devices.

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 sphere must be used exclusively in support of the International Space Station. Maximum quantity is limited to 60 spheres manufactured in accordance with this special permit.

- d. The service life of part number SV778880-1 (less Serial Nos. 08, 11, and 12) and part number SV809816-1 (all Serial numbers) may not exceed 40 years or 300 pressurizations, whichever occurs first. The service life of Part No. SV778880-1, Serial Nos. 08, 11 and 12 may not exceed 25 years or 300 pressurization cycles.
 - e. Each outside container must be marked "DOT-SP 8131".
 - f. The transportation of oxygen by aircraft is only authorized when in accordance with § 175.501.
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo aircraft only.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each 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: TG/AS