



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

January 04, 2024

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 16178
(THIRD REVISION)

EXPIRATION DATE: 2027-11-30

(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 Division 2.2 compressed gases in non-DOT specification composite cylinders for use in the Space Program. 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 the development of this special permit only considered the hazards and risks associated with the 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 §§ 173.302, 173.302a, and 173.304a in that a non-DOT specification cylinder is not authorized, except as provided herein.
5. BASIS: This special permit is based on the application of National Aeronautics and Space Administration dated December 5, 2023, submitted in accordance with § 107.117 and the determination that it is necessary to protect life and property and additional information dated January 4, 2024.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Argon, compressed	2.2	UN1006	N/A
Carbon dioxide	2.2	UN1013	N/A
Compressed gas n.o.s. (<i>Synthetic Air (O2:21% + N2:79%)</i>)	2.2	UN1956	N/A
Compressed gas n.o.s. (<i>Argon (98%) + Hydrogen (<2%)</i>)	2.2	UN1956	N/A
Compressed gas, oxidizing, n.o.s.	2.2	UN3156	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING: Packaging prescribed is an aluminum lined composite cylinder consisting of carbon fiber wrapping with epoxy resin followed by glass fiber overwrap. The cylinders (Gas Bottles) are designed and verified to the safety standards of International Space Station (ISS) and must be in accordance with the NASA's applications dated May 25, 2014 and December 5, 2023, and on file with Office of Hazardous Materials Safety (OHMS).

b. OPERATIONAL CONTROLS:

(1) The cylinders must be packed to protect from damage in Cargo Transport Bags (CTB) which should be further packaged in corrugated fiberboard, Tri-Wall Pack box as described in NASA's applications dated May 25, 2014 and December 5, 2023, and on file with OHMS.

(2) The cylinder temperature must be controlled to between 5°C - 30°C during transportation.

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.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle and cargo vessel.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel and motor vehicle used to transport packages covered by this special permit.

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: ae