

November 25, 2025



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

DOT-SP 22090

**EXPIRATION DATE: 2027-10-31**

(FOR RENEWAL, SEE 49 CFR 107.109)

1. **GRANTEE:** K2 Space Corporation  
Torrance, CA
2. **PURPOSE AND LIMITATION:**
  - a. This special permit authorizes the transportation in commerce of non-DOT specification cylinders containing compressed krypton (UN1056) and incorporated into a spacecraft or components of spacecraft. 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 § 173.302a(a)(1) in that a non-DOT specification cylinder is authorized and § 173.301(f) in that the cylinder is not equipped with a pressure relief device.
5. **BASIS:** This special permit is based on the application of K2 Space Corporation dated September 2, 2025, submitted in accordance with § 107.105 and the public proceeding thereon.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

<b>Hazardous Materials Description</b>			
<b>Proper Shipping Name</b>	<b>Hazard Class/ Division</b>	<b>Identifi- cation Number</b>	<b>Packing Group</b>
Krypton, compressed	2.2	UN1056	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING: Prescribed packagings are non-DOT specification cylinders described as composite overwrapped pressure vessels (COPVs) with a design maximum expected operating pressure (MEOP) of 5,000 psi, which are integrated into spacecraft or components of spacecraft and overpacked in a humidity and temperature-controlled container. Cylinders are not equipped with pressure relief devices. The design of each cylinder is based on the ISO 11119 Standard with modified testing based on the AIAA S-081B-2018 Space Systems – Composite Overwrapped Pressure Vessels Standards. The cylinders, components, and transport containers must be as described in the application on file with the Office of Hazardous Materials Safety.

b. MARKING:

- (1) All cylinders must be plainly and durably marked “DOT-SP 22090”.
- (2) When cylinders are shipped installed in spacecraft or components of spacecraft, the outer transport container or cover must be plainly and durably marked on two opposite sides in letters at least 2 inches in height on a contrasting background: “DOT-SP 22090” and “DO NOT STACK”.

c. OPERATIONAL CONTROLS: One spacecraft containing 3 non-DOT specification cylinders is authorized to be transported under the terms of this special permit.

8. SPECIAL PROVISIONS:

- a. Under the terms of this special permit, the grantee may only offer hazardous materials (i.e., the grantee is not authorized as a carrier).

b. 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.

c. 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.
10. **MODAL REQUIREMENTS:** A current copy of this special permit must be carried aboard each 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 Quade  
Acting 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.

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