



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

August 16, 2024

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 21708
(THIRD REVISION)

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: (See individual authorization letter)

2. PURPOSE AND LIMITATIONS:

a. This emergency special permit authorizes the transportation in commerce of certain non-DOT specification containers containing certain Division 2.2 and 2.3 materials for use in satellites. This special permit provides no relief from the Hazardous Materials Regulations (HMR) or the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI) 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. This special permit serves as an "exemption" as defined in 1;3.1.1 of the ICAO TI and as a "Competent Authority Approval" as defined under 49 CFR § 107.1.

d. This special permit serves as an exemption to the ICAO Technical Instructions (ICAO TI) for the transportation of UN1005, Ammonia, anhydrous aboard cargo aircraft. For international flights, the ICAO TI may require exemption authorization by the States of origin, transit, overflight, and destination of the consignment, as well as the State of the air operator.

e. This special permit in no way affects the need to obtain any required authorizations from other agencies of the United States Government or from the competent authorities of countries of origin, transit, and destination.

f. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.

Tracking Number: 2024084648

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171- 180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.101 Table Column (9B), Columns 12 and 13 of Table 3-1 of the ICAO TI, and 173.27(b)(2) in that anhydrous ammonia is forbidden on cargo aircraft. §173.301(f) in that the non-DOT specification packaging (heat pipe) is not fitted with a pressure relief device; § 173.302a, 173.304a, and Packing Instruction 200 of the ICAO TI in that non-DOT specification packaging (cylinder) is not authorized, except as specified herein; and §§ 171.23(a)(2)(iv) in that the letters “USA” will not be marked on the packaging.
5. BASIS: This emergency special permit is based on the application of Loft Orbital Solutions, Inc dated June 24, 2024, submitted in accordance with § 107.117 and the determination it was necessary to support an essential governmental function and additional information dated August 13, 2024.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Ammonia, anhydrous	2.2/2.3*	UN1005	N/A
Helium, compressed	2.2	UN1046	N/A
Krypton, compressed	2.2	UN1056	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Xenon, compressed	2.2	UN2036	N/A

*Division 2.3 for international transportation. Division 2.2 as an alternate when only domestic transportation is involved.

7. SAFETY CONTROL MEASURES:

a. PACKAGING: Prescribed packagings are:

(1) Non-DOT specification container (heatpipe) containing anhydrous ammonia, with a capacity not exceeding 4 L. The heatpipe has been welded shut on both ends. Details of the packagings, components, and transportation container must be as described in the application on file with the Office of Hazardous Materials Safety (OHMS); and

(2) Non-DOT specification cylinder: aluminum lined composite overwrapped pressure vessel (COPV) containing a Division 2.2 compressed gas (helium, krypton, nitrogen, or xenon). Each cylinder has a capacity not exceeding 9 L. Details of the packagings, components, and transportation container must be as described in the application on file with OHMS.

(3) Containers will be further incorporated into a satellite which is further packed in an Arrow 450 shipping container as described in Airbus U.S. Space & Defense, Inc's application on file with OHMS, or in a shipping container as described in Loft Orbital Solutions, Inc's application on file with OHMS.

b. OPERATIONAL CONTROLS: Emergency response information provided with the shipment and available via an emergency response telephone number must indicate that the heat pipes are not fitted with pressure relief devices and provide appropriate guidance in case receptacles are exposed to fire.

c. MARKING: The shipping container must be plainly and durably marked on two opposite sides on a contrasting background, "DOT-SP 21708".

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this special permit, but receives a packaging covered by this special permit, may reoffer it for transportation provided no modification or change is made to the packaging and it is offered 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, 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, aircraft or 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.:

A handwritten signature in blue ink, appearing to read "W. Schoonover", is written over a faint, circular official stamp.

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