



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

November 04, 2024

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 21847

EXPIRATION DATE: 2026-10-31

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: iSpace, Inc.
Tokyo, Japan

US AGENT: ShipMate, Inc.
Sisters, OR
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of prototype and low production lithium batteries contained in equipment (spacecraft) and battery powered vehicles that have not passed the UN-required tests via cargo-only aircraft in a specially designed transport packaging for use in space applications. 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.
 - d. This special permit serves as an approval under Special Provisions A88 and State Variation US 3 of the ICAO TI and as a “Competent Authority Approval” as defined under 49 CFR § 107.1.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.185(a)(1) in that the lithium batteries are not of a type proven to meet the requirements of section 38.3 of the UN Manual of Tests and Criteria; § 173.185(b) in that alternative packaging is authorized; and § 173.220(d) in that the lithium batteries installed in the battery powered

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vehicle are not of a type proven to meet the requirements of section 38.3 of the UN Manual of Tests and Criteria, as specified herein.

5. BASIS: This special permit is based on the application of Ispace, Inc. dated August 21, 2024, submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Lithium ion batteries contained in equipment <i>including lithium ion polymer batteries</i>	9	UN3481	N/A
Battery-powered vehicle <i>or</i> Battery-powered equipment	9	UN3171	N/A
Lithium metal batteries contained in equipment <i>including lithium alloy batteries</i>	9	UN3091	N/A

7. SAFETY CONTROL MEASURES:

- a. PACKAGING: Packagings prescribed are non-DOT specification packagings which are packaged as follows:

- (1) The batteries identified as ABSL must be contained in equipment (spacecraft identified as the Lunar Lander) and those identified as GomSpace must be installed in rover vehicles, all designed for space application and constructed of suitable material of adequate strength and design.
- (2) The vehicles containing the GomSpace batteries must be mounted on the equipment (the Lunar Landers).
- (3) The equipment (spacecraft/vehicle) containing the batteries must be placed in a rigid and fully-encased, specially designed non-DOT specification packaging outer transport container (OTC) as described in the August 21, 2024, application on file with the Office of Hazardous Materials Safety (OHMS).

b. TESTING REQUIREMENTS:

- (1) Each cell within the batteries must be of a type tested in accordance with the UN Manual of Tests and Criteria, 5th Revised edition, as specified in iSpace Inc.'s application date August 21, 2024, and on file with OHMS.
- (2) The ABSL batteries need not be of a type tested in accordance with the UN Manual of Tests and Criteria.
- (3) The GOMSpace Battery must be of a type tested in accordance with the UN Manual of Tests and Criteria, 7th Revised edition.

c. OPERATIONAL CONTROLS:

- (1) Only prototype, low production lithium ion batteries, and tested batteries contained in equipment or vehicles, as described in the application of iSpace, Inc. dated August 21, 2024, and on file with the OHMS may be offered for transportation under the terms of this special permit ("Low production" is defined as a production run of no more than 100 cells or batteries annually of a particular type.)
- (2) The batteries authorized under this special permit are identified as:
 - (i) ABSL Battery which is comprised of 3 modules, each having 32 E-One Moli lithium ion IHR-18650C cells (8S4P), and a nominal energy content of 236.2 Wh.
 - (ii) GOMSpace Battery which is comprised of 4 HG2 lithium ion cells and has a nominal energy content of 43.2 Wh.
- (3) All lithium ion batteries contained in equipment (spacecraft/vehicle) must be offered for transportation at a state of charge not exceeding 30 percent.
- (4) The batteries must be equipped with an effective means of preventing dangerous reverse current flow for the batteries that contain cells connected in parallel.
- (5) Cells and batteries must be protected against short circuiting.
- (6) Transportation of the equipment (spacecraft/vehicle) contained in the OTC is authorized for the one-way movement from Tokyo Japan to Cape Canaveral, FL.

(7) Cells or batteries that are leaking or liable to rapidly disassemble, dangerously react, produce a flame or a dangerous evolution of heat or a dangerous emission of toxic, corrosive, or flammable gases, or vapors under normal conditions of transport may not be transported under this special permit.

(8) Any changes to the battery or cell from the ones listed above invalidates this special permit.

d. MARKING: The outer transport container must be plainly and durably marked on two opposite sides in letters at least 2 inches in height on a contrasting background “DOT-SP 21847” and “DO NOT STACK” as specified in § 172.301(c).

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 or its contents 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. 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 or origin, transit, or destination or State of Operator.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle and cargo-only aircraft.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each motor vehicle and aircraft 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.:



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: ae