



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

March 16, 2023

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 21057
(FIRST REVISION)

EXPIRATION DATE: 2027-02-28

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Spaceflight, Inc.
Seattle, WA
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of low production lithium ion batteries contained in equipment (spacecraft). 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 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 "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.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.185(a)(1) and 2;9.3 a) of the ICAO TI in that each lithium battery must be of the type proven to meet the criteria in Part III, subsection 38.3 of the UN Manual of Tests and Criteria, except as specified herein.
5. BASIS: This special permit is based on the application of Spaceflight, Inc. dated November 23, 2022, submitted in accordance with § 107.109.

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*	9	UN3481	N/A

*Only low production lithium ion batteries contained in equipment (spacecraft) ("Low production" is defined as a production run of no more than 100 cells or batteries annually of a particular type) may be offered for transportation and transported under the terms of this special permit.

7. SAFETY CONTROL MEASURES:a. SAFETY CONTROLS:

- (1) The low production lithium ion battery pack must be constructed of four cells (Samsung INR21700-50E) connected in parallel and must not exceed a nominal energy rating of 72 Wh.
- (2) The battery pack contained in equipment must be equipped with an effective means of preventing dangerous reverse current flow.
- (3) The cells and the battery pack contained in equipment must be protected against short circuiting.
- (4) Only one lithium ion battery pack is permitted to be packaged within the spacecraft.
- (5) Only one shipment is authorized under the terms of this special permit from Seattle, WA to the US-based launch site.

b. TESTING REQUIREMENTS:

- (1) The lithium ion battery pack contained in equipment must be comprised of lithium ion cells of a type that has passed all required tests as specified in the UN Manual of Tests and Criteria.
- (2) The battery pack must be of a type that has passed the tests to operate in extreme outer space environments including those simulating T.1, T.2, T.3, and T.7 as described in the May 21, 2020, application and on file with Office of Hazardous Materials Safety.

c. PACKAGING: Prescribed packaging is as follows:

- (1) The lithium ion battery pack contained in equipment must be securely encased in the spacecraft.
- (2) Each spacecraft must be packaged within a plastic electrostatic discharge bag.
- (3) Each spacecraft must then be packaged in a non-specification solid plastic box which is filled with noncombustible, non-conductive packing foam to absorb standard vibration or shock events incident to normal transportation.

d. MARKING: The outer packaging containing the spacecraft must be marked on two sides in letters at least 2 inches high on a contrasting background with “DOT-SP 21057”.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, the HMR, and the ICAO TI.
- c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.
- d. 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 the States of origin, transit, over flight, and destination of the consignment, as well as the State of the air operator.
- e. For each cell and battery type, the grantee must maintain the following record and upon request make this record available to DOT representatives or enforcement officials. The record to be maintained is as follows:
 - (1) A description of each cell and battery type and types of tests conducted and test results prior to offering for transportation.
 - (2) Dates and description of each shipment, to include number of cells and batteries.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, and cargo-only aircraft.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each aircraft and 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 light blue circular stamp.

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: Steve H/NICKS