



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

September 20, 2023

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 21629
(FIRST REVISION)

EXPIRATION DATE: 2024-02-29

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Space BD Inc.
Tokyo, Japan

US AGENT: ShipMate Inc
Sisters, OR

2. PURPOSE AND LIMITATIONS:

a. This emergency special permit authorizes the transportation in commerce of prototype and low production lithium ion batteries contained in equipment (spacecraft) in an alternative packaging. 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 transportation in commerce. The safety analyses did not consider the hazards and risks associated with use, use as a component of a vehicle or other device, or other uses not associated with transportation in commerce.

c. This special permit serves as an approval under Special Provision A88 and State Variation US 3 of the ICAO TI, and as a "Competent Authority Approval" as defined under 49 CFR § 107.1.

d. No party status will be granted for this special permit.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171- 180.

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.185(e)(3) in that alternate packaging is authorized; and 49 CFR § 173.185(a)(1) in that prototype and low

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production lithium ion batteries are not of a type that has passed the criteria in Part III, subsection 38.3 of the UN Manual of Tests and Criteria.

5. BASIS: This emergency special permit is based on the application of Space BD Inc. dated August 18, 2023, submitted in accordance with § 107.117 and the determination it was necessary to prevent significant economic loss.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Lithium ion batteries contained in equipment	9	UN3481	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING:

- (1) Each battery must be contained in equipment (spacecraft) designed for space application and constructed of suitable material of adequate strength and design.
- (2) The equipment containing the battery must be placed in a rigid and fully encased, specially designed non-DOT specification packaging as described in the August 18, 2023, submission on file with the Office of Hazardous Materials Safety (OHMS)
- (3) The aggregate net weight of each battery type, which is comprised of not more than 24 cells (8S3P), may not exceed 12.0 kg maximum.

b. TESTING AND INSPECTION FOR EACH TYPE:

- (1) Each cell within the battery must be of a type tested in accordance with the UN Manual of Tests and Criteria, 5th Revised Edition.
- (2) The battery does not need to be of a type tested in accordance with the UN Manual of Tests and Criteria.

c. OPERATIONAL CONTROLS:

- (1) Only prototype and low production lithium ion batteries contained in equipment, as described in the application of Space BD, Inc. on file with 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 batteries annually of a particular type.
- (2) Two (2) satellites may each contain one (1) ASXB38001GA battery, which consists of 24 cells (8S3P) and has a maximum Watt-hour capacity of 276.48 Wh.
- (3) One (1) satellite may contain three separate components described as:
 - (i) the Parent, which contains two (2) ASXB23003GA lithium ion battery modules, each having 6 cells (3S2P) and Watt-hour rating of 78.72 Wh per module (157.44 Wh total);
 - (ii) the Child, which contains two (2) ASXB23003GA lithium ion battery modules, each having 6 cells (3S2P) and Watt-hour rating of 78.72 Wh per module (157.44 Wh total); and
 - (iii) the Climber, which contains one (1) 8.88 Wh 1ICP653450AHR-CC-3-TB lithium ion battery, comprised of two (2) cells (1S2P) having a Wh rating of 4.44 Wh each.
- (4) Each different battery type must comply with all the conditions of this special permit prior to being offered for transportation.
- (5) Cells and batteries contained in equipment must be protected against short circuiting, and the batteries must be equipped with an effective means of preventing dangerous reverse current flow for the batteries that contain cells connected in parallel.
- (6) Equipment containing lithium ion batteries must be protected against short circuits and unintentional activation.

d. MARKING: The outer transport container must be plainly and durably marked on two opposite sides in letters at least 2 inches (50 mm) in height on a contrasting background, “DOT-SP 21629” and “DO NOT STACK”.

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 and cargo-only aircraft.10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each 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.:



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/Casey Chambers