

March 10, 2017



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 20423

EXPIRATION DATE: 2017-09-30

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Ball Aerospace & Technologies Corporation
Boulder, CO
2. PURPOSE AND LIMITATIONS:
 - a. This emergency special permit authorizes the transportation of lithium ion batteries contained in equipment which contain low production lithium ion batteries which have not passed the UN-required tests. 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 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 approval under 49 CFR § 173.185(g) 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) in that batteries are not tested in accordance with the UN Manual of Tests and Criteria and 49 CFR § 173.185(g).

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5. BASIS: This emergency special permit is based on the application of Ball Aerospace & Technologies Corporation dated February 23, 2017, submitted in accordance with § 107.105 and the determination that it is necessary for national security.
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 <i>including lithium ion polymer batteries</i>	9	UN3481	N/A

7. SAFETY CONTROL MEASURES:

a. OPERATIONAL CONTROLS -

- (1) This special permit is valid for the lithium ion batteries contained in equipment in which the batteries are low production lithium ion batteries comprising of cells identified as SAFT VL48E.
- (2) Each battery has a nominal voltage of 32 V with a total energy rating of 7,680 Wh.
- (3) The battery must be mechanically and electrically disconnected from external loads of the equipment during transportation with all relays open.
- (4) All batteries must be shipped at a state-of charge not more than 50 percent.
- (5) The batteries must be equipped with an effective means of preventing dangerous reverse current flow.
- (6) The batteries in equipment must be protected against external short-circuiting using insulating caps.

b. TESTING -

- (1) All lithium ion cells must be of a type that have passed required tests as specified in the "UN Manual of Tests and Criteria, 5th Revised Edition".
- (2) The low production (annual production of not more than 100) batteries must have passed certain tests exceeding transportation environments as noted in the application including the vibration and thermal vacuum tests but need not be tested in accordance with the "UN Manual of Tests and Criteria, 5th Revised Edition".

c. PACKAGING -

- (1) An assembled battery must be individually placed in a spacecraft and securely mounted to its structure.
- (2) The battery contained in equipment (spacecraft) must be further packaged in a 28'Lx14.5'Wx13'H specially-designed steel outer container that meets Packing Group I performance criteria.
- (3) Only one battery contained in equipment is allowed per container package.
- (4) The net weight of a battery within a container package may not exceed 69 kg and its gross weight may not exceed 19,000 kg.

d. MARKING - Each package must be marked with the special permit number DOT-SP 20423 in accordance with § 172.301(c).

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

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- b. 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.
- c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.
- d. Each packaging manufactured under the authority of this special permit must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Special Permits and Approvals for a specific manufacturing facility.
- e. A current copy of this special permit must be maintained at each facility where the packaging is manufactured under this special permit. It must be made available to a DOT representative upon request.
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.

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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 Materials Safety Administration, U.S. Department of Transportation, East Building PHH-30, 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 http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm
Photo reproductions and legible reductions of this special permit

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are permitted. Any alteration of this special permit is prohibited.