

May 25, 2016



U.S. Department  
of Transportation

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

**Pipeline and Hazardous  
Materials Safety Administration**

DOT-SP 20238  
(FIRST REVISION)

**EXPIRATION DATE: 2016-10-31**

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: BALL AEROSPACE & TECHNOLOGIES CORPORATION  
BOULDER, CO
2. PURPOSE AND LIMITATION:
  - a. This emergency special permit authorizes the transportation in commerce of lithium ion batteries contained in equipment, that are not of a type proven to have met the testing requirements in sub-section 38.3 of the UN Manual of Tests and Criteria, within a shipping container undergoing a nitrogen purge. 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.
  - c. No party status will be granted to this special permit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.24(b)(1) in that there will be no identifiable release of hazardous materials to the environment and § 173.185(a)(1) in that batteries must be of a type proven to meet the requirements of sub-section 38.3 of the UN Manual of Tests and Criteria, except as specified herein.

**May 25, 2016**

5. BASIS: This special permit is based on the application of BALL AEROSPACE & TECHNOLOGIES CORPORATION dated March 28, 2016 submitted in accordance with § 107.117 and a determination that it is necessary for immediate national security and additional information dated May 18, 2016.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

| <b>Hazardous Material Description</b>  |                               |                                |                      |
|--|-------------------------------|--------------------------------|----------------------|
| <b>Proper Shipping Name</b>  | <b>Hazard Class/ Division</b> | <b>Identi- fication Number</b> | <b>Packing Group</b> |
| Lithium ion batteries contained in equipment <i>including lithium ion polymer batteries*</i> | 9                             | UN3481                         | N/A                  |
| Nitrogen, compressed   | 2.2                           | UN1066                         | N/A                  |

\*Only batteries authorized under CA2010070052, comprised of 5.63 Wh cells identified as US18650, are authorized under the terms of this special permit.

7. SAFETY CONTROL MEASURES:

a. SAFETY CONTROLS

(1) All batteries transported under the terms of this special permit must have been manufactured under CA2010070052.

(2) The batteries must be shipped with electrical wiring harness connected to battery interface connectors, and with arming plugs, REMOVED. This must disconnect all external loads to the battery.

(3) The aggregate energy capacity of all batteries contained in the equipment must not exceed 25,000 Wh.

(4) The batteries must be enclosed in a case that is made of high strength aluminum.

- b. TESTING: The batteries in the equipment must have been tested to vibration, acoustic, and thermal levels (launch vehicle loads).

**May 25, 2016**

c. PACKAGING -

(1) The batteries must be installed into the equipment (spacecraft) and must be transported in a dedicated shipping container (manufacture by RUAG and identified in BALL AEROSPACE & TECHNOLOGIES CORPORATION's application dated March 28, 2016 and on file with the Office of Hazardous Materials Safety Approvals and Permits Division in figure 4). The container is approximately 40' long, 18' wide, and 13' high;

(2) The batteries in the equipment must be mounted to a tilting unit within shipping container this restricts movement of the equipment within the shipping container; and

(3) To maintain a nitrogen gas environment in the shipping container, securely mounted specification cylinders may be used to purge the container while in transportation. The level of release of nitrogen gas must not pose an asphyxiation risk outside the shipping container, and the flow rate of the nitrogen gas must not exceed one (1) cubic foot per minute.

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.

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.

**May 25, 2016**

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.

**May 25, 2016**

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 Dr. Magdy El-Sibaie  
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-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](http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm) Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Andrew Eckenrode