

July 25, 2019



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 20856

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: (See individual authorization letter)
2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the transportation in commerce of lithium ion batteries exceeding 35 kg by cargo-only aircraft. 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. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
 - d. This special permit serves as an approval under Special Provision A99 and the third paragraph of IA.2 of Packing Instruction 965 of the ICAO TI and 49 CFR § 173.185(b) (5) 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 and the ICAO TI.

July 25, 2019

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.101 Hazardous Materials Table Column (9B) in that that a lithium battery may not exceed 35 kg when transported aboard cargo aircraft, except as specified herein.
5. BASIS: This special permit is based on the application of Samsung SDI America, Inc., dated March 22, 2019, submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Lithium ion batteries <i>including lithium ion polymer batteries</i>	9	UN3480	N/A

7. SAFETY CONTROL MEASURES:

a. SAFETY CONTROLS:

(1) The battery pack must be constructed from five (5) battery modules in which the modules comprised of Samsung SDI cells (Model: CS0600RT001A) are electrically connected into a battery pack of a nominal Wh rating of 15.4 kWh.

(2) Cells, battery modules, and battery packs must be protected against short-circuiting.

(3) All of the battery packs must be offered for transportation at a state of charge not greater than 30%.

(4) Only production lithium ion battery packs may be offered for transportation under the terms of this special permit.

(5) Battery modules and cells, when connected in parallel, must be equipped with an effective means to prevent dangerous reverse current flow (e.g., diodes, fuses).

(6) The battery packs must be equipped with a battery management system (BMS) that has been verified as preventing overcharge, short circuits, or over discharge between the battery modules.

b. TESTING: Each battery module comprising the battery pack and each cell within the module must be of a type demonstrated by testing to pass all required tests as specified in the UN Manual of Tests and Criteria, 5th Revised Edition (and Amendment 1) or the 6th Revised Edition.

c. PACKAGING:

(1) The battery pack must have a strong impact resistant aluminum housing;

(2) The battery pack, which exceeds 12 kg in weight, must be packed in a strong plywood crate which is a UN 4D box tested to a Packing Group I performance level;

(3) The battery pack within the crate must be protected against movement during transportation by use of foam inserts;

(4) Each crate may contain not more than one battery pack; and

(5) The net weight of a battery pack in a single package must not exceed 105.3 kg.

d. MARKING: Each package covered under the terms of this special permit must be durably and legibly marked and displayed on a background of contrasting color with "DOT-SP 20856".

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 and it is reoffered for transportation in conformance with this special permit, the HMR, and the ICAO TI.

b. A current copy of this special permit must be maintained and made available for examination at each facility where the materials are package and 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 of origin, transit, and destination.

d. The special permit grantee must maintain the following record and upon request and make this information available to DOT representatives or enforcement officials. The record to be maintained is as follows:

- (1) Dates of shipment; and
- (2) Description of each type of shipment.

9. MODES OF TRANSPORTATION AUTHORIZED: Cargo-only aircraft.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each 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.

July 25, 2019

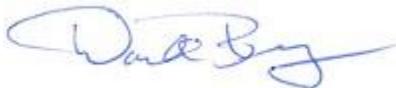
Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

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-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

Continuation of DOT-SP 20856

Page 6

July 25, 2019

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

PO: Steve H/kah