

July 01, 2021



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 21182  
(FIRST REVISION)

**EXPIRATION DATE: 2023-05-31**

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: LG Energy Solution, Ltd.  
Seoul, South Korea

US AGENT: LG Energy Solution Michigan, Inc.  
Troy, MI

2. PURPOSE AND LIMITATION:

a. This special permit authorizes the transportation in commerce of lithium ion modules exceeding 35 kg aboard 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. No party status will be granted to this special permit.

d. This special permit serves as an approval under Special Provision A99 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 and the ICAO TI.

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.101 Hazardous Materials Table Column (9B) in that lithium batteries may have a mass exceeding 35 kg per package, except as specified herein.
5. BASIS: This special permit is based on the application of LG Energy Solution, Ltd. dated May 4, 2021, submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

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

7. SAFETY CONTROL MEASURES:

a. OPERATIONAL CONTROLS:

(1) Only modules identified as EM07764P8B1, which are components of a battery (RESU10H Prime) unwired to form a battery and comprised of cells identified as JH5 in the LG Energy Solution, Ltd. application dated January 21, 2021 and on file with the Office of Hazardous Materials Safety, may be offered for transportation under the terms of this special permit.

(2) Each module has a nominal voltage of 77.1 V and a nominal energy rating of 4.94 kWh.

(3) The state of charge for lithium ion modules must be not more than 30% when offered for aircraft transportation.

(4) Cells and modules must be protected against short-circuiting.

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b. TESTING REQUIREMENTS:

(1) Each cell within the module must be of a type tested in accordance with the UN Manual of Tests and Criteria, 6<sup>th</sup> Revised Edition.

(2) Each module must be of a type tested in accordance with the UN Manual of Tests and Criteria, 6<sup>th</sup> Revised Edition.

c. PACKAGING REQUIREMENTS:

(1) Inner Packaging: Each module must be placed in a non-metallic inner packaging that completely encloses the module.

(2) Outer Packaging: Each inner packaging must be placed in a UN 4G fiberboard box meeting the performance criteria for Packing Group I.

(3) Packages offered for transportation must be in accordance with the requirements in Packing Instruction 974 of the Supplement to the ICAO TI.

(4) Not more than one module is allowed per package;

(5) The net weight of the module within the package may not exceed 43 kg (95 pounds) with the gross weight of a package not exceeding 50 kg (110 pounds).

(6) Two outer packagings may be stacked up with packages of a battery control unit and a connect plate placed on the top as a bundled set for the battery (RESU10H Prime), which is completely enclosed by placing a sleeve and bottom and top caps. The enclosed set must be securely fastened on a pallet by appropriate strapping.

(7) The gross weight of the strapped set including the pallet may not exceed 150 kg (331 pounds) with the net weight of the hazardous material not exceeding 120 kg (265 pounds).

d. MARKING: Each package must be marked with the special permit number DOT-SP 21182 in accordance with § 172.301(c).

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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 countries of origin, transit, destination, and the State of operator.

e. The special permit holder must maintain a record of all activity conducted under the authority granted in this special permit. The record must contain a complete listing and number of shipments made to include and upon request make this information available to a DOT representative or an enforcement official. The record must contain a listing and number of shipments made to include:

(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.

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

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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 <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: SH/NICKS