

February 18, 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 20283
(FIFTH REVISION)

EXPIRATION DATE: 2024-02-29

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: LG Energy Solution, Ltd.
Seoul, 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 batteries exceeding the 35 Kg maximum weight authorized for transportation by cargo 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.

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4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.101 Hazardous Materials Table Column (9B) in that a lithium battery may not exceed 35 kg when transported aboard cargo aircraft, except as provided herein.
5. BASIS: This special permit is based on the application of LG Energy Solution, Ltd. dated February 8, 2021 submitted in accordance with § 107.117 and the determination it is necessary to prevent significant economic loss.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Materials 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

*Batteries are limited to those identified as RESU6.5, RESU10, RESU10H, M48189P3B, M48128P6B, and EM048128P6BA.

7. SAFETY CONTROL MEASURES:
- a. OPERATIONAL CONTROLS:
- (1) This special permit is valid only for transportation of the lithium ion batteries identified as RESU6.5 (6.5 kWh), RESU10 (9.8 kWh), RESU10H (9.8 kWh), M48189P3B (9.8 kWh), M48128P6B (6.6 kWh), and EM048128P6BA (6.6 kWh), consisting of cell module assemblies (CMA) and identified with ending CMA at the end of battery number, as described in the original application dated February 12, 2016, July 29, 2016, supplemental information subsequently submitted, and February 12, 2018 on file with the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD). Any change in the battery or packaging invalidates this special permit.
- (2) All batteries are made of JH3 cells except for the M48128P6B and EM048128P6BA batteries, which are made up of JP3 cells.

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(3) The EM048128P6BA batteries must be a modification of M48128P6B batteries by installing aluminum plates between each cell for cooling.

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

(5) Batteries connected in parallel must be equipped with an effective means to prevent dangerous reverse current flow.

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

(7) The batteries must be equipped with a battery management system that has been verified as preventing overcharge, short circuits, and over-discharge between the batteries.

b. TESTING REQUIREMENTS: Each cell (JH3 and JP3) and cell module assemblies (CMAs) that are used to assemble batteries must be a type that has passed the required tests in accordance with the UN Manual of Tests and Criteria, 5th Revised Edition.

c. PACKAGING:

(1) Inner Packaging: Each battery must be placed in a non-metallic inner packaging that completely encloses the cells and separates the cells from contact with conductive materials in the packaging.

(2) Outer Packaging: Inner packagings containing the batteries must be placed in the following packagings meeting the Packing Group II performance level.

(i) RESU6.5: 4D Plywood box.

(ii) RESU10: 4D Plywood box.

(iii) RESU10H: 4D Plywood box or 4G Fiberboard box.

(iv) M48189P3B: 4G Fiberboard box.

(v) M48128P6B: 4G Fiberboard box.

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(vi) EM048128P6BA: 4G Fiberboard box.

(3) Packaging must comply with the requirements in ICAO TI Packing Instruction 965.

(4) The net weight of batteries within each package must not exceed the following:

(i) RESU6.5: 110 kg (2 batteries in a package).

(ii) RESU10: 75 kg.

(iii) RESU10H: 100 kg.

(iv) M48189P3B: 204 kg (3 batteries in a package).

(v) M48128P6B: 47 kg.

(vi) EM048128P6BA: 47 kg.

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, and destination.

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

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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.

f. A battery, battery assembly or monitoring system that is determined to be defective, may not be shipped under this special permit.

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.

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

PO: SH/TG