



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

August 29, 2023

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 21533

EXPIRATION DATE: 2025-08-31

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Samsung SDI Co., Ltd.
Yongin-Si, South Korea

US AGENT: Samsung SDI America
San Jose, CA
2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the transportation in commerce of lithium ion battery packs exceeding 35 kg net weight 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.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.101 Hazardous Materials Table Column (9B) in that a lithium battery may not exceed 35 kg, except as specified herein.

Tracking Number: 2023034092

5. BASIS: This special permit is based on the application of Samsung SDI Co., Ltd. dated February 20, 2023, 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. PACKAGING: Battery pack types authorized to be packaged in accordance with the terms of this special permit are Battery Model E4D and Battery Model E4L and must conform to the application dated February 20, 2023 and on file with the Office of Hazardous Materials Safety (OHMS):

(1) Inner Packaging: Each battery pack must be individually packaged in a fully enclosed non-metallic inner packaging that completely encloses the battery pack and separates the battery pack from contact with any electrically conductive materials in the packaging.

(2) Outer packaging:

(i) Battery Pack Model E4D –

(A) The inner packaging must be further packaged in a UN 4D plywood outer packaging that meets Packing Group I performance criteria; and

(B) The net and gross weight may not exceed 120 kg (265 pounds) and 175 kg (386 pounds), respectively.

(ii) Battery Pack Model E4L –

(A) The inner packaging must be further packaged in a UN 4C1 natural wood outer packaging that meets Packing Group I performance criteria; and

(B) The net and gross weight may not exceed 85 kg (188 pounds) and 120 kg (265 pounds), respectively.

(3) Not more than one battery pack is allowed per package.

(4) Packagings must comply with the requirements in Packing Instruction 974 of the Supplement to the ICAO TI.

b. OPERATIONAL CONTROLS:

(1) The nominal energy contents of Battery Model E4D and Battery Model E4L are rated at 19.514 kWh and 13.009 kWh, respectively.

(2) The terminals of the battery packs must be protected to prevent against external short circuits.

(3) The battery packs must be packaged such that terminals are not subjected to the weight of materials that may be superimposed during transportation.

(4) The cells connected in parallel within the battery packs must be equipped with an effective means to prevent dangerous reverse current flow.

(5) The state of charge for lithium ion battery packs must be not more than 30% when offered for air transportation.

c. TESTING REQUIREMENTS:

(1) The battery packs must consist of cells that have passed all required tests in accordance with subsection 38.3 of the UN Manual of Tests and Criteria, 6th Revised Edition. The authorized cells are Samsung Model CS1120RT001A and must conform to the test report on file with OHMS.

(2) Each battery pack with model number E4D or E4L must have been tested to the standards of the UN Manual of Tests & Criteria, part III, subsection 38.3, 6th Revised Edition in conformance with the test report on file with OHMS.

d. MARKING REQUIREMENTS: Each package, and overpack if used, prepared under the provisions of this special permit must be plainly marked with the special permit number DOT-SP 21533.

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 at each facility where the package is 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, destination, and the State of Operator.

d. 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 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-13, 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: Steve H/ae