1. **GRANTEE:** Samsung SDI. Co., Ltd.
   Gyeonggi-Do, South Korea

   **U.S. AGENT:** Samsung SDI America
   San Jose, CA

2. **PURPOSE AND LIMITATION:**
   
   a. This special permit authorizes the transportation in commerce of lithium battery packs 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. 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 lithium batteries may have a mass exceeding 35 kg per package, as provided herein.

Tracking Number: 2023035831
5. **BASIS:** This special permit is based on the application of Samsung SDI. Co., Ltd. dated March 27, 2023, submitted in accordance with § 107.105 and the public proceeding thereon.

6. **HAZARDOUS MATERIALS (49 CFR 172.101):**

<table>
<thead>
<tr>
<th>Hazardous Materials Description</th>
<th>Hazard Class/Division</th>
<th>Identification Number</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium ion batteries <strong>including lithium ion polymer batteries</strong></td>
<td>9</td>
<td>UN3480</td>
<td>N/A</td>
</tr>
</tbody>
</table>

7. **SAFETY CONTROL MEASURES:**
   a. **PACKAGING:**
      (1) Battery packs must be packaged in a cardboard inner packaging and a UN 4D specified plywood box outer packaging tested to the Packing Group II performance criteria. Only one battery pack may be contained in an outer packaging. Each battery pack must:
         (i) be packed as outlined in the application;
         (ii) secured in a manner to prevent shifting, vibration, and accidental activation; and
      (2) The gross weight of a package containing a battery pack authorized under this special permit may not exceed 260 kg (573.2 lb).
      (3) Packaging must comply with the requirements in Packing Instruction 974 of the Supplement to the ICAO TI. Additionally, waste lithium battery packs and lithium battery packs being shipped for recycling or disposal are forbidden from air transport, and lithium-ion battery packs must not be packed in the same outer packaging with substances and articles of Class 1 (explosives) other than Division 1.4S, Division 2.1 (flammable gases), Class 3 (flammable liquids), Division 4.1 (flammable solids), or Division 5.1 (oxidizers).
b. **TESTING:**

(1) Each lithium ion cell (model number: CP1495L101 533.6 Wh manufactured from Samsung SDI. Co., Ltd.) must be of a type that has successfully passed the required tests in accordance with the 38.3 of the UN Manual of Tests and Criteria.

(2) Each battery pack (model number: MS3204L101A 32.016 kWh manufactured from Samsung SDI. Co., Ltd.) must be of a type that has successfully passed the required tests in accordance with the 38.3 of the UN Manual of Tests and Criteria.

(3) Any changes to the battery cell or pack from the tested type, invalidates this special permit.

c. **OPERATIONAL CONTROLS:**

(1) Authorized battery packs and cells are as follows:

   (i) Battery packs of model number MS3204L101A manufactured from Samsung SDI. Co., Ltd., consisting of a rated capacity of 290 Ah, a nominal voltage of 110.4 V, comprised of 60 lithium-ion cells, and tested to the UN 38.3 standard.

   (ii) Battery lithium cells of model number CP1495L101 manufactured from Samsung SDI. Co., Ltd., consisting of a nominal capacity of 145 Ah, a nominal voltage of 3.68 V, and tested to the UN 38.3 standard.

(3) The battery packs may not exceed 173 kg or 32.1 kWh energy capacity.

(4) The battery packs must be offered for transportation at a state of charge not exceeding 30 percent.

(5) The cells incorporated into the battery packs must incorporate a safety venting device or otherwise be designed in a manner that precludes a violent rupture under conditions normally incident to transportation.

(6) An effective means of preventing reverse current flow must be provided when the battery packs are connected in parallel.

(7) Battery packs must be packed to prevent accidental activation of the battery packs.
(8) Cells or battery packs that are leaking or liable to rapidly disassemble, dangerously react produce a flame or a dangerous evolution of heat or a dangerous emission of toxic, corrosive, or flammable gases, or vapors under normal conditions of transport may not be transported under this special permit.

d. **MARKING REQUIREMENTS**: Each package, and overpack if used, prepared under the provisions of this special permit must be plainly marked with the special number, DOT-SP 21542.

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, 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, and destination and State of the 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:
All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

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.

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.:

[Signature]

for William Schoonover
Associate Administrator for Hazardous Materials Safety

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: CT/TG