



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

**February 03, 2025**

1200 New Jersey Avenue, SE  
Washington, DC 20590

DOT-SP 21734

**EXPIRATION DATE: 2026-12-31**

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: AVS Gefahrgut & Verpackungen  
Hessen, Germany

US AGENT: Liebherr USA  
Newport News, VA

2. PURPOSE AND LIMITATION:

a. This special permit authorizes the transportation in commerce of lithium ion battery assemblies, which exceed 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, as an approval under 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.

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR 172.101 Hazardous Materials Table Column (9B) in that the net weight of lithium batteries within a package must not exceed 35 kg when transported aboard cargo-only aircraft, except as provided herein.

Tracking Number: 2024034257

5. BASIS: This special permit is based on the application of AVS Gefahrgut & Verpackungen dated March 7, 2024, submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

| Hazardous Materials Description |                        |                       |               |
|---------------------------------|------------------------|-----------------------|---------------|
| Proper Shipping Name            | Hazard Class/ Division | Identification Number | Packing Group |
| Lithium ion batteries           | 9                      | UN3480                | N/A           |

7. SAFETY CONTROL MEASURES:

a. SAFETY CONTROLS:

- (1) This special permit is valid only for transportation of lithium ion battery assemblies identified as 15 OEM 50 PRC manufactured from prismatic cells manufactured by Samsung SDIHU identified as product number CS0495RT006B or 9 AKM 150CYC manufactured from cylindrical cells manufactured by LG Chem, Ltd. product number INR21700M50L as described in the application dated March 7, 2024, and on file with the Office of Hazardous Materials Safety (OHMS).
- (2) The 15 OEM 50 PRC battery assembly is composed of 15 Samsung CS0495RT001A (12S1P; 2.2 kWh) battery modules. Each battery module is composed of 12 prismatic cells manufactured by Samsung SDIHU (Model name CS0495RT006B; 178 Wh). The net mass of the battery assembly is 270 kg.
- (3) The 9 AKM 150 CYC battery assembly is composed of 9 AKM CYC\_C2LG50L (20S30P; 10.89 kWh) battery modules. Each battery module is comprised of 600 cylindrical cells manufactured by LG Chem, Ltd (Model name: INR21700M50L; 18 Wh). The net mass of the battery assembly is 598 kg.
- (4) Cells, battery modules, and battery assemblies must be protected against short-circuiting.
- (5) All battery assemblies must be offered for transportation at a state of charge no greater than 30%.

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

(7) Lithium battery assemblies must be packed to prevent accidental activation of the battery assembly.

(8) Cells, modules, or battery assemblies 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.

(9) Any changes to the battery assemblies or cells other than those listed in paragraph 7.a.(1) above invalidates this special permit.

b. TESTING REQUIREMENTS:

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

(3) Cells or battery modules which do not differ (see 38.3.2.2 of the UN Manual of Tests and Criteria) from the tested type may be offered for transportation or transported within the battery assemblies when otherwise conforming to the terms of this special permit.

c. Packaging:

(1) Each battery assembly must have a strong, impact-resistant outer casing and be enclosed in bubble wrap and packed in a foam lined strong wooden box as described in the application on file.

(2) Battery assemblies must be secured to prevent inadvertent shifting, and the terminals may not support the weight of other superimposed elements.

(3) Battery assemblies must be packed to prevent accidental activation of the battery.

(4) Packages offered for transportation must be in accordance with the requirements of Packing Instruction 974 of the Supplement to the ICAO TI. Additionally, waste lithium battery assemblies and lithium battery assemblies being shipped for recycling or disposal are forbidden from air transport, and lithium battery assemblies 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).

(5) Each package may not contain more than one battery assembly.

(6) The net weight of the battery assembly must not exceed 270 kg (595.2 lbs) for 15 OEM 50 PRC battery assembly and 598 kg (1318.4 lbs) for the 9 AKM 150 CYC battery assembly.

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 21734.

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 or its contents 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 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: Jephthah Nti