



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

March 18, 2025

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 21385
(FIRST REVISION)

EXPIRATION DATE: 2029-01-31

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Fortescue Zero Ltd.
Kidlington, United Kingdom

US AGENT: Zoox, Inc.
Foster City, CA
2. PURPOSE AND LIMITATION:
 - a. This special authorizes the transportation in commerce of prototype and low production lithium ion batteries exceeding 35 kg net weight aboard cargo-only aircraft for testing. 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 A88 and State Variation US 3 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 49 CFR § 172.101 Hazardous materials Table Column (9B) in that a lithium battery assembly may exceed 35 kg when transported aboard cargo-only aircraft; § 173.185(a)(1) in that prototype and low

Tracking Number: 2024065571

production lithium batteries have not passed the tests in Part III, subsection 38.3 of the UN Manual of Tests and Criteria; and § 173.185(b)(6) in that transportation aboard aircraft is authorized.

5. BASIS: This special permit is based on the application of Fortescue Zero Ltd., dated June 27, 2024, submitted in accordance with § 107.109.
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

*Only prototype and low production lithium ion batteries may be offered for transportation for testing under the terms of this special permit. ("Low production" is defined as a production run of no more than 100 cells or batteries annually of a particular type.) Each different cell and battery type must comply with all the conditions of this special permit prior to being offered for transportation.

7. SAFETY CONTROL MEASURES:

a. OPERATIONAL CONTROLS:

- (1) The battery with a nominal rated energy capacity of 60 kWh is made of Panasonic cells identified as NCR21700M in a configuration of six modules with each module connected in 16S36P as indicated in the application on file with the Office of Hazardous Materials Safety.
- (2) All batteries must be offered for transportation at a state of charge not exceeding 30 percent.
- (3) The batteries must be equipped with an effective means of preventing dangerous reverse current flow for the batteries that contain cells connected in parallel.
- (4) Cells and batteries must be protected against short circuiting.

(5) Each battery must be equipped with a battery management system (BMS) verified to prevent overcharge, short-circuiting, and over discharge.

b. TESTING: Cells must be of a type proven to have passed all required tests as specified in the “UN Manual of Tests and Criteria” 6th Revised Edition.

c. PACKAGING REQUIREMENTS:

(1) Inner Packaging: Each battery must be individually packaged in an inner packaging. Each inner packaging must be surrounded by sufficient non-combustible and conductive thermal insulating material (E-glass fabric with high temperature coating).

(2) Outer packaging: The inner packaging must be further packaged in a UN 50D outer packaging that meets Packing Group I performance criteria.

(3) Not more than one (1) inner packaging per outer packaging is authorized.

(4) Packaging must comply with the requirements in Packing Instruction 910 of the Supplement to the ICAO TI. Additionally, waste lithium batteries and lithium batteries being shipped for recycling or disposal are forbidden from air transport, and lithium batteries 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) The net weight per the outer package may not exceed 371 kg (818 pounds).

(6) The gross weight of the outer package may not exceed the weight that the package was designed and tested for.

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 21385”.

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 the Operator.
 - e. For each cell and battery type, the grantee must maintain the following record and upon request make this record available to DOT representatives or enforcement officials. The record to be maintained is as follows:
 - (1) A description of each cell and battery type and types of tests conducted and test results prior to offering for transportation.
 - (2) Dates and description of each shipment, to include number of cells and batteries.
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: BB