



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

September 20, 2024

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 21547
(FIRST REVISION)

EXPIRATION DATE: 2025-06-30

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Mazda Motor of America, Inc.
dba Mazda North American Operations
Irvine, CA
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of lithium ion batteries 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, 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 lithium batteries may have a mass exceeding 35 kg per package.

Tracking Number: 2024034013

5. BASIS: This special permit is based on the application of Mazda Motor of America, Inc. dba Mazda North American Operations dated April 11, 2023, 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 <i>including lithium ion polymer batteries</i>	9	UN3480	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING:

(1) Inner Packaging:

- (i) Each lithium ion battery must be placed in an individual, nonmetallic inner packaging that completely encloses the battery.
- (ii) The inner packaging must be surrounded by cushioning material that is electrically nonconductive.
- (iii) Each lithium ion battery must be packaged in a manner to prevent shifting, accidental activation, and short circuiting.

(2) Outer Packaging:

- (i) Lithium batteries must have an impact-resistant outer casing and may be packed in palletted, reinforced cardboard boxes instead of packages meeting the UN specification performance requirements.
- (ii) When the outer packagings are stacked, a plywood board must be placed between the lower and upper packagings.
- (iii) Only one lithium ion battery per package is authorized.
- (iv) The net weight of the battery may exceed 35 kg. The gross weight of a package may not exceed 357 kg (787 pounds).

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

b. TESTING:

- (1) Each lithium ion cell must be of the model UF261591TA SANYO and 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, 5th Revised Edition.
- (2) Each lithium ion battery module must be of the Model J20E-TPV or Model J30A-PHEV and must be of a type that has successfully passed the required tests in accordance with Section 38.3 of the UN Manual of Tests and Criteria, 7th Revised Edition.
- (3) Each CX-90 PHEV battery pack with a nominal energy content of 17.8 kWh 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, 6th Revised Edition.
- (4) Any changes to the battery cell or battery from the tested types listed above, invalidates this special permit.

c. OPERATIONAL CONTROLS:

- (1) The lithium ion battery MX- 30 BEV is comprised of 16 modules (Model J20E-TPV , 2.13 kWh), each module containing 12 lithium ion cells (UF261591TA SANYO) in a 6S2P configuration.
- (2) The lithium ion battery CX-90 PHEV is comprised of 8 modules (Model J30A-PHEV, 2.13 kWh), each module containing 12 lithium ion cells (UF261591TA SANYO) in a 12S configuration.
- (3) The total nominal energy content of the MX-30 BEV and CX-90 PHEV batteries may not exceed 35.5 kWh and 17.8 kWh, respectively.
- (4) Lithium ion cells and batteries must be protected against short-circuiting and be equipped with means of venting and preventing dangerous reverse current flow.

- (5) Each lithium ion battery must be offered for transportation aboard aircraft at a state of charge not exceeding 30%.
- (6) Each battery must be equipped with a battery management system that has been verified as preventing overcharge, short circuits, and over discharge between the modules.
- (7) Lithium ion batteries must be packed to prevent accidental activation of the battery.
- (8) Lithium ion cells or batteries that are leaking or liable to rapidly disassemble, dangerously react or 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.
- (9) The lithium ion battery must be secure to prevent shifting and minimize vibrations. The terminals may not support the weight of the superimposed elements.

d. MARKING: Each package, and overpack if used, must be plainly marked with the special permit number, "DOT-SP 21547" in accordance with §172.301(c).

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 Operator.
- e. The grantee must maintain the following record and upon request make this record available to DOT representatives or enforcement officials. 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.:

A handwritten signature in blue ink, appearing to read "W. Schoonover", is written over a faint circular stamp.

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: MK/TG