



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

September 29, 2022

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 21018
(FIFTH REVISION)

EXPIRATION DATE: 2026-08-31

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Packaging and Crating Technologies, LLC
Waterbury, CT

2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the manufacture, mark, sale, and use of UN 4G packaging with a specially-designed, fire-suppressing liner for the transportation of known or suspected damaged, defective, or recalled lithium ion cells and batteries, including those contained in or packed with equipment. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.

 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.

 - c. In accordance with 49 CFR 107.107(a), party status may not be granted to a manufacturing special permit. These packagings may be used in accordance with 49 CFR 173.22a.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171- 180.

4. REGULATIONS FROM WHICH EXEMPTED: Except when a shipment of consolidated packages has an aggregate gross weight exceeding 1000 pounds, 49 CFR Subparts C through H of Part 172 in that shipping papers, marking, labeling, emergency response information, and training are required for batteries and cells, which meet the size limits in § 173.185(c) except as specified herein; and § 173.185(f) in that more than

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one lithium cell or battery per package and alternative packaging are authorized.

5. BASIS: This special permit is based on the application of Packaging and Crating Technologies, LLC dated August 4, 2022, submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Lithium ion batteries*	9	UN3480	N/A
Lithium ion batteries contained in equipment*	9	UN3481	N/A
Lithium ion batteries packed with equipment*	9	UN3481	N/A

*Only damaged or defective lithium ion cells or batteries including those suspected of being damaged or defective and those contained in or packed with equipment may be transported under the terms of this special permit. All cells and batteries must have met all requirements of § 173.185(a) prior to being damaged or defective.

7. SAFETY CONTROL MEASURES:

a. PACKAGING:

(1) INNER PACKAGING: Each cell or battery, each piece of equipment containing these cells or batteries, or each cell or battery packed with equipment must be individually placed in a non-metallic, non-flammable packaging that completely encloses the cell or battery or the piece of equipment containing the cells or batteries.

(2) OUTER PACKAGING:

(i) For lithium ion cells or batteries complying with the Watt-hour limitations in paragraphs 7.b.(2), the completed inner packages must be surrounded by a specially-designed, fire-suppressing material as described in Packaging and Crating Technologies, LLC's application dated March 12, 2020 that is non-combustible, heat-absorbing and non-conductive and on file with the Office of Hazardous Materials Safety (OHMS) and then placed in a UN 4G fiberboard box lined with specially-designed, fire-suppressing material that meets Packing Group I performance criteria.

(ii) For lithium ion cells or batteries complying with the Watt-hour limitation in paragraph 7.b.(3), the completed inner packages must be surrounded by a specially-designed, fire-suppressing material as described in Packaging and Crating Technologies, LLC's application dated August 6, 2020 that is non-combustible, heat-absorbing and non-conductive and on file with the OHMS and then placed in a UN 4G fiberboard box lined with specially-designed, fire-suppressing material that meets Packing Group I performance criteria. Cells and batteries, including those packed with or contained in equipment, may not have an aggregate Watt-hour (Wh) rating of more than 1,200 Wh (or 96 grams total equivalent lithium content) per package;

(3) The aggregate net weight of cells or batteries in a single package may not exceed the net weight for which the package design type has been tested. The package test report must be made available to a DOT representative upon request.

(4) A cell or battery with a net mass of more than 30 kg (66 pounds) shall be limited to one cell or battery per outer packaging.

b. OPERATIONAL CONTROLS:

(1) Damaged, defective, or recalled lithium cells and batteries including those contained in or packed with equipment must have been demonstrated by testing to have passed all required tests as specified in the UN Manual of Tests and Criteria incorporated by reference (see § 171.7) at the date of the type testing prior to becoming damaged, defective or recalled.

(2) Only lithium cells or batteries, including those contained in or packed with equipment, with a Watt-hour rating not exceeding 60 Wh for a lithium ion cell or 300 Wh for a lithium ion battery are not subject to 49 CFR Subparts C through H of Part 172, except as specified herein. Except when lithium ion cells or batteries are packed with, or contained in equipment, each package must not exceed 30 kg (66 pounds) gross weight.

(3) Lithium ion cells or batteries, including those contained in or packed with equipment, with a Watt-hour rating exceeding 60 Wh for cells or 300 Wh for batteries and packaged with a gross package weight exceeding 30 kg (66 pounds) are subject to 49 CFR Subparts C through H of Part 172 (i.e., shipping papers, marking, labeling, placarding, emergency response information, and training), as applicable.

(4) Detailed closure, packing, and shipping instructions must be provided to individuals preparing shipments under the terms of the special permit. Persons

offering packages for transportation must comply with the closure instructions accompanying the packaging.

(5) Shipments containing a single packaging, pallet or aggregate quantity of packages with a gross weight exceeding 1000 pounds are not excepted from the requirements of Subparts C through H of Part 172.

c. MARKING AND LABELING: Each package must be:

(1) Marked “DOT-SP 21018” in accordance with § 172.301(c);

(2) Marked with the words “Damaged/defective lithium ion battery” in accordance with § 172.304; and

(3) Marked with the words “FORBIDDEN FOR TRANSPORT BY AIRCRAFT AND VESSEL - GROUND SHIPMENT ONLY” and the lithium battery handling marking conforming to § 173.185(c)(3)(i) when the package contains lithium ion cells with a Watt-hour rating not exceeding 60 Wh or lithium ion batteries with a Watt-hour rating not exceeding 300 Wh. This marking must be at least 6 mm in height on packages having a gross weight of 30 kg or less and at least 12 mm in height on packages having a gross weight exceeding 30 kg.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

b. A person who is not a holder of this special permit, but receives a package covered by this special permit, may offer or reoffer it for transportation provided no modification or change is made to the package and it is offered for transportation in conformance with this special permit, and the HMR

c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation unless each package is marked with a QR code which when scanned provides a direct link to a specific URL where the most recent revision of the special permit can be viewed or downloaded. If the QR code is marked on the packaging, the URL must also be marked on the package.

d. Each packaging manufactured under the authority of this special permit must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Safety for a specific manufacturing facility.

- e. A current copy of this special permit must be maintained at each facility where the packaging is manufactured under this special permit. It must be made available to a DOT representative upon request.
 - f. Any package that is damaged is not authorized to be loaded and transported.
 - g. 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 the States of origin, transit, and destination of the consignment.
 - h. The bill of lading must include the following information:
 - (1) In accordance with DOT-SP 21018; and
 - (2) Forbidden for Transport by Aircraft and Vessel.
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle and rail freight.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each motor vehicle used to transport packages covered by this special permit unless each package is marked in accordance with the QR codes as described in paragraph 8.c.
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 related to packages containing damaged or defective lithium ion cells or batteries, including those packed with or contained in equipment, that do not conform to the requirements in paragraphs 7.b.(2) or (3) must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

Each “Hazmat employee”, as defined in § 171.8, who performs a function subject to this special permit related to packages containing damaged or defective lithium ion cells or batteries, including those packed with or contained in equipment, that conform to the requirements in paragraphs 7.b.(2) or (3) must receive adequate instruction on the requirements and conditions of this special permit.

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 Materials 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: SH/TG