

November 15, 2019



U.S. Department  
of Transportation

East Building, PHH-30  
1200 New Jersey Avenue S.E.  
Washington, D.C. 20590

**Pipeline and Hazardous  
Materials Safety Administration**

DOT-SP 15552  
(EIGHTH REVISION)

**EXPIRATION DATE: 2022-06-30**

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Poly-Coat Systems, Inc.  
Liverpool, Texas
2. PURPOSE AND LIMITATIONS:
  - a. This special permit authorizes the manufacture, mark, sale, and use of a non-DOT specification glass fiber reinforced plastic (GFRP) cargo tank conforming with all regulations applicable to a DOT Specification 407/412, except as specified herein, for the transportation in commerce of the hazardous materials authorized by this special permit. 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.
  - c. In accordance with 49 CFR 107.107(a), party status may not be granted to a manufacturing 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: 49 CFR § 107.503(b) and (c) in that the manufacturer is not required to hold an ASME U stamp or National Board R stamp and § 172.203(a) in that the special permit need not be shown on a shipping paper;

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§§ 173.241, 173.242, and 173.243 in that a non-DOT specification cargo tank constructed of glass fiber reinforced plastic is not authorized, except as specified herein.

5. BASIS: This special permit is based on the application of Poly-Coat Systems, Inc. dated August 28, 2019, submitted in accordance with § 107.105 and the public proceeding thereon.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

<b>Hazardous Materials Description</b>			
<b>Proper Shipping Name</b>	<b>Hazard Class/Division</b>	<b>Identification Number</b>	<b>Packing Group</b>
Class 8 material authorized to be transported in a lined DOT 407/412 cargo tank, Class 8 liquid and solid waste materials/specific chemical name or generic description as appropriate	8	As Appropriate	I, II, or III
Class 3 liquid or solid waste materials/specific chemical name or generic description as appropriate	3	As Appropriate	I, II, or III
Division 6.1 liquid or solid waste materials/specific chemical name or generic description as appropriate	6.1	As Appropriate	I, II, or III
Class 9 liquid or solid waste materials/specific chemical name or generic description as appropriate	9	As Appropriate	III

7. SAFETY CONTROL MEASURES:

a. PACKAGING: The authorized packaging is a non-DOT specification glass fiber reinforced plastic (GFRP) cargo tank conforming with all regulations applicable to a DOT Specification 407/412, except as specified herein. Each

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tank must have a design pressure of -14.7 psig to 35 psig and a design margin of at least 4.0:1. Maximum tank capacity may not exceed 7,200 US water gallons, with tank diameters ranging from 42 to 66 inches nominal. A layer of carbon fiber shall be incorporated between the liner and the structural layers, functioning as a conductive membrane. In this special permit, the liner is an interior surface that is not part of the structural design elements and is sacrificial in nature. Each tank must be designed and constructed in accordance with the Poly-Coat Systems drawings FRP Tanker, Rev. 1 and with the Application for Special Permit on file with the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD). Each tank must be in compliance with §§ 173.241, 173.242, or 173.243, as prescribed in the Hazardous Materials Table (§ 172.101), except that Special Provisions B15 and B23 are waived. In addition, each tank must meet all requirements for a DOT-407 and DOT 412 specification cargo tank motor vehicle (§§ 178.345, 178.347 and 178.348), except as follows:

- (1) §§ 178.345-1, 178.347-1 and 178.348-1: Any references to ASME Code requirements do not apply.
- (2) §§ 178.345-2 and 3; § 178.347-2; and § 178.348-2: Type of material, wall thickness and corrosion allowance requirements do not apply. Tank shell, heads, and fittings must be constructed of GFRP in accordance with the data on file with the OHMSAPD. Shell design must be based on extreme dynamic loadings as described in § 178.345-3(c) (2).
- (3) § 178.345-4: Joint weld requirements do not apply.
- (4) § 178.345-7: Circumferential reinforcement requirements do not apply.
- (5) § 178.345-10(c): Pressure relief requirements for location do not apply except that, if there are multiple cargo tanks, the pressure relief device must be mid-plane of each tank.
- (6) § 178.345-14: Specification plate and name plate requirements must be appropriately modified to reflect compliance with the terms of this special permit. For example:

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**DOT NAME PLATE**  
**CARGO TANK MANUFACTURED BY**  
**POLY-COAT SYSTEMS, INC.**  
**HOUSTON, TX USA**  
**DOT Reg. # CT-1670**

**CARGO TANK MFR. SERIAL #:** \_\_\_\_\_  
**SPECIFICATION:** DOT 407/412 SP-15552  
**ORIGINAL TEST DATE:** \_\_\_\_\_  
**CARGO TANK MAWP:** 35 (psig)  
**CARGO TANK TEST PRESSURE:** 52.5 (psig)  
**CARGO TANK DESIGN TEMP. RANGE:** -20 °F to 180 °F  
**NOMINAL WATER CAPACITY:** \_\_\_\_\_  
**MAXIMUM LADING DENSITY:** \_\_\_\_\_  
**SHELL MATERIAL:** FRP/CORE/FRP  
**MINIMUM SHELL THICKNESS:** \_\_\_\_\_  
**HEAD MATERIAL:** FRP  
**MINIMUM HEAD THICKNESS:** \_\_\_\_\_  
**EXPOSED SURFACE AREA:** \_\_\_\_\_  
**CORROSION BARRIER MATERIAL (if applicable):** \_\_\_\_\_  
**CORROSION BARRIER THICKNESS (if applicable):** \_\_\_\_\_  
**CARGO TANK PRESSURE VESSEL CONSTRUCTED IN ACCORDANCE WITH DOT SP-15552**

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**DOT SPECIFICATION PLATE**  
**CARGO TANK MOTOR VEHICLE MANUFACTURED BY**  
**XXX Co.**  
**XXX, XX USA**  
**DOT Reg. # CT-XXXX**

**SPECIFICATION:** DOT 407/412 SP-15552  
**CARGO TANK MOTOR VEHICLE CERTIFICATION DATE:** \_\_\_\_\_  
**CARGO TANK MFR.:** \_\_\_\_\_  
**CARGO TANK DATE OF MFG:** \_\_\_\_\_  
**CARGO TANK MFR. SERIAL #:** \_\_\_\_\_  
**CARGO TANK MOTOR VEHICLE MFR. VIN:** \_\_\_\_\_  
**MAXIMUM PAYLOAD:** \_\_\_\_\_  
**MAXIMUM LOADING RATE:** \_\_\_\_\_  
**MAXIMUM UNLOADING RATE:** \_\_\_\_\_

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(7) Each cargo tank motor vehicle must be plainly and durably marked on both sides near the middle in letters at least two inches in height on a contrasting background "DOT-SP 15552" as specified in § 172.302(b) and (c).

(8) § 178.345-15 Certification: The manufacturer's certificate retained by the motor carrier shall reflect the cargo tank manufacturer and final assembly and/or CTMV and reflect compliance of the terms contained in the special permit.

(9) § 180.413: Any modification or stretching must be authorized in writing by OHMSAPD. The manufacturer must be notified and authorize any repairs or modifications to the pressure vessel including the FRP lining, rubber lining, or other lining if so installed. Repairs that affect the structural integrity of the design that involve replacement of structural layers beyond the lining shall be considered "structural" and must be performed by the manufacturer. If total "structural" repair area is less than 2 sq. ft. in total area, the repair may be performed by an authorized service center approved by the manufacturer following written procedures provided by the cargo tank manufacturer.

(10) Complete cargo tank barrel replacement is permitted if the replacement cargo tank barrel is new and of identical design, matching data on file with the OHMSAPD as described in paragraph 7.a. of this special permit (DOT-SP 15552).

(11) Barrel replacement must be completed by a CT registered facility approved by the manufacturer, performed under the supervision of a Registered Inspector (as specified in 49 CFR § 180.413(e)(2)), and must be in accordance with Poly-Coat Barrel Replacement Form Procedures on file with the OHMSAPD and detailed below:

- (i) Remove piping and unbolt handrail.
- (ii) Remove straps.

(iii) Inspect rubber for wear and adhesion to the saddle. Worn rubber must be replaced and adhesive must be used to hold it in place on the saddles.

(iv) Replacement barrel must be of identical design and installed at the same position as the old barrel.

(v) Make sure the bottom flange is level and not interfering with any cross members, making sure there is at least one inch of clearance from the bottom flange to the cross member.

(vi) Attach straps (the center of the chassis may need to be supported or lifted with a fork lift or crane to pull it tight to the barrel).

(vii) Tighten the straps to 50-60 ft lbs torque.

(viii) Fill the barrel with water until it is full and retighten the straps to 60-70 ft lbs torque.

(ix) Reinstall the piping.

(x) Initial qualification testing must be performed in accordance with § 180.405, except that any references to ASME Code requirements do not apply.

(xi) After 2-3 loads the straps must be checked for proper torque, and again after 30 days (adjust if needed). Torque must also be checked, and adjusted if needed, annually during annual inspections.

b. OPERATIONAL CONTROLS:

(1) Tanks that are to be used in transporting Class 3 waste materials must be equipped with a spring loaded relief valve.

(2) Prior to loading a cargo tank, the cargo tank owner must determine that the product being loaded is compatible with the lining material used. The compatibility of each product offered for transportation in the GFRP cargo tank must be

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based on ASTM C-581, or the appropriate ASTM standard test method for the lining material type or on corrosion testing data from actual service conditions, where the tested lining material was integral to the barrel wall, for a period of not less than one year, or with the testing procedure on file with OHMSAPD. Test reports obtained by the owner must be retained by the owner for as long as the cargo tank remains in active operation and sent to the manufacturer. If the cargo tank is sold, the owner shall keep all reports for one year after the date of sale. Shippers using cargo tanks authorized under this special permit must comply with compatibility requirements of § 173.24(e).

(3) Poly-Coat Systems, Inc. shall submit an annual report to the OHMSAPD detailing the following information for each cargo tank barrel replacement:

- (i) Original Manufacture Date of damaged cargo tank.
- (ii) Original Manufacture Date of replacement cargo tank.
- (iii) Date of cargo tank replacement.
- (iv) VIN of motor vehicle.
- (v) Cargo Tank Serial Number of damaged cargo tank.
- (vi) Cargo Tank Serial Number of replacement cargo tank.
- (vii) Defect and/or damage leading to replacement.
- (viii) Cause of defect and/or damage leading to replacement.
- (ix) Owner/Operator of damaged cargo tank.

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c. TESTING:

(1) Initial qualification testing must be in accordance with § 180.405 for DOT 407/412 CTMV's, except that any references to ASME Code requirements do not apply.

(2) The GFRP cargo tank motor vehicle shall meet all requirements for DOT 407/412 CTMV's except that references to the ASME Code do not apply. Qualification and maintenance shall meet all requirements for DOT 407/412 CTMV's in Subpart E of Part 180.

(3) Periodic requalification must include at least a five year hydrostatic pressure test and annual internal and external visual inspections. In addition to those items required to be examined by the visual inspections specified in § 180.407(d) and (e), the visual inspections must include detection of cracks, gouges, debonding delamination or deterioration of any layers. Any cracks or contamination that are beyond the liner will be considered structural repairs that must be performed by the cargo tank manufacturer or by an authorized service center approved by the cargo tank manufacturer.

(4) In addition to the periodic hydrostatic test and visual inspections, the rubber lining must be inspected at least annually in order to verify its integrity. A conductive membrane must be conductivity tested in accordance with the application for special permit. Cargo tanks with rubber linings shall be inspected at least annually in accordance with § 180.407(f). Testing procedures must be performed in accordance with § 180.407(f)(1). Rubber lined tanks must be marked in accordance with § 180.415.

d. The grantee of the special permit shall inform the OHMSAPD of the person who is manufacturing the GFRP shells under the terms of the special permit. The grantee may not utilize a new person to manufacture the GFRP shells unless acknowledged in writing by the OHMSAPD. Persons manufacturing the GFRP shells may be inspected by PHMSA or other government agencies to verify their capability to perform their manufacturing functions authorized under the terms of the special permit.

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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 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. Each offeror must review the current copy of this special permit prior to loading hazardous materials into the cargo tank.

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 OHMSAPD for a specific manufacturing facility.

e. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.

f. The Manufacturer's Data Report for the first cargo tank fabricated must be submitted to the OHMSAPD prior to the initial shipment of hazardous materials.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.

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.

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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

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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-30, 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 [http://hazmat.dot.gov/sp\\_app/special\\_permits/spec\\_perm\\_index.htm](http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm) Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: VC/NICKS