

January 26, 2021



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 16118  
(FOURTH REVISION)

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: (See individual authorization letter)
2. PURPOSE AND LIMITATION:
  - a. This special permit authorizes the transportation in commerce of Hydrogen, compressed in non-DOT specification carbon fiber composite tanks. This special permit provides no relief from the Hazardous Materials Regulations (HMR) the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI), or the International Maritime Dangerous Goods (IMDG) Code 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. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
  - d. This special permit serves as an "approval under Part 6; Chapter 5, Paragraph 5.1.1.2 of the ICAO TI and Chapter 6.2, Paragraph 6.2.1.1.2 of the IMDG Code 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, the ICAO TI, and the IMDG Code.

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4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.301(a)(1) in that alternative packaging is authorized as specified herein.
5. BASIS: This special permit is based on the application of Toyota Motor Sales USA Inc. dated April 27, 2020, 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>
Hydrogen, compressed	2.1	UN1049	N/A

7. SAFETY CONTROL MEASURES:

- a. PACKAGING: Prescribed packagings are as follows:

(1) Non-DOT specification composite tanks consisting of a Polyamide liner with Aluminum Boss Ends wrapped with carbon fiber and epoxy resin, followed by glass fiber overwrap. The tanks have a maximum volume of 62 Liters each, and a Nominal Working Pressure (NWP) of 70 MPa. The tanks are designed and verified to the Japanese Safety Standard KHK S0128 and The UN Global Technical Regulation No. 13 for Hydrogen and Fuel Cell Vehicles and must be in accordance with the Toyota Motor Sales USA Inc. application, its drawings HT-US-01 and HT-US-02, and the performance test reports for this special permit on file with the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD).

(2) Non-DOT specification composite tanks consisting of a Polyamide liner with Aluminum Boss Ends wrapped with carbon fiber and epoxy resin, followed by glass fiber overwrap. The tanks have maximum volumes of 64.9 Liters, 52 Liters, and 25.3 Liters, and each has a NWP of 70 MPa. The tanks are designed and verified to the UN Global Technical Regulation No. 13 for Hydrogen and

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Fuel Cell Vehicles and ECE Regulation No. 134, and must be in accordance with the Toyota Motor Sales USA Inc. application, its drawings HT-UN-01, HT-UN-02, or GF189-00170 and the performance test reports for this special permit on file with OHMSAPD.

b. OPERATIONAL CONTROLS:

(1) The tanks must be shipped in rigid outer packagings (as described in Toyota Motor Sales USA Inc.'s application on file with OHMSAPD) with UN Specification Packing Group II Performance Level, with appropriate inner packaging to prevent tank movement, and protective inserts for the tank valve. The outside of each outer packaging must be clearly marked "DOT-SP 16118".

(2) For each tank shipped under the terms of this special permit, the gas pressure is limited to 4.0 MPa (580 psi).

(3) Transportation under this special permit is limited to shipment of tanks that are not installed in the motor vehicle to and from Toyota Facilities and/or dealerships.

c. TESTING: Periodic requalification of tanks in accordance with 49 CFR Part 180 is not required.

8. SPECIAL PROVISIONS:

a. 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, the ICAO TI, and the IMDG Code.

b. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

c. 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, and destination.

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9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, and cargo-only aircraft.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel, aircraft, or motor vehicle 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.

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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-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: RS/HERZOG