



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

June 03, 2024

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 15284
(FIFTH 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 anhydrous hydrogen fluoride in DOT 112S500I, 112J500I or 112H500W specification tank cars equipped with alternative pressure relief devices. 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 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.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 179.15(a), 173.31(e)(2)(ii) and 173.244(a)(2) in that alternative pressure devices are authorized.
5. BASIS: This special permit is based on the application of Solvay Fluorides, LLC dated January 27, 2023, submitted in accordance with § 107.105 and the public proceeding thereon and additional information dated May 31, 2024.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Hydrogen fluoride, anhydrous	8	UN1052	I

7. SAFETY CONTROL MEASURES:

a. PACKAGING: Packaging authorized is DOT specification 112S500I, 112J500I, or 112H500W tank cars equipped with pressure relief devices rated as specified paragraph 8 of this special permit. In addition to the requirements of the HMR, features of the tank cars related to the special permit must be constructed per the Solvay Chemicals Rail Car Specification Sheet on file with the Department of Transportation (DOT) as follows.

- (1) The requirement for metal jackets in § 173.31(e)(2) is waived.
- (2) The tank car tank must be constructed of ASTM A516, Grade 70, normalized steel.
- (3) The shell and head must have a thickness of 1.263" after rolling and forming.
- (4) The total thickness must include a minimum of a 1/32" corrosion allowance.
- (5) The tank car must be equipped with ½" full head shields.

b. MARKING:

- (1) Each tank car operating under the terms of this special permit must be marked "DOT-SP15284" in letters and numbers at least 4 inches high on a contrasting background above the qualification stencil.
- (2) Each tank car marked DOT specification 112S500I and 112J500I must have the "I" delimiter replaced with the "H" delimiter by December 31st, 2027.

8. SPECIAL PROVISIONS:

- a. Each tank car shall be equipped with a pressure relief device with a minimum start discharge pressure of 375 pounds per square inch gauge (psig). The minimum flow capacity of the pressure relief device must be 7,299 standard cubic feet per minute (SCFM).
- 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 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.
- d. Shipping papers must be noted "DOT-SP 15284".

9. MODES OF TRANSPORTATION AUTHORIZED: Rail freight.

10. MODAL REQUIREMENTS:

- (a) Given the hazards associates with anhydrous hydrogen fluoride, the grantee must provide the following information prior to the first shipment. This information must be submitted to the address in 10.b. of this special permit.
 - (1) Simulations of the proposed tank car pressure relief valve using the Analysis of Fire Effects on Tank Cars (AFFTAC) program. The grantee must identify the source of the thermodynamic properties of the commodity. The simulation must be performed per the requirements of Appendix A of the AAR's Tank Car Manual. The results of the simulation must be provided and summarized by indicating the survival time of the tank in the fire scenarios.
 - (2) A Maintenance Plan for the tank car including inspection intervals and methods to ensure the structural integrity of the tank and its appurtenances. As part of the plan the grantee must describe methods to determine the condition of the tank shell and collect and analyze data to ensure the design level of reliability. The Maintenance Plan must be submitted to the FRA at the address in 10.b. prior to loading the car for the first time.
 - (3) The applicant must, on an annual basis, evaluate new or emerging technology related to pressure relief devices. As new or emerging technology is developed the applicants/grantees must determine if it offers enhanced survivability of the tanks car because of greater flow capacity. The evaluation will

take the form of AFFTAC simulations per the requirements of Appendix A of the AAR's Tank Car manual and incorporating new valve(s) into the model. If a new valve is developed, a copy of the AAR approval must be submitted to the address in 10.b.

(4) The applicant must submit a certificate of construction to address in 10.b. of this special permit.

(b) The applicant must notify the Federal Railroad Administration of any unusual incident or incidents known to it that occur during the movement of cars built under this special permit. This includes adverse findings related to the welded protective housing during qualification. FRA may be contacted at:

Federal Railroad Administration
Hazardous Materials Division
RRS-12/Mail Stop 25
1200 New Jersey Avenue, SE
Washington, DC 20590
ATTN: Karl Alexy
202-493-6245, FAX: 202-493-6478
karl.alexey@dot.gov

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: LM/TG