1. **GRANTEE:** Versum Materials US, LLC
   Tempe, AZ

2. **PURPOSE AND LIMITATION:**
   
a. This special permit authorizes the one time transportation in commerce of Deuterium, compressed in DOT specification 3AA cylinder filled to 110 percent of its marked service pressure. 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. No party status will be granted to this special permit.

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

4. **REGULATIONS FROM WHICH EXEMPTED:** 49 CFR 173.302a(b) in that flammable gases are not authorized for special filling limits in DOT specification cylinders, except as specified herein.

5. **BASIS:** This special permit is based on the Versum Materials US, LLC application dated November 8, 2023, submitted in accordance with § 107.105 and the public proceeding thereon.

Tracking Number: 2023114391
6. **HAZARDOUS MATERIALS (49 CFR 172.101):**

| Hazardous Materials Description |
|-------------------------------|--------------------------------|------------------|----------------|
| Proper Shipping Name          | Hazard Class/Division | Identification Number | Packing Group |
| Deuterium, compressed         | 2.1                   | UN1957            | N/A            |

7. **SAFETY CONTROL MEASURES:**

   a. **PACKAGING:** Prescribed packaging is DOT Specification 3AA steel cylinder, manufactured after December 31, 1945. The cylinder must meet the conditions for special filling limits prescribed in §173.302a(b) except that the (+) mark is not stamped. The affected cylinder drawing is included with Versum Materials application on file with the Office of Hazardous Materials Safety.

   b. **OPERATIONAL CONTROLS:**

      1. Only one DOT 3AA cylinder charged with Deuterium, compressed is involved in this one-way shipment from warehouse in Manor, Texas, to Versum Materials facility in Tamaqua, Pennsylvania.

      2. The cylinder must be visually inspected for any damage or leaks and shipped in accordance with the provisions of §§173.301 and 173.302a as applicable.

      3. The shipping paper must identify the cylinder with the special permit number “DOT-SP 21669”.

      4. Versum Materials must act as the offeror (shipper) and the cylinder must be transported by dedicated truck.

      5. Upon transportation to Versum facility in Tamaqua, Pennsylvania, the cylinder may be requalified in accordance with §180.205 and, if successful, stamped for filling to 110% of the marked service pressure for future use in accordance with the terms of DOT SP-6530 as originally intended.

   c. **MARKING:** The outside of the cylinder must be marked “DOT-SP 21669”. 
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 and the HMR.

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

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.

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 the 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.:

![Signature]

for William Schoonover  
Associate Administrator for Hazardous Materials Safety  


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: TG