



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

DOT-SP 970  
(SEVENTEENTH 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 Diborane (UN1911) in DOT Specification 3AA and 3AL cylinders subject to the limitations and special requirements specified herein. 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. 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 § 173.302a(e) in that a maximum authorized filling density of greater than 7 percent is not authorized, except as specified herein.
5. BASIS: This special permit is based on the application of Linde Gas & Equipment Inc. submitted on August 8, 2024, submitted in accordance with 49 CFR 107.105 and the public proceeding thereon.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Diborane	2.3	UN1911	N/A

7. SAFETY CONTROL MEASURES:a. PACKAGING: Prescribed packaging is as follows:

(1) DOT Specification 3AA2015 and 3AA2400 with valves as shown in Callery Chemical Company Drawing #'s 3233-D, Revision 4 (dated July 30, 1996) and 5232; and in DOT Specification 3AL2015 and 3AL2216 cylinders which are equipped with valves as shown in Ceodeux S.A. Puretec Drawing # BASIC-D304, or equivalent. Cylinders filled with a filling density greater than 7% must be overpacked in an insulated drum with dry ice per the Callery Chemical Company Drawing # 3410A. Cylinders filled with a filling density of 14% must be overpacked in an insulated drum or case with dry ice as per Callery Chemical Company Drawing #'s 3410-A and 3272-A. Drawings are on file with the Office of Hazardous Materials Safety (OHMS).

(2) DOT Specification 3AA2400 (Drawing # 3025C) cylinders packaged in accordance with details included in Callery Chemical Company Drawing # 3219-A or in DOT Specification 3AA2015 and 3AA2400 cylinders packaged in accordance with details included in Callery Chemical Company Drawing # 3272-A; or, in DOT Specification 3AL2015 and 3AL2216 cylinders which are equipped with valves as shown in Ceodeux S.A. Puretec Drawing # BASIC-D304, or equivalent. The filling density may not exceed 28%. The outside packing case must be constructed of 3/4-inch outdoor plywood or equivalent with metal corners and have five-inch insulation throughout of polyurethane foam and a plywood or equivalent liner. The outside packing case must be equipped with steel frame centers to hold the cylinder in place and the surrounding area must be filled with dry ice. Drawings are on file with the Office of Hazardous Materials Safety (OHMS).

(3) DOT Specification 3AA2015 and 3AA2400 cylinders with valves installed per the Callery Chemical Company Drawing #'s 3233-D, Revision 4 (dated July 30, 1996) and 5232; or in DOT Specification 3AL2015 and 3AL2216 cylinders that are equipped with valves as shown in the Ceodeux S.A. Puretec

Drawing # BASIC-D304, or equivalent. The filling density may not exceed 28%. Cylinders must be overpacked in an insulated drum with dry ice as per Callery Chemical Company Drawing # D4061. Drawings are on file with the Office of Hazardous Materials Safety (OHMS).

(4) Cylinders authorized under this special permit may be overpacked in non-DOT specification metal drums that are insulated and filled with dry ice for refrigeration purposes. Insulated metal drums containing dry ice must have perforated top heads to allow venting of carbon dioxide. All drums used as overpacks, purchased after March 1, 1998, must meet the performance requirements for UN1A2 steel drums for Packing Group I solids (see § 178.504 and §§ 178.601 through 178.608) prior to installation of the insulation. If the drums are marked as UN1A2 prior to modification by installation of insulation and perforation of the top head, the markings must be obliterated prior to use.

(5) The cylinders authorized under this special permit must comply with the requirements prescribed in § 173.40, except for Paragraph (d). The cylinders must be equipped with a single or double valve arrangement as detailed in the Callery Chemical Company Drawing # 3233-D, Revision 4 (dated July 30, 1996); or, with valves as shown in the Ceodeux S.A. Puretec Drawing # BASIC-D304 on file with OHMS, or equivalent.

(6) Where this special permit prescribes the use of outside shipping containers designed for inclusion of dry ice, sufficient dry ice must be packed therein to provide refrigeration for a period of at least 14 days. Normal time in transportation must not exceed 10 (ten) days.

(7) Cylinders containing residual diborane must be kept in the outer packaging packed with sufficient amounts of dry ice to provide adequate refrigeration for a period of at least 14 days. The shipper then must notify the supplier in writing via telegram, email, or facsimile of the intent to return the above cylinders and must obtain confirmation from supplier of the shipment due date.

b. TESTING: Each cylinder must be requalified at least once every five years in accordance with § 180.205. The cylinders may be requalified by using either the hydrostatic test and internal visual examination or by 100% Ultrasonic Examination (UE) and external visual examination.

c. OPERATIONAL CONTROLS:

(1) The shipper must require acknowledgment of receipt of shipment in writing by means of a telegram, email, or facsimile (FAX) and must promptly

notify the OHMS of any such shipment not received at the destination within two days after shipment is due.

(2) Drivers must be instructed of the necessary safeguards and proper procedure in event of unusual delay, fire, or accident.

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.

c. MARKING: In addition to the POISON GAS label and the FLAMMABLE GAS label, each outside shipping container must bear a conspicuous marking that reads as follows: "IF NOT DELIVERED BEFORE \_\_\_\_\_, CARRIER MUST ADVISE THE (Name of Shipper, City and State), ALSO THE OFFICE OF HAZARDOUS MATERIALS SAFETY, WASHINGTON, D.C., BY FAX 202-366-3308." The date inserted in the blank space on this marking must not be in excess of the number of days prescribed herein for each type of packaging, from the date shipment is first offered for transportation.

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.

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., where 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.:



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: ae