

May 14, 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 15213  
(FOURTH REVISION)

**EXPIRATION DATE: 2025-04-30**

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Global Nucleonics, LLC  
Houston, TX
2. PURPOSE AND LIMITATIONS:
  - a. This special permit authorizes the manufacture, mark, sale and use of non-refillable, non-DOT specification cylinders for the transportation in commerce of Boron Trifluoride. The cylinders are described as electron tubes that are part of radiation detectors. 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. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not 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 § 172.101 Column 9 in that boron trifluoride is forbidden for transport by aircraft, except as specified herein; the labeling and

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placarding requirements of Part 172, except when transported by air; § 173.302a(a)(1) in that the prescribed packagings are not authorized; and the ICAO Technical Instructions Table 3-1, Columns 9,10,11 and 12.

5. BASIS: This special permit is based on the application of Global Nucleonics LLC dated March 22, 2021, submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

<b>Hazardous Material Description</b>			
<b>Proper Shipping Name</b>	<b>Hazard Class/ Division</b>	<b>Identification Number</b>	<b>Packing Group</b>
Boron trifluoride, compressed	2.3	UN1008	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING: Packagings prescribed are non-refillable, non-DOT specification cylinders described as electron tubes. The electron tubes are constructed of stainless steel or aluminum. The tubes have welded, soldered, or solder glassed joints, and brazed metal to ceramic electrical feed-through assemblies. The maximum tube volume is 250 cubic inches, and the maximum operating pressure is 0 psig at 70 °F. The design burst pressure of the electron tube must at least 4 times the maximum operating pressure, but no less than 100 psig. Each electron tube must be manufactured in accordance with Centronic drawings on file with the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD).

- b. OPERATIONAL CONTROLS:

(1) Electron tubes must be shipped in strong outside packagings that are capable of withstanding a drop of 6 feet without breakage or rupture of the outside packaging or the contents.

(2) When electron tubes are transported installed in equipment, the equipment must be packaged in strong outside packagings, providing equivalent protection for the devices as specified in paragraph 7.b.(1) of this

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special permit, unless the electron tubes are afforded adequate protection by the construction of the machinery or apparatus.

(3) For international shipment by aircraft, electron tubes must first be tightly packed in a UN1A2 drum that meets the requirements for the transport of a solid at the Packing Group II performance level. In addition, the drum must be capable of passing the leakproofness test prescribed in § 178.604 at a 30 kPa (4 psig) test pressure for Packing Group I. The size of the outer drum must be such that leakage from all electron tubes contained therein will not cause the contained pressure to exceed 4 psig.

(4) Notwithstanding § 175.3, packagings prescribed by this special permit may be shipped by cargo aircraft in packages of no more than 60 grams of Boron trifluoride each.

c. MARKING: The outside of each package authorized by this special permit must be plainly and durably marked "DOT-SP 15213".

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.

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

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registration symbol designated by the Office of Hazardous Materials Special Permits and Approvals for a specific manufacturing facility.

- e. A current copy of this special permit must be maintained at each facility where the packaging is manufactured under this special permit. It must be made available to a DOT representative upon request.
- f. Except when transported by air, packages prescribed by this special permit are excepted from 49 CFR Part 172, Subparts E (labeling) and F (placarding).
- 9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, cargo aircraft, cargo vessel, and rail freight.
- 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.

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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 -- OHMSPA, 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: TG