



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

November 21, 2024

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 11580
(EIGHTEENTH REVISION)

EXPIRATION DATE: 2028-10-31

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Columbiana Boiler Company, LLC
Columbiana, OH
2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the manufacture, mark, sale, and use of non-DOT specification stainless steel cylinders conforming to all regulations applicable to DOT specification 4BW, except as specified herein, for use in transporting hazardous materials authorized under this special permit. 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. 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 §§ 173.40(a), 173.158(b), (g), and (h), 173.192(a), 173.201(c), 173.202(c), 173.203(c), 173.226(a), 173.227(a), and 173.336 in that a non-DOT specification cylinder is not authorized, except as specified herein.
5. BASIS: This special permit is based on the application of Columbiana Boiler Company, LLC dated September 27, 2024, and submitted in accordance with § 107.109.

Tracking Number: 2024095340

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Dimethylhydrazine, unsymmetrical	6.1	UN1163	I, Hazard Zone B
Dinitrogen tetroxide	2.3	UN1067	Hazard Zone A
Hydrazine, anhydrous	8	UN2029	I
Methylhydrazine	6.1	UN1244	I, Hazard Zone A
Nitric acid <i>other than red fuming, with more than 70 percent nitric acid</i>	8	UN2031	I
Nitric acid <i>other than red fuming, with not more than 70 percent nitric acid</i>	8	UN2031	II
Hazardous materials authorized to be transported in DOT Specification 4BW cylinders	As Appropriate	As Appropriate	As Appropriate
Toxic by inhalation liquid, corrosive, n.o.s.	6.1	UN3390	I, Hazard Zone B
Toxic liquids, flammable, organic, n.o.s. (50% anhydrous hydrazine and 50% unsymmetrical dimethylhydrazine)	6.1	UN2929	I, Hazard Zone B

The provisions of 49 CFR 172.101, Column (9B) apply to aircraft shipments made under the terms of this special permit.

7. SAFETY CONTROL MEASURES:

- a. PACKAGING: Packaging prescribed is a non-DOT specification stainless steel cylinder conforming to the general requirements for specification cylinders (§ 178.35) and DOT Specification 4BW (§ 178.61), except as follows:

§ 178.35(b) *Inspection by whom and where.*

(1) Inspections and verifications must be performed by a third party. The third-party inspector must either be a National Board Authorized Inspector or an inspector approved in writing by the Associate Administrator for Hazardous Materials Safety, in accordance with Subpart I of Part 107 of the Hazardous Materials Regulations.

(2) * * *

§ 178.35(f) *Marking.*

(1) Marking on each cylinder stamped as follows:

(i) “DOT-SP 11580” must be marked in place of “DOT-4BW” followed by the service pressure.

* * *

§ 178.61(b) *Authorized steel.* Material of construction must be SA240 type 304L or type 316L stainless steel.

§ 178.61(d) *Manufacture.*

(1) * * *

(2) Circumferential seam welds must be full penetration butt welds with full 100% radiograph inspection.

§ 178.61(g) *Heat treatment.* Cylinders need not be heat treated.

§ 178.61(i) *Hydrostatic test.*

(1), (2), (3), and (4) * * *

(5) A one-time, first article hydrostatic test, to four times the marked service pressure without bursting, is required for initial qualification of each cylinder design type. For the purposes of this test, cylinders of the same wall thickness, diameter, and material grade are of the same design type.

§ 178.61(j) *Physical tests.* Physical tests are not required.

b. TESTING:

(1) For the transportation of dinitrogen tetroxide, liquefied and nitric acid, cylinders must be inspected and tested as required in NASA Kennedy Space Center Procurement Specification 81K05262.

(2) Cylinders must be requalified in accordance with the requirements of § 180.209 applicable to DOT 4BW cylinders.

c. OPERATIONAL CONTROLS:

(1) The transport pressure must be limited to 50 psig.

(2) The following additional requirements apply for the transportation of dinitrogen tetroxide, liquefied and nitric acid:

(i) Cylinders must be in conformance with NASA Kennedy Space Center Procurement Specification 81K05262;

(ii) Cylinders must be in conformance with § 173.40 except as follows:

(A) § 173.40(c)(1). Connections must be straight threads with controlled root radius straight threads (thread form symbol UNJ) in accordance with Military Specification MIL-S-8879. Female ports must be UNJ straight threads and must meet Military Standard MS33649. The sealing gasket must be polytetrafluoro-ethylene or Kalrez 1045 preformed packing per Military Standard MS9956. Preformed packing must be deformed in assembly only once; reassembly must require a new preformed packing; and

(B) § 173.40(c)(2). Valves must be quarter turn ball valves with secondary stem containment stem seals of a NASA approved design. Prior to filling, or at a minimum frequency of one year, a bubble leak check must be performed on all mechanical joints at a minimum of 200 psig. Prior to cylinder refill, or at a five-year frequency, whichever is greater, valves must have all soft good materials (such as seats, packing, and o-rings) replaced, valves must be cleaned, and valves must be leak-tested at rated pressure at all joints and across the seat.

(iii) Cylinders may not be equipped with safety relief devices. Cylinders must be equipped with a detachable protective housing for the loading and unloading valves.

(3) Manufacturing, testing, and inspection of prescribed cylinders must be in accordance with The Columbiana Boiler Company Quality Assurance Manual on file with the Office of Hazardous Materials Safety.

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 marked with a registration symbol designated by the Office of Hazardous Materials Safety for a specific manufacturing facility.

e. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.

f. Transportation of Division 2.1 (flammable gases) and Division 2.3 (toxic gases which are poisonous by inhalation) are not authorized aboard cargo vessel or aircraft unless specifically authorized in the Hazardous Materials Table (§ 172.101).

g. Transportation of oxygen by aircraft is only authorized when in accordance with § 175.501.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, cargo-only aircraft (See paragraphs 8.f. and 8.g. for restrictions).

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 shall furnish a current 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, 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.:

A handwritten signature in blue ink, appearing to read "W. Schoonover", is written over a faint circular stamp.

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-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: BB