U.S. Department
of Transportation

**Research and
Special Programs
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

**DOCKETS UNIT
(202)366-5046 BUS.
(202366-3753 FAX**

**CYLINDERS 3-AL
SEE LIST BELOW**

**D.O.T.E- 6498
7042
8107
8364
8422
6616
6668
8404**

**SEE SECTION 173.23
49 CFR CODE OF REGULATIONS**

§ 173.23 Previously authorized packaging.

(a) When the regulations specify a packaging with a specification marking prefix of "DOT," a packaging marked prior to January 1, 1970, with the prefix of "ICC" may be used in its place if the packaging otherwise conforms to applicable specification requirements.

(b) [Reserved]

(c) After July 2, 1982, a seamless aluminum cylinder manufactured in conformance with and for use under DOT exemption E 6498, E 7042, E 8107, E 8364, or E 8422, may be continued in use if marked before or at the time of the next retest with the specification identification "3AL" immediately above the exemption number, or the DOT mark (e.g., DOT 3AL 1800) is added in proximity to the exemption marking.

(d) Cylinders (spheres) manufactured and marked DOT-E 6616 prior to January 1, 1983, may be continued in use if marked before or at the time of the next retest with the specification identification "4BA" near the exemption marking.

(e) After October 1, 1984, cylinders manufactured for use under exemptions DOT E-6668 or E-8404 may be continued in use, and must be marked "DOT-4LXXXYY" (XXX to be replaced by the service pressure, YY to be replaced by the letters "AL", if applicable) in compliance with Specification 4L (§178.57 of this subchapter) on or before January 1, 1986. The "DOT-4LXXXYY" must appear in proximity to other required specification markings.

(f) An MC 331 cargo tank motor vehicle must conform to structural integrity requirements in §178.337-3 or to corresponding requirements in effect at the time of manufacture.

(g) A non-bulk packaging manufactured, tested, marked, and certified on or before September 30, 1996, in accordance with the applicable provisions of subparts L and M of part 178 of this subchapter in effect on September 30, 1995, may be used as authorized by this subchapter if the packaging conforms to all requirements applicable at the time of manufacture. In addition, such a packaging may be reused as authorized by §173.28 without a nominal thickness marking, if it conforms to the minimum thickness criteria prescribed in §173.28(b)(4).

[Amdt. 173-3, 33 FR 14921, Oct. 4, 1968, as amended by Amdt. 173-94; 41 FR 16063, Apr. 15, 1976; Amdt. 173-152, 47 FR 26633, June 21, 1982; Amdt. 173-16, 48 FR 50460, Nov. 1, 1983; Amdt. 173-176, 49 FR 24689, June 14, 1984; Amdt. 173-180, 49 FR 42735, Oct. 24, 1984; Amdt. 173-224, 55 FR 52610, Dec. 21, 1990; 57 FR 45460, Oct. 1, 1992; Amdt. 173-240, 60 FR 17400, Apr. 5, 1995; Amdt. 173-242, 60 FR 26805, May 18, 1995]

DEPARTMENT OF TRANSPORTATION
RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION
WASHINGTON, D.C. 20590

DOT-E 8404
(CORRECTED COPY)

1. Minnesota Valley Engineering, New Prague, Minnesota is hereby granted an exemption from those provisions of this Department's Hazardous Materials Regulations specified in paragraph 5 below to manufacture, mark, and sell the packaging described in paragraph 7 below for use in the transportation of the non-flammable gases described in paragraph 3 below in commerce subject to the requirements specified herein. This exemption authorizes the use of a DOT 4L cylinder with a design pressure less than that allowed in the regulation, and provides no relief from any regulation other than as specifically stated.

2. BASIS. This exemption is based on Minnesota Valley Engineering's (MVE) application dated April 1, 1980 submitted in accordance with 49 CFR 107.103 and the public proceeding thereon.

3. HAZARDOUS MATERIALS (Descriptor and Class). The following pressurized liquids, argon, nitrogen and oxygen, classed as nonflammable gases.

4. PROPER SHIPPING NAME (49 CFR 172.101). Argon, pressurized liquid; nitrogen, pressurized liquid; or oxygen, pressurized liquid, as appropriate.

5. REGULATION AFFECTED. 49 CFR 173.304(a)(2).

6. MODES OF TRANSPORTATION AUTHORIZED. Motor vehicle, rail freight, cargo vessel.

7. SAFETY CONTROL MEASURES. Packaging prescribed is a vacuum insulated cylinder with a service pressure of 100 psi, and in full compliance with Specification DOT 4L (49 CFR 178.57) except as follows:

a. The cylinder must not be marked "DOT 4L*** per 49 CFR 178.57-20(a)(1) but instead must be marked "DOT-E 8404", followed by the service pressure.

b. Each cylinder must be filled as follows:

Commodity	Maximum Pressure Control Valve Setting	Filling Density % by weight
Argon	110 psi	126%
Nitrogen	110 psi	71%
Oxygen	110 psi	102%

c. Cylinders in oxygen service must be:

(1) Insulated with a material that does not sustain combustion in a 99.5 per cent oxygen atmosphere at atmospheric pressure when contacted with a continuously heated glowing platinum wire.

(2) Thoroughly cleaned for oxygen service in accordance with CGA Pamphet G 4.1.

8. SPECIAL PROVISIONS.

a. Shippers may use the packaging covered by this exemption pursuant to 49 CFR 173.22a.

b. A copy of this exemption must be carried aboard each vessel used to transport packages covered by this exemption.

c. Before transportation in an empty condition, each cylinder must be emptied of liquid content. In addition, the vapor pressure must be so reduced as to avoid the possibility of venting en route.

9. REPORTING REQUIREMENTS. Any incident involving loss of contents of the package must be reported to the OHMR as soon as practicable.

10 EXPIRATION DATE. April 30, 1982.

Issued at Washington, D.C.:

29 AUG 1980

Alan I. Roberts
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Hazardous Materials Regulation
Materials Transportation Bureau

(DATE)

Address all inquiries to: Associate Director for Hazardous Materials Regulation, Materials Transportation Bureau, Research and Special Programs Administration, U.S. Department of Transportation, Washington, D.C., 20590. Attention: Exemptions Branch.

Dist: USCG, FHWA, FRA