U.S. Department
of Transportation

**Pipeline and
Hazardous
Materials Safety
Administration**

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

SEP 3 0 2005

DOT-E 8221
(SEVENTH REVISION)

EXPIRATION DATE: August 31, 2007

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Applied Companies
Valencia, CA

2. PURPOSE AND LIMITATION:

a. This exemption authorizes the transportation in commerce of certain materials described in paragraph 6 below in non-DOT specification, high pressure cylinders of welded construction for military missile systems use only. This exemption provides no relief from any Hazardous Materials Regulations (HMR) other than as specifically stated herein.

b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated for use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.

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

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.302a(a), § 175.3 in that non-DOT Specification cylinders are not authorized except as prescribed herein.

5. BASIS: This exemption is based on the application of Applied Companies dated August 30, 2005 submitted in accordance with § 107.109.

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6. HAZARDOUS MATERIALS (49 CFR § 172.101):

| Hazardous Materials Description | | | |
|---|---|---|---|
| **Proper Shipping Name** | **Hazard Class/ Division** | **Identi-fication Number** | **Packing Group** |
| Air, compressed | 2.2 | UN1002 | n/a |
| Nitrogen, compressed | 2.2 | UN1066 | n/a |

7. SAFETY CONTROL MEASURES: Packaging prescribed is a non-DOT Specification girth welded steel cylinder having a maximum water capacity of 130 cubic inches and a maximum service pressure of 6,000 psi. Cylinders must be in accordance with AEC design specifications including drawing 54080-181-36 Rev. A, dated March 3, 1979, on file in the Office of Hazardous Materials Exemptions and Approvals (OHMEA), and in full compliance with DOT Specification 3HT (§ 178.35 and § 178.44) except as follows:

§ 178.44 (a) Type, size and service pressure.

Cylinders may be girth welded and have one end fitting welded as shown on AEC drawing 54080-181-36. Nominal volume to be 120 cubic inches water capacity with a service pressure of 6000 psi.

§ 178.44 (e) Welding or Brazing.

Welding as prescribed in § 178.44(a) of this exemption, is authorized. All pressure welds on 10 percent of the cylinders of each lot must be 100 percent radiographed after hydrostatic test. If any cylinder is rejected, the entire lot must be 100% radiographed.

§ 178.44 (f) Wall thickness.

(1) Minimum wall thickness for any cylinder must be 0.050 inch. The minimum wall thickness must be such that the wall stress at the minimum specified test pressure must not exceed 75 percent of the minimum tensile strength of the steel as determined from the physical tests required in § 178.44(m) and must not be over 95,000 psig.

§ 178.44 (n) Magnetic Particle Inspection.

(Added) Liquid penetrant inspection in accordance with ASTM-E 165-65 is authorized. Inspection must be performed externally on the finished container after hydrostatic test. Evidence of discontinuities, which in the opinion of the independent inspector may appreciably weaken or decrease the durability of the cylinder, must be cause for rejection.

§ 178.44 (p) Acceptable results of tests.

(1) Flattening required without cracking to six times the wall thickness of the cylinder.

§ 178.44 (r) Marking.

Applies except that instead of DOT 3HT, cylinders must be marked DOT-E 8221 followed by the service pressure.

8. SPECIAL PROVISIONS:

a. Cylinders are for military missile systems use only.

b. Cylinders must be shipped in strong outside packagings in conformance with § 173.301(a)(9).

c. Cylinder service life is not authorized to exceed 15 years from the date of manufacture.

d. Each cylinder must be reinspected and hydrostatically retested every 3 years in accordance with § 180.205 as prescribed for DOT 3HT cylinders.

e. A current copy of this exemption must be carried aboard each aircraft used to transport packages covered by this exemption.

f. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modifications or changes are made to the package and it is reoffered for transportation in conformance with this exemption and the HMR.

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

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, and cargo aircraft only.

10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel, aircraft or motor vehicle used to transport packages covered by this exemption. The shipper must furnish a current copy of this exemption 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 exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

    - All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

    - Persons operating under the terms of this exemption must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.

    - Registration required by § 107.601 et seq., when applicable.

    Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

    No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this exemption 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 exemption must notify the Associate Administrator for Hazardous Materials Safety --

OHMEA, in writing, of any incident involving a package, shipment or operation conducted under terms of this exemption.

Issued in Washington, D.C.

SEP 3 0 2005
DATE

for Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, D.C. 20590. Attention: PHH-31.

Copies of this exemption may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/exemptions Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

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