



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

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

**MAR 15 2004**

DOT-E 8023  
(EIGHTH REVISION)

EXPIRATION DATE: January 31, 2006

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Structural Composites Industries (SCI)  
Pomona, CA
2. PURPOSE AND LIMITATIONS:
  - a. This exemption authorizes the manufacture, mark, sale and use of non-DOT specification FRP-2 cylinders for transportation of Division 2.1 and 2.2 materials listed in paragraph 6 below. This exemption provides no relief from the 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.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.302a(a), 173.302a(a) and (d) and 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 Structural Composites Industries dated January 30, 2004, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name/ Hazardous Material Description	Hazard Class/ Division	Identi- fication Number	Packing Group
Air, compressed	2.2	UN1002	N/A
Argon, compressed	2.2	UN1006	N/A
Carbon dioxide	2.2	UN1013	N/A
Helium, compressed	2.2	UN1046	N/A
Hydrogen, compressed	2.1	UN1049	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Nitrous Oxide	2.2	UN1070	N/A
Oxygen, compressed	2.2	UN1072	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Prescribed packaging is a non-DOT specification fiber reinforced plastic (FRP) hoop-wrapped (HW) cylinder made in accordance with Acurex Corporation's technical data submitted with their application, on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA), and in full compliance with DOT FRP-2 Standard First Revision dated January 4, 1987, except as follows:

§ 178.BB-5 Material.

(a) Aluminum liner used in the construction of any new cylinders after May 29, 1985 must be the 6351-T6 alloy and temper.

\* \* \* \* \*

§ 178.BB-15 Marking.

(a) Each cylinder must be permanently marked (other than stamping in the composite) in the composite wrap on the side near the end of the cylinder containing the valve outlet, except that cylinders manufactured prior to October 1, 1982 may be marked as follows:

"DOT-E 8023" followed by the service pressure and the inspectors mark must be located in the composite wrap. Other required markings must be in the composite wrap or on the metal shoulder, top head or neck of the cylinder.

\* \* \* \* \*

b. TESTING - Each cylinder must be reinspected and hydrostatically retested at least once every three years in accordance with § 180.205 as prescribed for DOT 3HT cylinders, except that permanent volumetric expansion for cylinders made after July 1, 1979 may not exceed 5 percent of total volumetric expansion at test pressure, and the rejection elastic expansion criteria does not apply. Retest dates must be stamped into the metal of the cylinder shoulder near the original test date.

c. OPERATIONAL CONTROLS -

1. Cylinders may not be used for underwater breathing purposes.
2. A cylinder is not authorized for use 15 years after its date of manufacture.
3. Cylinder must be packaged in accordance with § 173.301(a)(9).
4. A cylinder which has been subjected to action of fire must not be returned to service.
5. Acurex, the former grantee of this exemption, is responsible for compliance with the terms of DOT-E 8023 (Third Revision, Second Corrected Copy) and with the provisions as related to those cylinders manufactured prior to May 29, 1985 and marked with this exemption number.
6. Acurex, the former grantee of this exemption, is not authorized to manufacture cylinders under this exemption after May 29, 1985.
7. Transportation of flammable gases is not authorized for aircraft or cargo vessel.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of paragraph (b) of § 173.22a, persons may use the packaging authorized by this exemption for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this exemption.

b. A person who is not a holder of this exemption, but receives a package covered by this exemption, may reoffer it for transportation provided no modification or change is made to the package or its contents and it is offered for transportation in conformance with this exemption and the HMR.

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

d. Each packaging manufactured under the authority of this exemption must be marked with a registration symbol designated by the Office of Hazardous Materials Exemptions and Approvals for a specific manufacturing facility.

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

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, cargo aircraft only, and passenger-carrying aircraft (see paragraph 7(c)(7) for restrictions).

10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel or aircraft used to transport packages covered by this exemption. The shipper shall furnish a 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:

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

- o 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.
- 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 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: The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must also inform the AAHMS, in writing, as soon as practicable of any incidents involving the package and shipments made under this exemption.

Issued in Washington, D.C.



*fr* Robert A. McGuire  
Associate Administrator for  
Hazardous Materials Safety

**MAR 15 2004**

DATE

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

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

PO: KFW/ALB  
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