



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

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

**APR 15 2004**

DOT-E 10664  
(SEVENTH REVISION)

EXPIRATION DATE: March 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 a non-DOT specification fully wrapped carbon-fiber reinforced aluminum lined cylinders for the transportation in commerce of the materials authorized by this exemption. 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)(1), 173.304a(a)(1) and 175.3 in that non-DOT specification cylinders are not authorized, except as specified herein.
5. BASIS: This exemption is based on the application of Structural Composites Industries dated April 1, 2004, submitted in accordance with § 107.109.

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6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name/ Hazardous Material Description	Hazard Class/ Division	Identi- fication Number	Packing Group
Air, compressed (containing up to 39% by volume oxygen content)	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
Methane, compressed or Natural gas, compressed (with high methane content)	2.1	UN1971	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Oxygen, compressed	2.2	UN1072	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Prescribed packaging is a fully wrapped carbon-fiber reinforced aluminum lined cylinder made in conformance with the Basic Requirements for Fully Wrapped Carbon-Fiber Reinforced Aluminum Lined Cylinders (DOT-CFFC) (Fourth Revision), dated November 2000, contained in Appendix A of this exemption except for the following:

CFFC-3 SERVICE LIFE -

\* \* \*

(1) The exemption holder must submit a Service Life Extension Plan no later than six months after the issue date of this exemption.

\* \* \*

b. TESTING -

(1) Each cylinder must be reinspected and hydrostatically retested every three years in a water jacket suitable for the determination of the expansion of the cylinder. The hydrostatic test must be conducted in accordance with the test procedure described in DOT CFCC-13 (see Appendix A).

(2) A cylinder must be condemned if the elastic expansion exceeds the marked rejection elastic expansion. Repair of rejected cylinders is not authorized.

(3) Retest dates must be marked on a label securely affixed to the cylinder near the original test date and overcoated with epoxy.

(4) When a hydrostatic retest is repeated as provided for in § 180.205(g), only two such retests are permitted.

c. OPERATIONAL CONTROLS -

(1) Cylinders may not be used for underwater breathing purposes.

(2) Cylinders used in oxygen service must conform with § 173.302(b)(1) through (4).

(3) A cylinder that has been subjected to fire may not be returned to service.

(4) Cylinders must be packaged in accordance with § 173.301(a)(9).

(5) Cylinders manufactured under this exemption are not authorized for use fifteen (15) years after the date of manufacture.

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.
- f. Transportation of Division 2.1 (flammable gases) is not authorized aboard cargo vessel or aircraft unless specifically authorized in the Hazardous Materials Table (§ 172.101).
- g. The transportation of oxygen by aircraft is only authorized when in accordance with § 172.102(c)(2) Special Provision A52 and §§ 175.85(h) and (i).
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, cargo aircraft only, and passenger-carrying aircraft.
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 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:
- 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:



Robert A. McGuire  
Associate Administrator for  
Hazardous Materials Safety

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(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/exemptions> Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

PO: KFW/sln