U.S. Department
of Transportation

**Research and
Special Programs
Administration**

JUL 15 1999

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

DOT-E 11621
(FIRST REVISION)

EXPIRATION DATE: June 30, 2001

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Aerojet General Corporation
Sacramento, California

2. PURPOSE AND LIMITATIONS:

This exemption authorizes the manufacture, marking, sale, and transport of non-DOT specification fiberglass and carbon-fiber reinforced aluminum-lined fully-wrapped bulk cylinders to be used for the transportation in commerce of certain Division 2.1 and Division 2.2 compressed gases. This exemption provides no relief from any regulation other than as specifically stated herein.

b. An exemption authorization to manufacture, mark, sell, and transport only represents certification of safety for a package when it is an article of commerce in transportation. 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 with consumer use, 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 § 173.34(e), § 173.301(h), and § 173.302(a)(1) in that the prescribed packaging is not listed as an authorized packaging.

5. BASIS: This exemption is based on the application of Aerojet General Corporation dated June 23, 1999 submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous materials description -- proper shipping name	Hazard Class/ Division	Idenifi-cation Number	Packing Group
Air, compressed	2.2	UN1002	N/A
Argon, compressed	2.2	UN1006	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
Mixtures of Air, Argon, Helium, Neon, and Nitrogen compressed/ Compressed gases, n.o.s.	2.2	UN1956	N/A
Mixtures of Hydrogen and Methane, compressed or Natural gas, compressed/ Compressed gases, flammable, n.o.s.	2.1	UN1954	N/A
Neon, compressed	2.2	UN1065	N/A
Nitrogen, compressed	2.2	UN1066	N/A

7. PACKAGING(S) and SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is the Aerojet-Specification Composite Cylinder (A-SCC), a non-DOT specification fiberglass and carbon-fiber reinforced aluminum-lined fully-wrapped bulk cylinder. The A-SCC must be designed, manufactured, tested, and marked in conformance with Aerojet's A-SCC Product Specification, AIP Specification 1.0 submitted with the amended application for exemption, on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA).

The water capacity is not over 2558 pounds and the service pressure is not over 3,800 psig.

b. TESTING - The A-SCC must be periodically retested every three years in accordance with Aerojet A-SCC Periodic Inspection and Testing, AIP Specification 3.0 (Appendix 7 of the application for exemption).

When a hydrostatic retest is repeated as provided for in § 173.34(e)(3), only two such retests are permitted.

c. OPERATIONAL CONTROLS -

(1) The A-SCC must be mounted into the Aerojet Mobile Storage Module (MSM) with the Aerojet cylinder mounting system as defined in Appendixes 2 and 9 of the application for exemption on file with OHMEA. Shippers must ensure that the cylinders are transported in a manner that does not allow repetitive abrasion, chafing, cutting or wear of the A-SCC's outer surface.

(3) Manifolding of A-SCCs is authorized. Manifolding must be in accordance with § 173.301(d).

(4) During charging and filling, the internal temperature of the dead end (end of cylinder opposite filling connection) of the A-SCC may not exceed 170°F.

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 modifications or changes are made to the package and it is offered for transportation in conformance with this exemption and the HMR.

c. Each packaging manufactured under the authority of this exemption must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which the fiber reinforcement is applied or (2) marked with a registration symbol designated by the OHMEA for a specific manufacturing facility where the fiber reinforcement is applied. In addition, each packaging manufactured under the authority of this exemption must be either: (1)marked with the name of the manufacturer and

location (city and state) of the facility at which the liner is inspected; or (2) marked with a registration symbol designated by the OHMEA for a specific manufacturing facility where the liner is inspected.

d. 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 the DOT representative upon request.

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

f. An A-SCC that has been subjected to fire may not be returned to service.

g. The service life of the A-SCC must not exceed 15 years from the date of manufacture as marked on the cylinder.

h. MARKING - Each cylinder must be marked "DOT-E 11621" followed by service pressure in pounds per square inch, gauge.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.

10. MODAL REQUIREMENTS:

1. A current copy of this exemption must be carried aboard each motor vehicle used to transport packages covered by this exemption.

2. Motor carriers used to transport A-SCCs offered in accordance with the terms of this exemption must have a "Satisfactory" safety rating as prescribed in 49 CFR Part 385.

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, Parts 171-180.
- Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined § 171.8 who performs a function subject to this exemption must received training on the requirements and conditions of this exemption in addition to the training requirement 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 at Washington, D.C.

Ann Mazzullo 7/15/99

for Alan I. Roberts (DATE)
Associate Administrator
for Hazardous Materials Safety

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.

The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

Copies of exemptions may be obtained form the AAHMS, U.S. Department of Transportation, 400 7th Street, SW, Washington, DC 20590-0001, Attention: Records Center, 202-366-5046.

Dist: FHWA
PO: KIW/sln99