



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

NOV 3 - 1995

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

DOT-E 11331

EXPIRATION DATE: September 15, 1997

(FOR RENEWAL, SEE 49 CFR 107.105.)

1. **GRANTEE:** Citergaz SA, Civray, France
US Agent: Travel and Trade International,
Alexandria, Virginia
2. **PURPOSE AND LIMITATIONS:** This exemption authorizes the manufacture, marking and sale of non-DOT specification portable tanks comparable to DOT Specification 51, except for the location of the openings to be used for the transportation in commerce of certain Division 2.1 and 2.2 gases. This exemption provides no relief from any regulation other than as specifically stated herein.
3. **REGULATORY SYSTEM AFFECTED:** 49 CFR Parts 106, 107 and 171-180.
4. **REGULATIONS FROM WHICH EXEMPTED:** 49 CFR Section 173.315(a) Table column 4, insofar as non-DOT specification packagings are not listed as authorized packagings; 178.245-1(b) insofar as all openings are not grouped in one location.
5. **BASIS:** This exemption is based on the application of Citergaz dated March 15, 1994, and supplemental information dated August 31, 1994, January 24, August 28 and September 14, 1995, submitted in accordance with 49 CFR 107.103 and the public proceeding thereon.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous materials description/proper shipping name	Hazard Class/Division	Identification number
Chlorodifluoromethane, (R22)	2.2	UN1018
Chloropentafluoroethane, (R115)	2.2	UN1020
Chlorotetrafluoroethane, (R124)	2.2	UN1021
Dichlorodifluoromethane, (R12)	2.2	UN1028
Difluoroethane, (R152a)	2.1	UN1030
Dichlorotetrafluoroethane, (R114)	2.2	UN1958
Chlorodifluoromethane and chloropentafluoroethane mixture, (R502)	2.2	UN1973
Chlorotrifluoroethane, (R133a)	2.2	UN1983
Trifluoroethane, compressed, (R143)	2.1	UN2035
Chlorodifluoroethanes, (R142)	2.1	UN2517

7. PACKAGING(S) and SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging authorized is a non-DOT specification portable tank, mounted in an ISO frame, designated as Citergaz SA Model C21H018A. The tank is designed and constructed in accordance with Citergaz SA drawing numbers ES210006 Rev. E; 210006 Rev. B; CHC303 Rev. D; 93104 Rev. C; 93082 Rev. A; 93079 Rev. B.; and 93093 Rev. F; other drawings, technical specifications, and calculations on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA) and in compliance with the following provisions:

i. Code:

A. Complies with DOT Specification 51 in all respects except openings may be located on the tank in areas other than on the top or at the end;

B. is designed, constructed, and certified in accordance with the ASME Code including being "U" stamped; and

C. meets IMO Type 5.

- ii. Water capacity (U.S. Gallons) - 4,887
- iii. Insulation - Tanks are provided with a sun shield.
- iv. Material - ASME SA-612 Grade A (carbon steel)
- v. Tank Size

	Outside Diameter	Length	Thickness
(Inches)	82.68	236.97	0.74

Head Thickness - 0.681 inches
 Weld Joint Efficiency - 1.0
 Corrosion Allowance - 0.0
 Number of Baffles - 2

- vi. Design pressure (psig) - 362
Note: Design pressure means "maximum allowable working pressure (MAWP)" as used in the ASME Code.
- vii. Test Pressure, minimum (psig) - 544
- viii. Openings - One (1) 18 inch diameter opening for the manhole at one end; one (1) 2 inch diameter opening for the vapor phase connection and one (1) 2 inch diameter opening for the liquid phase connection on the bottom of the tank; one (1) 5 inch diameter opening for the pressure relief device on the top of the tank; and one (1) 5 inch diameter opening for the level gauge at the other end.

NOTE: Each bottom outlet valve must be provided with a shear section that meets the requirements of 49 CFR 178.337-12.
- ix. Tank surface area (square feet) - 445.
- x. Pressure Relief Devices - One (1) 3 inch diameter spring loaded pressure relief valve outboard of and in series with one (1) 3 inch rupture disk, all set to open at 362 psig. Total relief device capacity is 32,730 SCF/min.
- xi. G-Loadings: Vertical down 2; Vertical up 1; Longitudinal 2; and Transverse 1.
- xii. Maximum Gross Weight (pounds) - 74,956

NOV 3 - 1995

Continuation of DOT-E 11331

Page 4

- xiii Maximum Commodity Weight (pounds) - 54,453
- xiv. Tare Weight (pounds) - 20,503
- xv. Design Specific Gravity - 1.33
- xvi. Design Temperature Range (°F): - 40°F to + 131°F.

b. TESTING - Each tank must be tested as required for DOT Specification 51 portable tanks in 49 CFR 178.245. Each tank must be inspected and retested once every five years in accordance with 49 CFR 173.32(e) as prescribed for DOT Specification 51 portable tanks.

c. MARKING - Each portable tank must be plainly marked on both sides near the middle, in letters and numerals at least two inches high on a contrasting background, "DOT-E 11331." Additionally, "DOT-E 11331" must be stamped on the manufacturer's data plate on the line which reads "U.S. DOT Specification No." Each pressure relief device must be marked with a start-to-discharge pressure in psig and a rated relief device capacity in SCF/min.

d. OPERATIONAL CONTROLS -

i. No product may be shipped that has venting requirements exceeding 32,730 SCF/min. The venting capacity required for each product must be determined by the flow formulas contained in the Compressed Gas Association's (CGA) Pamphlet S-1.2.

ii. The tank must be filled by weight in accordance with the provisions of 49 CFR 173.315.

iii. Each tank must be visually inspected prior to each trip to ensure that it has not been damaged on the previous trip.

8. SPECIAL PROVISIONS.

a. Offerors for transportation of the hazardous materials specified in this exemption may use the packaging described in this exemption for the transportation of such hazardous materials so long as no modifications or changes are made to the packages, all terms of this exemption are complied with, and a copy of the current exemption is maintained at each facility from which such offering occurs.

NOV 3 - 1995

Continuation of DOT-E 11331

Page 5

b. 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 it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Exemptions and Approvals Program for a specific manufacturing facility.

c. A copy of this exemption, in its current status, must be maintained at each manufacturing facility at which this packaging is manufactured and must be made available to a DOT representative upon request.

d. Shippers using the packaging covered by this exemption must comply with all provisions of this exemption, and all other applicable requirements contained in 49 CFR Parts 171-180.

e. Hydrostatic test certificates for each tank must be maintained by the owner or manufacturer at its principal business office and be made available to any representative of the DOT upon request.

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

10. MODAL REQUIREMENTS:

a. A copy of this exemption must be carried aboard each cargo vessel or motor vehicle used to transport packages covered by this exemption.

b. Portable tanks may not be transported in container-on-flatcar (COFC) or trailer-on-flatcar (TOFC) service except under conditions approved by the Associate Administrator for Safety, Federal Railroad Administration.

c. Rear end protection for the motor vehicle must meet the requirements of 49 CFR 178.340-8(b) and 393.86.

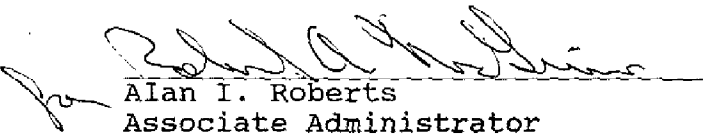
d. Each portable tank must be secured to the motor vehicle in conformance with the requirements of 49 CFR 393.100 through 393.106.

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 laws, 49 U.S.C. Section 5101 et seq:
- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Registration required by 49 CFR 107.601 et seq., when applicable.

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. (49 CFR 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 inform the AAHMS, in writing, of any incidents involving the package and shipments made under the terms of this exemption.

Issued at Washington, D.C.:


Alan I. Roberts
Associate Administrator
for Hazardous Materials Safety

NOV 3 - 1995

(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.

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.

Dist: USCG, FHWA, FRA
PO: PTolson