U.S. Department of Transportation
Research and Special Programs Administration

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

DOT-E 11661
(SECOND REVISION)

JUN 17 1996

EXPIRATION DATE: **May 31, 1998**

1. GRANTEE: AFR (Arbel Fauvet Rail), Douai, France
U.S. Agent: C.J.B. International, Inc., Washington, D.C.

2. PURPOSE AND LIMITATIONS: This exemption authorizes the manufacture, marking and sale of non-DOT specification IMO Type 5 portable tanks which conform with DOT Specification 51 except that all openings are not grouped in one location, to be used for the transportation in commerce of Division 2.1 and Division 2.2 materials. 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 173.315(a) in that a non-DOT specification packaging is authorized and 178.245-1(b).

5. BASIS: This exemption is based on the application of Arbel Fauvet Rail dated March 19, 1996, and supplemental letters dated April 3, 1996, and April 14, 1996, submitted in accordance with 49 CFR 107.103.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous materials description -- proper shipping name	Hazard Class/ Division	Identi-fication Number
Butadiene, inhibited	2.1	UN1010
Butane	2.1	UN1011
Butylene	2.1	UN1012
Chlorodifluoromethane, R22	2.2	UN1018
Chlorotetrafluoroethane, R124	2.2	UN1021
Cyclopropane, liquified	2.1	UN1027
Dichlorodifluoromethane, R12	2.2	UN1028
Dichlorofluoromethane, R21	2.2	UN1029

Difluoroethane, R152a	2.1	UN1030
Dimethylamine, anhydrous	2.1	UN1032
Dimethyl ether	2.1	UN1033
Ethylamine	2.1	UN1036
Ethyl chloride	2.1	UN1037
Isobutylene	2.1	UN1055
Methylamine, anhydrous	2.1	UN1061
Methyl chloride	2.1	UN1063
Propylene	2.1	UN1077
Trimethylamine, anhydrous	2.1	UN1083
Vinyl chloride, inhibited	2.1	UN1086
Isobutane	2.1	UN1969
Chlorodifluoromethane and chloropentafluoroethane mixture with fixed boiling point, with approximately 49 percent chlorodifluoromethane, R502	2.2	UN1973
Chlorodifluorobromomethane, R12B1	2.2	UN1974
Propane	2.1	UN1978
Trifluoroethane, compressed, R143	2.1	UN2035
Chlorodifluoroethanes, R142b	2.1	UN2517
Dichlorodifluoromethane and difluoroethane azeotropic mixture with approximately 74 percent dichlorodifluoromethane, R500	2.2	UN2602
Chlorotrifluoroethane, R133a	2.2	UN1983
1,1,1,2-Tetrafluoroethane, R134a	2.2	UN3159
Pentafluoroethane, R125	2.2	UN3220

7. PACKAGING(S) and SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification steel portable tank, mounted in an ISO frame, that complies with DOT Specification 51, including ASME "U" stamp, except that the fill and discharge openings are located on the bottom of the tank. This exemption authorizes two tank models, designated as AFR 200/36 AP-2 and AFR 200/36 AP-3. The

tanks are constructed in accordance with Arbel Fauvet Rail drawings C.1.607083 and C.1.607032, other drawings, specifications, and calculations on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA) and in compliance with the following:

(1) Code - Tanks must comply with DOT Specification 51 in all respects except that fill and discharge openings are located on the bottom of the tank.

(2) Design Specifications -

Model	AFR 200/36 AP-2	AFR 200/36 AP-3
Material	SA-612	SA-612
Water Capacity (US Gallons)	5,283	5,283
Tank Size: Outside diameter Length Shell Thickness Head Thickness	 86.61 inches 232.20 inches 0.776 inches 0.716 inches	 86.61 inches 232.20 inches 0.776 inches 0.716 inches
Design pressure	362.6 psig (25 bar)	362.6 psig (25 bar)
Note: Design pressure means "Maximum allowable working pressure (MAWP)" as used in the ASME Code.		
Test pressure	543.9 psig (37.5 bar)	543.9 psig (37.5 bar)
Tank surface area (square feet)	467	467
Pressure relief device setting	**362.6 psig.**	**398.9 psig.**
Total relief device capacity	1,963,848 SCFH @ 120% MAWP	2,067,003 SCFH @ 120% MAWP
Pressure relief devices are one (1) 3 inch diameter spring loaded pressure relief valve outboard of and in series with one (1) 3 inch diameter rupture disc.		
Baffles	2	2
Weld Joint Efficiency	1	1
Corrosion Allowance	0.0	0.0
Design temperature	-4°F to 131°F	-4°F to 131°F
Design specific gravity	1.33	1.33

Maximum gross weight (lbs)	79,366	79,366
Max. commodity weight (lbs)	58,643	58,643
Tare weight (lbs)	20,723	20,723

(3) G-loadings - Vertical down - 2, vertical up - 2, longitudinal - 2, transverse - 2.

(4) Insulation - None. Tanks are equipped with sunshield.

(5) Openings - One (1) opening for 3 inch diameter pressure relief devices on top of the tank; one (1) opening for a 18.5 inch diameter manway on the rear head; one (1) opening for a 4.72 inch inspection hole on the front head; one (1) opening for a 2.56 inch diameter vapor phase valve and one (1) opening for a 2.56 inch diameter liquid phase valve on the bottom of the tank. Each bottom outlet valve must be provided with a shear section that meets the requirements of 49 CFR 178.337-12.

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

c. OPERATIONAL CONTROLS -

(1) Each tank must be visually inspected prior to shipment to ensure that it has not been damaged during loading.

(2) No product may be transported that has a venting requirement exceeding 1,963,848 SCFH in Tank Model AFR 200/36 AP-2 or 2,067,003 SCFH in Tank Model AFR 200/36 AP-3. The venting capacity required for each product must be determined by the flow formulas contained in the Compressed Gas Association (CGA) Pamphlet S-1.2.

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

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 provided 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.

JUN 17 1996

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 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 manufacturer or owner and made available upon request to any representative of the Department of Transportation.

f. 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 11661". Additionally, "DOT-E 11661" must be stamped on the metal manufacturer's data plate on the line which reads "U.S. DOT Specification No.".

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 used to transport packages covered by this exemption.

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

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

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

JUN 17 1996

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. Section 5101 et seq:

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

for Marilyn E. Morris

Alan I. Roberts
Associate Administrator
for Hazardous Materials Safety

JUN 17 1996
(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.

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