

August 8, 2006



U.S. Department
of Transportation

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

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 11803
(EIGHTH REVISION)

EXPIRATION DATE: July 31, 2010

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Chart, Inc.
Distribution and Storage Group
Plaistow, NH
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the manufacture, mark, sale and use of DOT Specification 113A90W tank cars for the transportation in commerce of certain non-flammable cryogenic liquids listed in paragraph 6 below. This special permit also authorizes the transportation in commerce of DOT Class 113A90W tank cars with a maximum gross weight on rail greater than 263,000 pounds but not greater than 286,000 pounds. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.
 - b. The safety analyses performed in development of this special permit 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 § 172.203(a) in that marking the special permit number on the shipping papers is waived; §§ 173.26, 173.319, 179.13 and 179.401-1 as modified herein.

5. BASIS: This special permit is based on the application of Chart, Inc., Distribution and Storage Group dated July 28, 2006, submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Argon, refrigerated liquid (<i>cryogenic liquid</i>)	2.2	UN1951	N/A
Nitrogen, refrigerated liquid (<i>cryogenic liquid</i>)	2.2	UN1977	N/A
Oxygen, refrigerated liquid (<i>cryogenic liquid</i>)	2.2	UN1073	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Prescribed packagings are DOT Specification 113A90W tank cars constructed under Certificate of Construction number L-029001 (286K GRL, Model SR-386), L979010 (263K, Model SR-360L), L999007 (263K, Model SR-360L) and L019019 (263K, Model SR-160) complying with the following:

(1) Each pressure relief device must meet the requirements of the AAR Specification for Tank Cars, Appendix A, A8.07(a).

(2) Each tank car must be designed and constructed with the following individual specification requirements:

DOT Specification	113A90W
Design service temperature	-320°F
Material	§ 179.400-5
Impact test (weld and plate material)	§ 179.400-5(c)
Impact test values	§ 179.400-5(d)
Standard heat transfer rate	5.8

(Btu per day per lb. Of water capacity, max) (see § 179.400-4)	
Burst Pressure, minimum psi	240
Minimum shell thickness, inches [see § 179.400-7(a)]	3/16"
Minimum head thickness, inches [see § 179.400-7(a), (b) and (c)]	3/16"
Test pressure, psi (see § 179.400-18)	90
Safety vent bursting pressure, maximum psi	90
Pressure relief valve start-to-discharge pressure, psi (\pm 3 psi)	60
Pressure relief valve vapor tight pressure, min. psi	48
Pressure relief valve flow rating pressure, max. psi	66
Alternate pressure relief valve start-to-discharge pressure, psi (\pm 3 psi)	72
Alternate pressure relief valve vapor tight pressure min. psi	58
Alternate pressure relief valve flow rating pressure, max. psi	80
Pressure control valve	optional up to 60 psig

(3) The normal evaporation rate test specified in § 179.400-4 must be conducted on the first tank car of each specific design.

(4) Prior to manufacturing, the applicant must secure approval in accordance with § 179.3.

(5) Each tank car must conform with the Association of American Railroads Standard S-259, dated January 5, 1995, and the following requirements: (This paragraph and the S-259 standard are not applicable to cars built for 263K GRL.)

Betterments	Type of Features
Puncture Resistance	Head thickness 0.5 AAR TC128 Gr. B Shell thickness 0.4375 AAR TC128 Gr. B
Controlling Longitudinal Loadings	Cardwell Westinghouse Mark 50

Structural Worthiness	Trinity underframe having a million mile fatigue life calculated by applying an overall load factor of 1.09
Track Worthiness	Barber S-2 trucks
Pressure Relief Device	Located along the sides of the car.
Service Equipment Protection	Located along the sides of the car in accordance with 179.400-22
Maintenance Program Development	See paragraph 8 (j)

(6) Each tank may be loaded to a maximum gross weight on rail not to exceed 286,000 pounds. This is not applicable to cars designed for 263,000 pounds GRL.

b. TESTING - Each tank car operating under the terms of this special permit must be tested in accordance with § 179.400-18 at the time of construction. Retest of the pressure relief devices must be conducted in accordance with § 173.319(e) (4) and (5). Each loaded tank car must be examined prior to offering to determine the annular space vacuum. If the vacuum in the annular space exceeds 300 microns of mercury, the vacuum must be restored and the tank must be tested in accordance with the provisions of § 173.319(e) (2).

c. FILLING - Each tank car operating under the terms of this special permit must be filled in accordance with the following table:

Maximum set-to-discharge pressure (psig)	Maximum permitted filling density (percent by weight)		
	Argon	Oxygen	Nitrogen
605525	126%	104%	72%
	127.2%	104%	73%
	132%	108%	76%
Design service temperature	-320°F	-320°F	-320°F

8. SPECIAL PROVISIONS:

a. The marking requirements of § 172.203(a) are waived.

b. MARKING - Each tank car operating under the terms of this special permit must be marked "DOT-SP 11803" in letters and numerals at least 4 inches high on a contrasting background near the DOT specification markings.

c. Evaporation control equipment, as specified in § 179.400-20(c)(4), is optional. Mixing devices are not required under the terms of this special permit.

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

e. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modifications or changes are made to the package and it is reoffered for transportation in conformance with this special permit and the HMR.

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

g. Each packaging manufactured under the authority of this special permit 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 Special Permits and Approvals Program for a specific manufacturing facility.

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

i. Each tank car must meet the Association of American Railroads (AAR) Standard S-259, dated January 5, 1995, and may be operated only under controlled interchange conditions, as specified in the AAR Interchange Rules. The AAR and/or the individual rail carriers may impose more

stringent operating and design requirements. Transit routes must be agreed to, in writing, by participating railroads. The written acceptance must be submitted to the Associate Administrator for Hazardous Materials Safety (AAHMS) at the address specified at the end of this special permit prior to the first offering on each route. The requirements of this paragraph are not applicable to cars built for 263 GRL.

j. The applicant must file a copy of their complete maintenance program (see Appendix U of the Association of American Railroads Manual of Standards and Recommended Practices, M-1002, dated January, 1996) for any car operating under the terms of this special permit. The program must be filed with the Federal Railroad Administration, at the address indicated in paragraph 10 prior to offering a tank car under the terms of this special permit. The requirements of this paragraph are not applicable to cars built for 263 GRL.

Packagings permanently marked 'DOT-E 11803', prior to October 1, 2007 may continue to be used under this special permit for the remaining service life of the packaging or until the special permit is no longer valid. Packagings marked on or after October 1, 2007 must be marked 'DOT-SP 11803'.

9. MODES OF TRANSPORTATION AUTHORIZED. Rail freight.
10. MODAL REQUIREMENTS: The Federal Railroad Administration is to be notified if any unusual incident occurs during the movement by contacting the:

Federal Railroad Administration
Hazardous Materials Division
RRS-12, Mail Stop 25
1120 Vermont Avenue, N.W.
Washington, D.C. 20590
(202) 493-6076 or 493-6248
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
 - o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

- o Persons operating under the terms of this special permit 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 special permit must receive training on the requirements and conditions of this special permit in addition to the training by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when the special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)- 'The Hazardous Materials Safety and Security Reauthorization Act of 2005' (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term 'exemption' to 'special permit' and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Robert A. McGuire
Associate Administrator
for Hazardous Materials Safety

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

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

PO: FG/sln