

August 27, 2014



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 15713
(FIRST REVISION)

EXPIRATION DATE: June 30, 2018

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Bulk Tank International
Fond du Lac, WI
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the manufacture, marking, sale, and use of DOT 400 series cargo tank motor vehicles fabricated using certain duplex stainless steels and other materials not authorized in § 178.345-2 as a material of construction. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - 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 § 178.345-2 in that the use of a material not listed in Section II of the ASME Code is not authorized except as specified herein; and the use of cargo tanks with thicknesses less than that specified in §§ 178.346-2, 178.347-2, and 178.348-2 is not authorized except as specified herein.
5. BASIS: This special permit is based on the application of Bulk Tank International dated August 4, 2014, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Hazardous materials authorized in DOT Specification 400 series cargo tank motor vehicles	Various	Various	I, II, III

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packagings prescribed are certain DOT specification cargo tank motor vehicles conforming in all respects to either DOT Specification 406, 407 or 412, except that the materials of construction are as shown in the attached table to this special permit. Materials must conform to the ASME Code and applicable ASME Code Case for the respective material, except that the allowable design stresses shall be such that the design margin for all cargo tanks will be 4:1. The minimum thicknesses shall be as determined by the notes shown in the attached table to this special permit.

b. TESTING - All cargo tank motor vehicles fabricated under the terms of this special permit must be reinspected and retested in accordance with the requirements in 49 CFR PART 180, Subpart E for the applicable DOT 400 series cargo tank.

c. MARKING - Each cargo tank motor vehicle must be plainly marked on both sides near the middle in letters at least two inches in height on a contrasting background SP-15713." Each vehicle identification number must be marked on both sides of the vehicle as specified in §§ 172.302(b) and (c).

8. SPECIAL PROVISIONS:

a. 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.

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- b. A person who is not a holder of this special permit, but receives a packaging covered by this special permit, may reoffer it for transportation provided no modification or change is made to the packaging and it is offered for transportation in conformance with this special permit and the HMR.
- c. 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.
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each motor vehicle used to transport packages covered by this special permit. Shippers need not add this Special Permit number to any document required by 49 CFR 172.200, et. al., as subject cargo tanks are marked as DOT 400 series units.
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 the 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 required by §§ 172.700 through 172.704. Shippers need not provide any unique hazmat training associated with this special permit. However, during General Awareness training all hazmat employees must learn about special permits, in general.

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No person may use or apply this special permit, including display of its number, when this 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 Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

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

PO: herzog

Continuation of DOT-SP 15713 (1st Rev.)

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PTO: Staniszewski

SP15713 MATERIAL DESIGNATIONS AND TYPICAL CORRECTION FACTOR						
UNS Number	Common Name	ASME/ASTM Material Specification	ASTM Minimum Tensile Strength (MPa)	178.274(c)(10) Minimum Elongation at Fracture (%)	ASTM Minimum Elongation at 2" (%)	Mild Steel Correction Factor (Cf)
N08020	Alloy 20	SA-240/A 240	550	20	30	0.85
N08367	AL6XN	SA-240/A 240	690	20	30	0.78
R50400	Titanium, Grade 2	SB-265	345	29	20	1.00
R50400	Titanium, CC2497-2	SB-265	400	25	20	1.00
R50550	Titanium, Grade 3	SB-265	450	22	18	1.00
S31200	LDX 1200	SA-240/A 240	690	20	25	0.83
S31260	LDX 1260	SA-240/A 240	690	20	20	0.90
S31803	LDX 1803	SA-240/A 240	620	20	25	0.86
S32001	LDX 2001	SA-240/A 240	620	20	25	0.86
S32003	LDX 2003	SA-240/A 240	690	20	25	0.83
S32101	LDX 2101	SA-240/A 240	700	20	30	0.78
S32205	LDX 2205	SA-240/A 240	655	20	25	0.85
S32304	LDX 2304	SA-240/A 240	600	20	25	0.87
S32520	LDX 2520	SA-240/A 240	770	20	25	0.80
S32760	LDX 2760	SA-240/A 240	750	20	25	0.81
S32906	LDX 2906	SA-240/A 240	750	20	25	0.81

Typical Notes:

- A) ASTM minimum elongation values are used in the calculation of the Correction Factor where they are greater than 49CFR 178.274(c)(10) calculated values.
- B) Material Test Certificate tensile strength and elongation values, if greater than the minimums listed in the table above, may be used in the calculation of the Correction Factor.
- C) Correction Factor determined through application of 49 CFR 178.274(d)(5) calculation for reference steel.
- D) ASTM Published minimum elongation is over 2" which is more conservative than as indicated by 49 CFR 178.274(d)(5).

Application Examples:

The 49 CFR 178.346-2, 347-2, and 348-2 minimum thickness table value for mild steel shall be found for the tank design and the material correction factor applied. Minimum thickness shall in no case be less than 0.090".

Example I: A mild steel DOT 407 cargo tank with a volume capacity of 20 gallons per inch has a 178.347-2 Table I & II minimum thickness of 0.129".

For the same design built out of LDX 2205 would be found using equation,
Table minimum thickness = $0.129"(C_f) = 0.129"(0.85) = 0.1097"$ head & shell

Example II: A mild steel DOT 412 cargo tank with a volume capacity of 12 gallons per inch, a lading density of 15 pounds per gallon, and ring spacing of 50" has a 178.348-2 Table I & II minimum head thickness of 0.187" and minimum shell thickness of 0.157".

For the same tank design built out of LDX 2101 would be found using equation,

Table minimum thickness = $0.187(C_f) = 0.187(0.78) = 0.1459$ " head

Table minimum thickness = $0.157(C_f) = 0.157(0.78) = 0.1225$ " shell

Example III: A mild steel DOT 407 cargo tank with a volume capacity of 12 gallons per inch has a 178.347-2 Table I

& II minimum thickness of 0.100".

For the same tank design built out of LDX 2906 would be found using equation, Table minimum thickness = $0.100(C_f) = 0.100(0.81) = 0.0810$ "

Head & shell absolute minimum thickness of 0.090" is to be used.