

August 28, 2015



U.S. Department  
of Transportation

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

**Pipeline and Hazardous  
Materials Safety Administration**

DOT-SP 16373

EXPIRATION DATE: July 31, 2017

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Stainless Tank & Equipment Co., LLC  
Beloit, WI
2. PURPOSE AND LIMITATIONS:
  - a. This special permit authorizes the manufacture, mark, sale and use of non-DOT specification cargo tank motor vehicles conforming in part to Specification DOT 406, DOT 407, and DOT 412 cargo tank motor vehicles. 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. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, 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 § 178.345-2 in that the use of a material not listed in Section II of the ASME Code is not authorized and §§ 178.345-2, 178.346-2, 178.347-2, and 178.348-2 in that the use of cargo tanks with thicknesses less than those specified is not authorized, except as specified herein.

5. BASIS: This special permit is based on the application of Stainless Tank & Equipment Co., LLC dated January 21, 2015, submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

<b>Hazardous Material Description</b>			
<b>Proper Shipping Name</b>	<b>Hazard Class/ Division</b>	<b>Identification Number</b>	<b>Packing Group</b>
Hazardous materials authorized in Specification DOT 406, DOT 407, and DOT 412 cargo tank motor vehicles	Various	Various	I, II, and 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 table in the appendix 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 table in the appendix 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 "DOT-SP 16373". Each vehicle identification number must be marked on both sides of the vehicle as specified in § 172.302(b).

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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.

b. A person who is not a holder of this special permit, but receives a package covered by this special permit, may reoffer it for transportation provided no modification or change is made to the package 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 offered or reoffered for transportation.

d. 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 for a specific manufacturing facility.

e. A current copy of this special permit must be maintained at each facility where the packaging 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.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.

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- 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.

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](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: MAJORS

## Appendix:

UNS Number	Type	Material Spec	Tensile Strength, ksi	Yield Strength, ksi	Elongation in 2 in,%	Elongation at Fracture	Correction Factor, Cf
S20103	201L	SA-240	95	38	40		0.72
S20153	201LN	SA-240	95	45	45		0.69
S31200	LDX 1200		100	65	25		0.83
S31260	LDX 1260		100	70	20		0.89
S31803	LDX 1803		90	65	25		0.85
S32001	LDX 2001		90	65	25		0.85
S32003	LDX 2003		100	70	25		0.83
S32101	LDX 2101		101	77	30	30	0.78
S32205	LDX 2205		95	65	25		0.84
S32304	LDX 2304		87	58	25		0.87
S32520	LDX 2520		112	80	25		0.8
S32760	LDX 2760		108	80	25		0.81
S32906	LDX 2906		116	94	25		0.79
R50550	Titanium, Grade 3		65		18		1.07
R50400	Titanium, Grade 2		50		20		1.13
	Reference Steel		54			27	

## Example Calculations:

A cargo tank designed to DOT 407 code using mild steel with a volume capacity of 14.8 gallons/in has a minimum thickness of .115" as determined by Table I & Table II under § 178.347-2

A cargo tank designed to DOT 407 code using LDX 2101 with a volume capacity of 14.8 gallons/in the minimum thickness would be found using the associated correction factor from the above table as follows:

$$\begin{aligned} \text{§ 178.347-2 Table I \& Table II minimum thickness} &= .115 \times (\text{Cf}) = .115 (.78) \\ &= .090" \text{ minimum thickness, shell \& head} \end{aligned}$$

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A cargo tank designed to DOT 412 code using LDX 2205 with a volume capacity of 13.9 gallons/in, a lading density of 16 lbs./gallon and, a 50" ring spacing; the minimum thickness would be found using the associated correction factor from the above table as follows:

$$\begin{aligned} \text{\S 178.348-2 Table I minimum thickness} &= .187 \times (Cf) = .187 (.84) \\ &= .157'' \text{ minimum thickness, head} \end{aligned}$$

$$\begin{aligned} \text{\S 178.348-2 Table II minimum thickness} &= .187 \times (Cf) = .187 (.84) \\ &= .157'' \text{ minimum thickness, shell} \end{aligned}$$