



U.S. Department
of Transportation

1200 New Jersey Avenue SE
Washington, DC 20590

**Pipeline and Hazardous
Materials Safety
Administration**

JUN 26 2015

Mr. Paul M. Anderson
President
Traffic Stripes, LLC
16 Devonshire Road
New Rochelle, NY 10804

Reference No. 15-0005

Dear Mr. Anderson:

This is in response to your recent correspondence and March 18, 2015 telephone conversation with a member of my staff requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the use in the United States of foreign-made, non-specification cargo tanks for roadway striping and/or pavement marking. Your initial correspondence was erroneously sent to the Office of Pipeline Safety before it was redirected to the Office of Hazardous Materials Safety.

In your February 19, 2015 e-mail, you attached the following: 1) Borum Tryktank Drawing No. 113441, 2) TÜV Nord Tryktank SP-500 Test Report No. 9120 P 000/10/D/046, 3) PHMSA Press Release No. 02-11, and 4) an electronic code of federal regulations image of § 173.5a printed on October 20, 2014. You ask if pressurized or non-pressurized cargo tanks built to the European Technische Überwachungsvereine (TÜV) Rheinland Group certification may be sold and used in the United States for road striping and/or pavement marking equipment.

Section 173.5a(c) of the HMR permits cargo tanks that do not meet a Department of Transportation (DOT) specification but comply with all other applicable HMR requirements to be used to transport paint and paint related material for roadway striping operations provided the following conditions are met:

- The cargo tank must:
 - Transport only those hazardous materials listed in the table under § 173.5a(c)(1).
 - Be filled to a capacity that is not greater than liquid full at 130 °F.
 - Be securely bolted to a motor vehicle and must –
 - Be constructed and certified in conformance with the HMR in effect at the time of its manufacture and must be marked accordingly;

- Have a minimum design pressure of 100 pounds per square inch gauge (psig);
- Have a maximum capacity of 500 gallons;
- For solvents and organic peroxides, the cargo tank may not contain more than 50 gallons;
- Be given an external visual inspection prior to each use to ensure that it has not been damaged on the previous trip;
- Be retested and reinspected in conformance with § 180.407(c) as specified for an MC 331 cargo tank motor vehicle; and
- Be securely mounted to a motor vehicle in conformance with the securement provisions prescribed in 49 CFR 393.100-393.106. Be plainly marked on both sides “ROADWAY STRIPING” near the middle in letters at least two inches high on a contrasting background.
- Not be pressurized when the motor vehicle is traveling to and from job sites.
- Travel 750 miles or less per day.
- Heat thermoplastic resin only during roadway striping operations.
- The owner or operator of the roadway striping vehicle must:
 - maintain hydrostatic test records in conformance with § 180.417(b), and
 - make those records available to any representative of the DOT upon request.

Section 173.242(b) states that non-DOT specification cargo tank motor vehicles that comply with § 173.5a may be used to transport certain medium hazard liquids and solids, including solids with dual hazards, in the manner prescribed in § 173.5a. Therefore, if you meet the above-described requirements, your non-DOT specification cargo tanks would be authorized.

I hope this satisfies your request.

Sincerely,



T. Glenn Foster
Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division

Goodall, Shante CTR (PHMSA)

*Edmonson
173.242(b)
Cargo tanks specification
15-0005*

From: Betts, Charles (PHMSA)
Sent: Thursday, January 08, 2015 10:06 AM
To: Goodall, Shante CTR (PHMSA)
Cc: Dodd, Alice (PHMSA)
Subject: FW: Interpretation request
Attachments: DRAFTletterTUVPMexempt61114.docx

Importance: High

Shante -

Please log and assign to a specialist for response.

Thanks,
Charles

-----Original Message-----

From: Stewart, Darcia CTR (PHMSA)
Sent: Thursday, January 08, 2015 9:59 AM
To: Betts, Charles (PHMSA)
Subject: FW: Interpretation request

Charles,

Please see email below.

Thanks,

Darcia

-----Original Message-----

From: Morgan, Janice CTR (PHMSA)
Sent: Thursday, January 08, 2015 9:57 AM
To: Stewart, Darcia CTR (PHMSA)
Cc: Gale, John (PHMSA); Asebe, Tewabe (PHMSA)
Subject: FW: Interpretation request

Good morning Darcy...

The request below is a HAZMAT request. Would you please handle.

Thanks

-----Original Message-----

From: Morgan, Janice CTR (PHMSA)
Sent: Wednesday, January 07, 2015 5:30 PM
To: Gale, John (PHMSA); Asebe, Tewabe (PHMSA)
Subject: FW: Interpretation request

6 Nov 2014

U.S. DOT
PHMSA Office of Hazardous Materials Standards
Attn: PHH-10
East Building
1200 New Jersey Avenue, SE.
Washington, DC 20590-0001

RE: Interpretation request "Pavement Marking Exemption", 49 CFR § 173.242(b)

To whom it may concern:

Please accept this interpretation request and enclosed documentation regarding use of non-DOT specification cargo tanks in pavement marking equipment.

I represent the Danish manufacturer of road marking equipment, Borum Industri A/S, offering products for sale to the U.S. marketplace.

Borum currently offers cargo tanks built to European TUV certification (sample documentation enclosed referencing ASME VIII/II), whether such tanks are pressurized or non-pressurized. ASME certification is used with similar tanks built and sold in the U.S. for pavement marking equipment.

Given the decision referenced above, (Pavement Marking Exemption, 49 CFR § 173.242(b)...), can you provide interpretation whether TUV can be accepted in the U.S.?

Very truly yours-

Paul M. Anderson
President
paul@trafficstripes.com

Encl

CC: Ingo Hansen; Borum Industri A/S

Mr. Anderson is checking on a response to his request in the attached letter.

Thank you.

-----Original Message-----

From: Trafficstripes_NY [<mailto:paul@trafficstripes.com>]

Sent: Wednesday, January 07, 2015 4:44 PM

To: Morgan, Janice CTR (PHMSA)

Subject: Interpretation request

Janice:

Thank you for your assistance in follow-up on my request.

Paul Anderson

ZERTIFIKAT CERTIFICATE

(Konformitätsbescheinigung) / (of conformity)

EG-Einzelprüfung

EC unit verification

nach Richtlinie 97/23/EG / according to directive 97/23/EC
Zertifikat-Nr. / Certificate No.: **07 202 9120 Z 0006/10/D/046**

Name und Anschrift des Herstellers KN Consult Polska Sp. z o.o.
Name and address of bearer/
manufacturer: ul. Dęblińska 18
24-100 Puławy, Poland

Hiermit wird bescheinigt, dass die Ergebnisse der an dem unten genannten Druckgerät vorgenommenen Prüfungen die Anforderungen der Richtlinie 97/23/EG erfüllen. Das Druckgerät ist mit dem abgebildeten Zeichen gekennzeichnet. We hereby certify that according to the results of the product verification the pressure equipment mentioned below fulfills the requirements of directive 97/23/EC. The pressure equipment is marked with:

CE 0045

Geprüft nach Richtlinie 97/23/EG
Tested according to 97/23/EC

EG-Einzelprüfung (Modul G) , AD 2000, ASME VIII/I
EC unit verification (module G)

Prüfbericht-Nr.: / Test report No.:

9120 P 0006/10/D/046

Beschreibung des Druckgerätes:
Description of pressure equipment:

Tryktank SP-500

Herstellnummer: / Serial number.:

BO-220

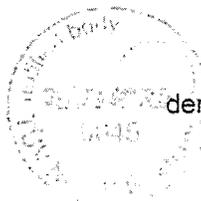
Kategorie / category:

IV

Fertigungsstätte/Place of manufacture:

**KN Consult Polska Sp. z o.o.
ul. Dęblińska 18, PL-24-100 Puławy**

Katowice, 26.04.2010



Zertifizierungsstelle für Druckgeräte
der TÜV NORD Systems GmbH & Co. KG

Dipl.-Ing. P.Kaczmarek

Benannte Stelle/ Notified Body, 0045

TÜV Nord Systems GmbH & Co. KG
Große Bahnstr. 31
D-22525 Hamburg, Germany

Tel. +48 32 7864650
Fax +48 32 7864605

e-mail: p.kaczmarek@tuv-nord.pl

Mitglied der
Member of



CONFÉDÉRATION EUROPÉENNE D'ORGANISMES DE CONTRÔLE

Checkliste / checklist

Herstell-Nr.: / Manufacturing No.: BO-220		Prüfbericht-Nr.: / Test Report No.: 9120P0006/10/D/046			
	MESSUNGEN/UNTERSUCHUNGEN UND ERGEBNISSE EXAMINATIONS/TESTS AND RESULTS	erfüllt Fulfilled	entfällt Not applicable	Anlage Annex	Bemerkungen Remarks
1.	Werkstoffe: / Materials: EN-Norm / EN-Standard <input checked="" type="checkbox"/> , EAM / EAM <input type="checkbox"/> , Einzelgutachten / Particular material appraisal <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.	Rückverfolgbarkeit der Werkstoffe (Zeugnisbelegung) Material traceability	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Liste der Werkstoffzeugnisse List of material certificates
3.	Betriebliche Voraussetzungen gemäß Prerequisites of manufacturer according to AD 2000 HP0, DIN EN 729-3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.	Voraussetzung für nicht objektgebundene Prüfung Condition for testing not necessarily on certain objects	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Umfang gemäß HP 5/2 und HP 5/3 Scope according to HP 5/2 and HP 5/3
5.	Eignungsfeststellung Schweißzusätze Records of welding consumables	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.	Qualifikation des Fügepersonals Qualification of welding personnel DIN EN 287-1, DIN EN 1418	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Liste der Schweißer liegt bei. Liste of welders enclosed. Schweißerprüfung durch TÜV NORD Welder approvals by TÜV NORD
7.	Qualifikation der Fügeverfahren Qualification of operating procedures DIN EN 288-3, DIN EN ISO 15614-1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Verfahrensprüfung durch TÜV NORD WPQ by TÜV NORD
8.	Arbeitsprüfungen gemäß AD 2000 HP 5/2 Production tests according to	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	nicht objektgebunden not necessarily on certain objects
9.	Nachweise über ZFP-Personal DIN EN 473 Stufe / Level 2 Records of NDT personnel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10.	Nachweise über zerstörungsfreie Prüfungen NDT test reports	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11.	Wärmebehandlungsbelege Heat treatment records	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12.	Kalibrierung der Meß- und Prüfeinrichtungen Calibration of measuring and test equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Herstellereklärung eingesehen. Manufacturer's declaration reviewed Manometer Nr.: PM1, Pressure gauge No.
13.	Visuelle Prüfung / Maßprüfung Visual examination / Dimensional check	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
14.	Kennzeichnung (Typenschild) Marking (name plate)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15.	Gefahrenanalyse Hazard analysis			<input type="checkbox"/>	hat vorgelegen <input type="checkbox"/> was available
16.	Betriebsanleitung hat vorgelegen (verbindlich) Operating instructions were available (mandatory)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
17.	Nachweise über Reparaturen und Abweichungen Repair and nonconformity records	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
18.	Konformitätserklärung / Entwurf (verbindlich) Declaration of conformity / Draft (mandatory)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ERGEBNIS: / RESULT:

Die vorgenannten Prüfungen erfolgten in Übereinstimmung mit den Anforderungen der RL 97/23/EG sowie den o.g. Prüfgrundlagen und ergaben keine Beanstandung. Eine Zertifizierung wird empfohlen.
The aforementioned tests were carried out in accordance with Directive 97/23/EC as well as the aforementioned test specifications and did not result in any objections. Certification is recommended.



**Prüflaboratorium für Druckgeräte
der TÜV NORD Systems
GmbH & Co. KG**

Dipl.-Ing. Dariusz Nowak



U.S. Department of Transportation
Office of Public Affairs
1200 New Jersey Avenue, SE
Washington, DC 20590
www.dot.gov/briefing-room.html

News

PHMSA 02-11
Tuesday, February 1, 2011
Contact: Julia P. Valentine
Tel: 202-366-4831

USDOT Converts Widely Used HazMat Transportation Permits into Federal Regulations

WASHINGTON – The U.S. Department of Transportation’s Pipeline and Hazardous Materials Safety Administration (PHMSA) today announced another step in its efforts to improve the safe transport of hazardous materials by incorporating the provisions of six widely used cargo tank special permits into Federal Hazardous Materials regulations. This new regulation will cut down on thousands of special permit applications per year.

The special permits incorporated into regulations today have long established safety records. Like all special permits, these were used to approve processes for hazmat transport not explicitly spelled out in PHMSA regulations. Over years, the practices approved in these permits became commonplace and were proven safe.

“President Obama asked us to find ways to make our government better for the people of the United States,” said U.S. Transportation Secretary Ray LaHood. “Getting rid of this cumbersome process will maintain safety and save businesses and the government both time and money.”

“This rulemaking is another step in incorporating tested transportation technologies and operations from longstanding special permits into the regulations, promoting safety and streamlining our processes.” said PHMSA Administrator Cynthia Quarterman.

Streamlining the hazardous materials special permit and approvals process is a major priority for PHMSA. Last year, the Department released an Action Plan to improve PHMSA’s safety oversight, processes, procedures, and policies for its hazardous materials special permits and approvals program.

Listed below are the six special permits that will be incorporated into the Hazardous Materials Regulations pertaining to the shipment of certain hazardous materials in cargo tanks.

- Two of the special permits cover hazardous materials mounted on farm trucks used exclusively for agricultural purposes:

- Liquefied petroleum gas (LPG)
- Liquid soil pesticide (toxic substances)
- One special permit covers the transportation of hazardous materials used for striping roads.
- One special permit authorizes private motor carrier companies to transport propane tanks most commonly used for home heating and cooking.
- Two special permits address nurse tanks:
 - The first covers the transportation of nurse tanks securely mounted on field trucks.
 - The second authorizes the use of the nurse tanks carrying anhydrous ammonia under certain conditions when the tanks are missing or have illegible identification plates.

The final rule becomes effective 30 days after the date of publication in the *Federal Register*. The final rule is scheduled for publication on February 1, 2011. It is also available on the PHMSA website at www.phmsa.dot.gov.

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(9) Transportation of the moveable fuel storage tender between its point of use and a liquefied petroleum gas distributor is authorized only if the cargo tank contains no more than five percent of its water capacity. A moveable fuel storage tender may be filled at the consumer's premises or point of use.

(e) *Liquid soil pesticide fumigants.* MC 306 and DOT 406 cargo tank motor vehicles and DOT 57 portable tanks may be used to transport liquid soil pesticide fumigants, Pesticides, liquid, toxic, flammable, n.o.s., flash point not less than 23 degrees C, 6 PG II, exclusively for agricultural operations by a private motor carrier between a bulk loading facility and a farm (including farms). However, transportation is not to exceed 150 miles between the loading facility and the farm, and not more than five intermediate stops for temporary storage. Additionally, transport is permitted only under the following conditions:

(1) *Cargo tanks.* MC 306 and DOT 406 cargo tank motor vehicles must:

(i) Meet qualification and maintenance requirements (including periodic testing and inspection) in accordance with subpart 180 of this subchapter;

(ii) Conform to the pressure relief system requirements specified in §173.243(b)(1);

(iii) For MC 306 cargo tanks, be equipped with stop-valves capable of being remotely closed by manual and mechanical means; and

(iv) For DOT 406 cargo tanks, conform to the bottom outlet requirements specified in §173.243(b)(2).

(2) *Portable tanks.* DOT 57 portable tanks must—

(i) Be constructed of stainless steel; and

(ii) Meet qualification and maintenance requirements of subpart G of part 180 of this subchapter.

(f) See §173.315(m) pertaining to nurse tanks of anhydrous ammonia.

(g) See §173.6 pertaining to materials of trade.

(h) See §172.800(b) pertaining to security plans.

Amdt. 173-259, 62 FR 1215, Jan. 8, 1997, as amended by Amdt. 173-262, 62 FR 49566, Sept. 22, 1997; Amdt. 173-259, 63 FR 8142, 1998; 65 FR 50460, Aug. 18, 2000; 70 FR 73165, Dec. 9, 2005; 73 FR 4717, Jan. 28, 2008; 76 FR 5491, Feb. 1, 2011]

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§173.5a Oilfield service vehicles, mechanical displacement meter provers, and roadway striping vehicles excepted

(a) *Oilfield service vehicles.* Notwithstanding §173.29 of this subchapter, a cargo tank motor vehicle used in oilfield service operations is not subject to the specification requirements of this subchapter provided—

(1) The cargo tank and equipment contains only residual amounts (*i.e.*, it is emptied so far as practicable) of a flammable liquid alone or in combination with water,

(2) No flame producing device is operated during transportation, and

(3) The proper shipping name is preceded by "RESIDUE: LAST CONTAINED * * *" on the shipping paper for each unit on a public highway.

(b) *Mechanical displacement meter provers.* (1) A mechanical displacement meter prover, as defined in §171.8 of this subchapter permanently mounted on a truck chassis or trailer and transported by motor vehicle is excepted from the specification pack requirements in part 178 of this subchapter provided it—

(i) Contains only the residue of a Division 2.1 (flammable gas) or Class 3 (flammable liquid) material. For liquids, the meter prover must be drained to not exceed 10% of its capacity or, to the extent that draining of the meter prover is impracticable, to the extent practicable. For gases, the meter prover must not exceed 25% of the marked pressure rating;

(ii) Has a water capacity of 3,785 L (1,000 gallons) or less;

(iii) Is designed and constructed in accordance with chapters II, III, IV, V and VI of ASME Standard B31.4 (IBR, see §173.5a subchapter);

(iv) Is marked with the MAWP determined from the pipe component with the lowest pressure rating; and

(v) Is equipped with rear-end protection as prescribed in §178.337-10(c) of this subchapter and 49 CFR 393.86 of the Federal Motor Carrier Safety Regulations.

(2) The description on the shipping paper for a meter prover containing the residue of a hazardous material must include the phrase "RESIDUE: LAST CONTAINED * * *" before the basic description.

(3) *Periodic test and inspection.* (i) Each meter prover must be externally visually inspected once a year. The external inspection must include at a minimum: checking for leakage, defective fittings and welds, defective closures, significant derelicts or abnormalities which indicate a potential or actual weakness that could render the meter prover unsafe for transportation.

(ii) Each meter prover must be pressure tested once every 5 years at not less than 75% of design pressure. The press held for a period of time sufficiently long to assure detection of leaks, but in no case less than 5 minutes.

(4) In addition to the training requirements in subpart H, the person who performs the visual inspection or pressure test signs the inspection report must have the knowledge and ability to perform them as required by this section.

(5) A meter prover that fails the periodic test and inspection must be rejected and removed from hazardous materials unless the meter prover is adequately repaired, and thereafter, a successful test is conducted in accordance with the require this section.

(6) Prior to any repair work, the meter prover must be emptied of any hazardous material. A meter prover containing fl lading must be purged.

(7) Each meter prover successfully completing the external visual inspection and the pressure test must be marked wit date (month/year), and the type of test or inspection as follows:

- (i) V for external visual inspection; and
- (ii) P for pressure test.

The marking must be on the side of a tank or the largest piping component in letters 32 mm (1.25 inches) high on a co background.

(8) The owner must retain a record of the most recent external visual inspection and pressure test until the next test or of the same type is successfully completed. The test or inspection report must include the following:

- (i) Serial number or other meter prover identifier;
- (ii) Type of test or inspection performed;
- (iii) Test date (month/year);
- (iv) Location of defects found, if any, and method used to repair each defect;
- (v) Name and address of person performing the test or inspection;
- (vi) Disposition statement, such as "Meter Prover returned to service" or "Meter Prover removed from service".

(c) *Roadway striping.* In addition to conformance with all other applicable requirements of this subchapter, non-DOT sp cargo tanks used for roadway striping are authorized provided all the following conditions in this paragraph (c) are met.

(1) *Authorized materials.* Only the hazardous materials listed in the table below may be transported in roadway striping Cargo tanks may not be filled to a capacity that would be greater than liquid full at 130 °F.

HAZARDOUS MATERIALS DESCRIPTION

Proper shipping name	Hazard class/division	Identificati number
Adhesives, containing a flammable liquid	3	UN1133
Paint including paint, lacquer, enamel, stain, shellac solution, varnish, polish, liquid filler, and liquid lacquer base	3	UN1263
Paint related material including paint thinning drying, removing, or reducing compound	3	UN1263
Flammable liquids, n.o.s. ^a	3	UN1993
Gasoline	3	UN1203
Acetone ^b	3	UN1090
Dichloromethane ^b	6.1	UN1593
Ethyl methyl ketone or Methyl ethyl ketone ^b	3	UN1193
Ethyl acetate ^b	3	UN1173
Methanol ^b	3	UN1230
Organic peroxide type E, liquid (Dibenzoyl peroxide) ^c	5.2	UN3107
Petroleum distillates, n.o.s. or Petroleum products, n.o.s. ^b	3	UN1268
1,1,1-Trichloroethane ^b	6.1	UN2831
Toluene ^b	3	UN1294
Xylenes ^b	3	UN1307
Environmentally hazardous substance, liquid, n.o.s. ^c	9	UN3082
Corrosive liquid, basic, organic, n.o.s. ^c	8	UN3267
Corrosive liquids, n.o.s. ^c	8	UN1760
Elevated temperature liquid, n.o.s., at or above 100 °C and below its flash point (including molten metals, molten salts, etc.) ^d	9	UN3257



- a. Adhesive containing ethyl acetate.
- b. Solvent.
- c. Catalyst.
- d. Thermoplastic material non-hazardous at room temperature.

(2) *Cargo tank requirements.* Each non-DOT specification cargo tank used for roadway striping must be securely bolted to the vehicle and must—

(i) Be constructed and certified in conformance with the HMR in effect at the time of its manufacture and must be marked accordingly. For questions regarding these requirements, contact PHMSA by either: (1) Telephone (800) 467-4922 or (202) 368-5811 (local); or (2) by electronic mail (e-mail) to: infocntr@dot.gov;

(ii) Have a minimum design pressure of 100 psig;

(iii) Have a maximum capacity of 500 gallons;

(iv) For solvents and organic peroxides, the cargo tank may not contain more than 50 gallons;

(v) Be given an external visual inspection prior to each use to ensure that it has not been damaged on the previous trip;

(vi) Be retested and reinspected in accordance with §180.407(c) of this subchapter as specified for an MC 331 cargo tank used for roadway striping;

(vii) Be securely mounted to a motor vehicle in accordance with the securement provisions prescribed in §§393.100 through 393.106 of this title.

(3) *Test records.* The owner or operator of the roadway striping vehicle must maintain hydrostatic test records in accordance with §180.417(b) and must make those records available to any representative of the Department of Transportation upon request.

(4) *Marking.* A non-DOT specification cargo tank used for roadway striping must be plainly marked on both sides near the top with letters at least two inches in height on a contrasting background "ROADWAY STRIPING".

(5) *Operational controls.* A non-DOT specification cargo tank used for roadway striping may not be pressurized when the vehicle is traveling to and from job sites. Additionally, the distance traveled by a non-DOT specification cargo tank used for roadway striping may not exceed 750 miles. Thermoplastic resin may only be heated during roadway striping operations.

[70 FR 3308, Jan. 24, 2005, as amended at 75 FR 27213, May 14, 2010; 76 FR 5492, Feb. 1, 2011]

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§173.5b Portable and mobile refrigeration systems.

This section authorizes the highway transportation of residual amounts of Division 2.2 refrigerant gases or anhydrous ammonia contained in non-specification pressure vessels that are components of refrigeration systems, which may or may not be permanently mounted to a transport vehicle, used for agricultural operations. These refrigeration systems are used at field sites to cool produce before the produce is loaded into trucks or railcars for market or used to supplement stationary refrigeration systems during peak harvest times. The components of these refrigeration systems are commonly known as vacuum tubes, accumulators, receivers, units, ice makers, pressure coolers, or evaporators.

(a) *General packaging requirements.* Each non-specification pressure vessel must conform to the following:

(1) Each pressure vessel must be designed, manufactured, and maintained in accordance with applicable requirements of ASME Code (IBR, see §171.7 of this subchapter).

(2) Except as authorized in this section, each pressure vessel and associated piping must be rated at a maximum allowable working pressure (MAWP) of 250 psig. The pressure in these components may not exceed MAWP.

(3) Any part of the piping or pressure vessel separated from another component of the refrigeration system by means of a blank flange, or other device must be equipped with a pressure relief valve set at MAWP. All lines that must be disconnected for transportation purposes must be closed by means of a cap, plug or blank flange, and valves at the end of disconnected line tightly closed.

(4) The aggregate total volumetric capacity of components within the refrigeration system authorized for highway transportation in accordance with this section may not exceed 2,500 gallons per vehicle.

(5) Each pressure vessel and associated piping containing anhydrous ammonia must conform to the following:

(i) Piping with a diameter of 2 inches or more must conform to ASTM A 53 Schedule 40 or ASTM A 106 Schedule 40 (IBR, see §171.7 of this subchapter).

(ii) Piping with a diameter of less than 2 inches must conform to ASTM A 53 Schedule 80 or ASTM A 106 Schedule 80 (IBR, see §171.7 of this subchapter).

(iii) The words "Inhalation Hazard" must be marked as required in special provision 13 in §172.102 of this subchapter as practicable, within 24 inches of the placard.