



U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

Safety Advisory Notice¹ – Roadway Striping and Use of Non-DOT Specification Cargo Tanks

Summary

PHMSA is issuing this safety advisory notice to inform the public, roadway striping stakeholders, and relevant government officials of the requirements for the use of non-DOT specification cargo tanks for roadway striping operations. While PHMSA's regulations have always applied to the shipment and transportation of hazardous materials for roadway striping operations, specific requirements for roadway striping vehicles using non-DOT specification cargo tanks went into effect in 2011. PHMSA has recently become aware that the roadway striping industry may not be aware of these requirements, or that they apply to roadway striping operations. Accordingly, PHMSA is issuing this Notice, and initiating other outreach with relevant stakeholders, to raise awareness about these requirements.

Supplementary Information

While non-DOT specification cargo tanks are commonly used in applying roadway striping to roads across the United States, it has come to PHMSA's attention that companies conducting these operations may not be aware of the regulatory requirements stated in PHMSA's Hazardous Materials Regulations (HMR; 49 CFR §§ 171-180) for using non-DOT specification cargo tanks for this purpose. Recent compliance inspections found several instances where road striping companies did not meet the HMR's requirements for using non-DOT specification cargo tanks to transport hazardous materials in commerce to perform roadway striping operations.

Title 49 Code of Federal Regulations (49 CFR) §173.5a(c) sets out some of the requirements that apply specifically to non-DOT specification cargo tanks used for roadway striping operations. This section was added to the HMR in 2011, when PHMSA incorporated provisions of DOT Special Permit (DOT-SP)12284 into the HMR in HM-245 (76 FR 5492). Specifically, §173.5a(c) allows companies to use non-DOT specification cargo tanks for roadway striping purposes, as long as the conditions stated

¹ *This document contains guidance provided to help the regulated community understand how to comply with regulations, but its contents are not substantive rules themselves and do not create legally enforceable rights, assign duties, or impose new obligations not otherwise contained in the existing regulations and standards.*

in this section are met. These provisions set out the types of hazardous materials authorized for transportation, tank construction requirements, test requirements, and operational controls.

PHMSA is aware that it may be difficult for some stakeholders to comply with the testing requirements set out in 173.5a(c)(2)(vi). This section requires non-DOT specification cargo tanks to pass the same tests as an MC 331 cargo tank, as required in 180.407(c). Specifically, PHMSA is aware that some stakeholders may use tanks that would be difficult to pressurize for the performance of the pressure test. However, a tank not designed to be pressurized must still pass the pressure test unless a company obtains a special permit from PHMSA waiving this requirement. Additionally, once testing has been completed, test records must be maintained in accordance with 180.417(b).

PHMSA recognizes that road striping operations may involve transportation of hazardous materials in a variety of packagings, including cargo tanks and portable tanks. It is important to properly identify packagings and test them accordingly, so companies should always consult the HMR to verify that packaging testing and inspection requirements are met and that proper records are maintained.

PHMSA specifically highlights the requirements of 173.5a(c) and reminds stakeholders that they must comply with these requirements. Noncompliance with these requirements could result in the imposition of civil penalties if discovered by PHMSA, Federal Motor Carrier Safety Administration (FMCSA), or the State. Stakeholders should always consult the HMR as the primary source for determining compliance. This notice serves as a reminder of HMR requirements and is not intended to be used in place of the HMR.

49 CFR 173.a(c) states:

(c) *Roadway striping*. In addition to conformance with all other applicable requirements of this subchapter, non-DOT specification 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 1 to this paragraph (c)(1) may be transported in roadway striping vehicles. Cargo tanks may not be filled to a capacity that would be greater than liquid full at 130 °F.

Table 1 to Paragraph (c)(1)—Hazardous Materials Description

Proper shipping name	Hazard class/ division	Identification No.	Packing group
Acetone ^a	3	UN1090	II.
Adhesives, <i>containing a flammable liquid</i>	3	UN1133	II.
Amines, liquid, corrosive, n.o.s. ^b or Polyamines, liquid, corrosive, n.o.s. ^b	8	UN2735	III.
Corrosive liquid, basic, organic, n.o.s. ^b	8	UN3267	III.

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

^a: Solvent.

^b: Catalyst.

^c: Thermoplastic material non-hazardous at room temperature.

^d: Adhesive containing ethyl acetate.

(2) *Cargo tank requirements.* Each non-DOT specification cargo tank used for roadway striping must be securely bolted to a motor 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) 366-4488 (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 motor vehicle; and
 - (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 middle in 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 motor 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.

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