



DEPARTMENT OF TRANSPORTATION  
HAZARDOUS MATERIALS REGULATIONS BOARD  
WASHINGTON, D.C. 20590

14696

[Docket No. HM-84; Amdts. Nos. 173-51, 179-7]

**PART 173—SHIPPERS**  
**PART 179—SPECIFICATIONS FOR TANK CARS**

**Chlorine in Tank Cars**

The purpose of this amendment to §§ 173.314, 179.100, and 179.102 of the Hazardous Materials Regulations as they apply to chlorine is to: (1) Authorize the use of larger capacity cars; (2) authorize use of weld joint efficiency of 100 percent in design calculations; (3) require any size chlorine tank to be built to specification 105A500W; (4) authorize use of self-extinguishing polyurethane foam as an insulating material; (5) add a requirement for use of specific "fine grain practice" steels in construction; (6) require marking "chlorine only" on each tank car; and (7) prohibit the use of specifications ARA-V and Class 105A cars having forge welded anchors.

On April 16, 1971, the Hazardous Materials Regulations Board published a notice of proposed rule making, Docket No. HM-84; Notice No. 71-12 (36 F.R. 258) proposing the amendments described above. No objection to the proposal was received.

Several commenters requested modification of the proposal to more clearly express the Board's intent with respect to existing tank cars. A commenter also pointed out that one material specification in § 179.102-2(a)(4) should be updated. Other changes of editorial nature were suggested to §§ 173.314(c), Note 12, and 179.102-2(a). These suggested changes have been incorporated in this amendment.

In consideration of the foregoing, 49 CFR Parts 173 and 179 are amended as follows:

**I. Part 173:**

In § 173.314, paragraph (c) table and Note 12 are amended; Note 3 is canceled as follows:

**§ 173.314 Requirements for compressed gases in tank cars.**

(c) \* \* \*

Kind of gas	Maximum permitted filling density, Note I	Required tank car, see § 173.31(a) (2) and (3)
Change Chlorine	125	DOT-106A500X, Note 7.
	125	DOT-105A500W, Note 12.

NOTE: 3: [Canceled]

NOTE 12: For special tank requirements applying to chlorine, see § 179.102-2. The quantity of chlorine loaded into a single-unit tank car must not exceed 90 tons. Nominal 16-, 30-, 55-, 85-, or 90-ton tank car tanks must be loaded to the nominal lading weights with a tolerance of plus 0, minus 2 percent. Tank cars built to ICC-105A500 may be stenciled either ICC-105A300 or ICC-5A500; tank cars built to ICC or DOT-105A500W may be stenciled either 105A300W or 105A500W; each tank must be equipped with the safety relief valve required by the stenciled specification. Existing tank cars, not larger than 30-ton chlorine capacity built to ARA-V, or not larger than 55-ton chlorine capacity built to ICC-105A300, or ICC-105A300W, may be continued in service if equipped with excess flow valves in accordance with § 179.102-2. ARA-V and ICC-105A cars having forge welded anchors must not be used for the transportation of chlorine.

**II. Part 179:**

(A) In § 179.100-6 paragraph (a), the second explanation following the formula is amended to read as follows:

§ 179.100 General specification applicable to pressure tank car tanks.

§ 179.100-6 Thickness of plates.

(a) \* \* \*

E=0.9 welded joints efficiency; except E=1.0 for seamless aluminum alloy heads, and for calculating the minimum wall thickness of class 105A tank shells and seamless heads.

(B) In § 179.102-2, paragraph (a) is amended to read as follows:

§ 179.102 Special commodity requirements for pressure tank car tanks.

§ 179.102-2 Chlorine.

(a) Each tank car used to transport chlorine must comply with all of the following:

(1) Each tank must be constructed in compliance with spec. DOT-105A500W. A tank car must be operated and the jacket stenciled either DOT-105A300W or DOT-105A500W, and each tank must be equipped with the safety relief valve required by the stenciled specification.

(2) Interior pipes of liquid discharge valves must be equipped with excess flow valves of approved design.

(3) Insulation must be 4 inches minimum thickness of corkboard or of self-extinguishing polyurethane foam.

(4) Tanks must be fabricated from carbon steel complying with ASTM Specification A-516-70, Grade 70, or AAR Specification TC-128-70, Grade A or B.

(5) Each tank car jacket must be stenciled on both sides, in letters not less than 1½ inches high "Chlorine Only".

(Secs. 831-835 of title 18, United States Code; sec. 9, Department of Transportation Act, 49 U.S.C. 1657)

This amendment is effective October 15, 1971, however, compliance with the regulations as amended herein is authorized immediately.

Issued in Washington, D.C., on August 4, 1971.

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For the U.S. Coast Guard.

MAC E. ROGERS,  
Board Member, For the  
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