



DEPARTMENT OF TRANSPORTATION  
RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION  
WASHINGTON, D.C. 20590

2126

49 CFR Parts 172, 173, 175, 176, and 179

[Docket No. HM-166G; Notice No. 80-9]

**Shipment of Hazardous Materials; Proposed Miscellaneous Amendments**

**AGENCY:** Materials Transportation Bureau, Research and Special Programs Administration, DOT.

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** The Materials Transportation Bureau (MTB) is proposing to make several miscellaneous amendments to the regulations pertaining to the shipment of hazardous materials. This action is necessary to update the regulations and to reduce MTB's backlog of rulemaking petitions.

**DATE:** Comments must be received on or before February 23, 1981.

**ADDRESS:** Address comments to Dockets Branch, Materials Transportation Bureau, U.S. Department of Transportation, Washington, D.C. 20590. It is requested that the docket number be identified and that five copies be submitted. The Dockets Branch is located in Room 8428 of the Nassif Building, 400 7th St., SW. Washington, D.C. Public dockets may be reviewed between the hours of 8:30 a.m. and 5:00 p.m., Monday through Friday.

**FOR FURTHER INFORMATION CONTACT:** Darrell L. Raines, Chief, Exemptions and Regulations Termination Branch, Office of Hazardous Materials Regulation, Materials Transportation Bureau, Research and Special Programs Administration, Washington, D.C. 20590 [202-472-2726].

**SUPPLEMENTARY INFORMATION:** This document is the ninth in a series of notices and amendments to incorporate changes in the Hazardous Materials Regulations based on either petitions for rulemaking submitted in accordance with 49 CFR 106.31 or on MTB's own initiative. On November 30, 1978, MTB published the first notice of proposed rulemaking under Docket HM-166; Notice 78-11 (43 FR 56070).

In summary, these proposed amendments would (1) remove Rosin or Resin from the Hazardous Materials Table; (2) change § 173.118 to read "None" in column (5)(a) of § 172.101 for Allyl alcohol; n-Butyl isocyanate; Crotonaldehyde; Flammable liquid, corrosive, n.o.s.; and Flammable liquid, poisonous, n.o.s.; (3) amend § 172.101 by adding Potassium superoxide and Sodium superoxide, change Peroxide of sodium to read Sodium peroxide and change the packaging reference in Column (5)(b) for Potassium peroxide from § 173.154 to § 173.187; (4) update § 173.31(a)(5) by removing the January 1, 1978 date; (5) require strict inspection of closures on tank cars; (6) authorize the use of DOT Specification 19B wooden boxes where the DOT Specification 15A wooden box is now authorized; (7) authorize the use of DOT Specification 112A200W tank cars for the shipment of Dichlorobutene which may be flammable and corrosive; (8) clarify the exception for Lithium batteries and devices containing lithium batteries, (9) delete Phosphorus pentasulfide from paragraph (a) of § 173.225(a); (10) remove an obsolete restriction in § 173.225(b)(2) regarding the use of non-DOT specification metal portable tanks;

(11) authorize the shipment of Ammonium hydroxide containing not more than 26 percent ammonia in cargo tanks and portable tanks having a capacity of 3,000 gallons or less and all DOT Specification cargo tanks listed in § 173.33(b); (12) extend the maximum service life of DOT Specification 3HT cylinders in § 173.302(a)(2) and Note 7 of the Table in § 173.304(a)(2) to 24 years; (13) eliminate the need for shipping papers for vehicles transporting Anhydrous ammonia in nurse tanks by private carriers under specified conditions; (14) authorize the use of additional outside packaging for the shipment of Poison B liquids in limited quantities; (15) correct an oversight in Docket HM-166 regarding the shipment of an ORM-B material; (16) clarify the number of rabbits to be used in testing corrosion to skin; (17) expand the provisions of § 175.10a to include flood control; (18) reduce the minimum height of the lettering required on the name plate of DOT Specification 51, 56, 57 and 60 portable tanks from at least 3/8 inch high to at least 1/4 inch high; (19) authorize the use of stainless steel anchor legs in tank cars used to transport liquefied carbon dioxide; (20) provide for additional testing methods to insure that certain welds on tank cars are free from cracks and other detrimental weld defects; (21) remove the reference to ASTM-240-70, Type 430A steel for tank shell fabrication; (22) require reinforcement of the dome on tank cars that do not have a flued-type opening and (23) reduce the possibility of a static electrical charge in the loading of flammable liquids in DOT Specification 115 tank cars.

Regulation affected	Reason(s) for proposed change	Proposed amendment
§ 172.101 Rosin (colophony) or Resin § 173.1060.	Rosin or Resin is listed in § 172.101 as an ORM-C. Based on the information MTB has on file and that furnished by Hercules, Inc., we are unable to justify the need for continuing to specifically regulate Rosin or Resin as a hazardous material.	To delete Rosin (colophony) or Resin from § 172.101 and delete § 173.1060 in its entirety.
§ 172.101 Column (5)(a)	Allyl alcohol (RC-100/45.4), n-Butyl isocyanate, Crotonaldehyde (RC-100/45.4), Flammable liquid, corrosive, n.o.s., and Flammable liquid, poisonous, n.o.s. are classed as a flammable liquid but have more than one hazard as indicated in Column (4) of § 172.101. Column (5)(a) of § 172.101 references a packaging exception in § 173.118. However, the introductory text of § 173.118(a) limits the exception to flammable liquids that do not meet the definition of another hazard class. Therefore, the reference to § 173.118 in Column (5)(a) of § 172.101 should read "None" instead of § 173.118 for the above commodities.	To amend Column (5)(a) of § 172.101 to read "None" instead of § 173.118 for the following commodities: Allyl alcohol (RC-100/45.4); n-Butyl isocyanate; Crotonaldehyde (RC-100/45.4); Flammable liquid, corrosive, n.o.s.; and Flammable liquid, poisonous, n.o.s.
§ 172.101	Potassium superoxide and Sodium superoxide are currently shipped as Oxidizer, n.o.s. or Oxidizing material, n.o.s. Based on their properties, the MTB believes that these superoxides should be identified by their technical name instead of a generic description and that the requirements for these two commodities should be the same as for Sodium peroxide. Also, the MTB proposes to change the packaging requirement for Potassium peroxide from § 173.154 to § 173.187.	To amend the Hazardous Materials Table as follows

§ 172.101 Hazardous materials table.

(1) +1 E/ A/ B/	(2) Hazardous materials description and proper shipping name	(3) Hazard class	(1A) Identification number	(4) Label(s) required (if not excepted)	(5) Passenger		(6) Maximum net quantity in one package			(7) Water shipments		
					(a) Exception	(b) Specific requirements	(a) Passenger carrying aircraft	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements	
	(Add) Potassium superoxide	Oxidizer	UN 2466	Oxidizer	None	173.187	Forbidden	100 pounds	1,2	1		Keep dry. Stow away from powdered metals, peroxides and combustible packaging and cargo.
	Sodium superoxide	Oxidizer	UN 2547	Oxidizer	None	173.187	Forbidden	100 pounds	1,2	5		Keep dry. Stow away from powdered metals, peroxides and combustible packaging and cargo.
	(Amend.) Potassium peroxide	Oxidizer	UN 1491	Oxidizer	None	173.187	Forbidden	100 pounds	1,2	1,2		Keep dry.

BILLING CODE 4910-60-C

Regulation affected	Reason(s) for proposed change	Proposed amendment
§ 173.14(a)(5)	To update the regulations by deleting the January 1, 1979 date in the third line.	To revise § 173.31(a)(5) to read: (5) After December 31, 1978, each Specification 112 and 114 tank car must be equipped with shell couplers in accordance with § 179.105-6 of this subchapter.
§ 173.31(b)(6)	To improve safety in rail transportation by requiring strict inspection of closures in tank cars and the replacement of defective packing, gaskets, bolting and threaded elements.	To amend § 173.31(b)(6) by adding the following two sentences: All closures of openings in tank cars must be inspected to the extent practical for corrosion of or damage to the gasket seating surfaces and for serviceability of packing, gaskets and hold-down bolts. All defective packing, gaskets, bolting or threaded elements must be replaced.
<p>§ 173.60(a)(4), § 173.60(a)(5), § 173.60(b)(1), § 173.60(c)(1), § 173.60(d)(1), § 173.60(d)(2), § 173.60(d)(3), § 173.63(a)(2), § 173.63(b), § 173.63(c)(1), § 173.63(c)(2), § 173.63(d)(2), § 173.63(e)(1), § 173.64(a)(1), § 173.64(a)(2), § 173.65(b)(1), § 173.65(c)(1), § 173.65(g), § 173.65(h)(1), § 173.65(h)(2), § 173.66(a)(1), § 173.66(d)(1), § 173.70(a)(1), § 173.82(a)(1), § 173.82(a)(2), § 173.82(a)(3), § 173.83(a)(8), § 173.83(a)(9), § 173.83(a)(10), § 173.83(a)(11), § 173.83(b)(3), § 173.83(d)(2), § 173.83(e)(1), § 173.83(g)(1), § 173.84(a)(1), § 173.85(a)(1), § 173.124(a)(1), § 173.134(a)(2), § 173.135(a)(1), § 173.136(a)(1), § 173.137(a)(1), § 173.138(a)(1), § 173.139(a)(2), § 173.140(a)(1), § 173.145(a)(2), § 173.154(a)(7), § 173.157(a)(1), § 173.158(a)(1), § 173.161(a)(1), § 173.164(a)(2), § 173.176(a)(1), § 173.177(a)(2), § 173.184(a)(2), § 173.188(a)(1), § 173.188(a)(2), § 173.188(a)(3), § 173.190(a)(1), § 173.190(c)(1), § 173.191(a)(1), § 173.193(a)(1), § 173.195(a)(1), § 173.195(b)(2), § 173.201(a)(2), § 173.202(a)(1), § 173.203(a)(1), § 173.206(b)(1), § 173.206(c)(1), § 173.207(a)(1), § 173.207(b)(1), § 173.208(a)(1), § 173.208(b)(1), § 173.214(a)(1), § 173.214(c)(1), § 173.225(a)(1), § 173.226(a)(1), § 173.226(a)(4), § 173.231(a)(1), § 173.233(a)(1), § 173.251(b)(1), § 173.252(a)(1), § 173.253(a)(1), § 173.276(a)(2), § 173.277(a)(1), § 173.280(a)(1), § 173.281(a)(1), § 173.288(a)(1), § 173.293(a)(1), § 173.329(a)(2), § 173.331(a), § 173.331(a)(1).</p>	To expand the use of DOT Specification 198 (§ 178.191) wooden boxes. At the present time, DOT Specification 15A (§ 178.168) wooden boxes and 198 are both authorized in 79 paragraphs in Parts 173. Specification 15A is authorized in 88 paragraphs. This proposed change would authorize the use of Specification 198 in each of those 88 paragraphs for shipments having a maximum gross weight of 35 pounds or 150 pounds, depending on whether the box has corner posts.	To amend each of the paragraphs listed in the first column to include DOT Specification 198 wooden boxes.
§ 173.118(m)(14)	Dichlorobutene was formerly classed as a corrosive material as indicated by its reference in § 173.245a. Since Docket HM-103/112 changed the hazard class to flammable the 112A200W tank car is not authorized as the material may also be corrosive or combustible.	To revise § 173.118(m)(14) to read: (14) Specification 112A200W or 114A340W (§§ 179.100, 179.101 of this subchapter) Tank cars. Authorized only for propylene oxide except 112A200W also authorized for acrylonitrile and dichlorobutene.
§ 173.187	To change the heading of § 173.187 and the introductory text of paragraph (a) to read the same as proposed in § 172.101.	To revise the heading of § 173.187 and the introductory text of paragraph (a) to read: § 173.187 Potassium peroxide, Potassium superoxide, Sodium peroxide or Sodium superoxide. (a) Potassium peroxide, potassium superoxide, sodium peroxide or sodium superoxide must be packed in specification containers as follows:
§ 173.206(f)	To clarify the exception for lithium batteries and to declare a device which contains a lithium battery not regulated because even when the battery decomposes in the device, no hazardous materials are released. If no hazard is created by the device, there is little or no basis for the device, to be regulated.	To revise § 173.206(f) and add paragraph (g) to read: (f) Lithium batteries comprised of one or more cells are not subject to the requirements of this subchapter, if they meet the following requirements: (1) Each cell may contain no more than 0.5 gram of lithium or lithium alloy. (2) Each battery may contain an aggregate quantity of no more than 1 gram of lithium or lithium alloy. (3) Each cell must be hermetically sealed. (4) Cells must be separated so as to prevent short circuits. (5) Batteries must be packed in strong outside packagings except when installed in electronic devices. (6) If a battery contains more than 0.5 gram of lithium or lithium alloy, it may not contain a liquid or gas that is a hazardous material according to this subchapter unless the liquid or gas, if free, would be completely absorbed or neutralized by other materials in the battery. (g) Devices containing lithium batteries comprised of one or more cells which have been tested and shown to completely contain all gases and other products of decomposition when the batteries are deliberately short circuited through a resistance of not more than 0.1 ohm are not subject to any other requirement of this subchapter.

Regulation affected	Reason(s) for proposed change	Proposed amendment
§ 173.225(a)	To delete phosphorus pentasulfide from paragraph (a) because it is specifically listed in paragraph (b).	To revise the introductory text of § 173.225(a) to read: (a) Phosphorus trisulfide, phosphorus sesquisulfide and phosphorus heptasulfide must be packaged as follows:
§ 173.225(b)(2) and Note 1	To update paragraph (b)(2) by deleting the reference to Note 1. Also, Note 1 would be deleted.	In § 173.225(b)(2), Note 1 is removed.
§ 173.245(a)(36)	To authorize the transportation of ammonium hydroxide containing no more than 26 percent ammonia in cargo tanks and portable tanks having a capacity of 3,000 gallons or less and in all of the DOT specification cargo tanks listed in § 173.33(b). All portable tanks and cargo tanks must be made from aluminum or steel.	To amend § 173.245(a) by adding paragraph (36) to read: (36) For ammonium hydroxide containing no more than 26 percent ammonia, any specification cargo tank listed in § 173.33(b) or any non-specification cargo tank or portable tank having a capacity of 3,000 gallons or less. Tanks must be made from aluminum or steel.
§ 173.302(a)(2)	To extend the maximum service life of DOT Specification 3HT cylinders in § 173.302(a)(2) to read 24 years instead of 15 years. In § 173.304(a)(13)(iii) the DOT-3HT cylinder must be condemned at the termination of a 24-year period following the date of the original test or after 4,300 pressurizations, whichever occurs first.	To amend the first sentence of § 173.302(a)(2) to read: (2) Specification 3HT (§ 178.44 of this subchapter) cylinder for aircraft use only, having a maximum service life of 24 years.
§ 173.304(a)(2) Note 7 of Table	To extend the maximum service life from 15 years to 24 years as proposed in § 173.302(a)(2).	To amend Note 7 of § 173.304 to read 24 years instead of 15 years.
§ 173.315(m)	To eliminate the need for shipping papers for vehicles transporting anhydrous ammonia in nurse tanks by a private carrier from the loading facility to the farm customer. In view of the controlled conditions under which the nurse tanks are operated and the limited amount of time during the year that the farmer has to apply the anhydrous ammonia to the soil, the need for shipping papers under these circumstances is not warranted.	To add paragraph (7) to § 173.315(m) to read: (7) Is operated in conformance with the requirements of Part 172 of this subchapter except that shipping papers are not required.
§ 173.345(a)(1)	To authorize the use of additional outside packages for the shipment of limited quantities of Poison B liquids.	To revise § 173.345(a)(1) to read: (1) In glass packaging not over 1-quart capacity each, or in metal containers or polyethylene bottles not over 1-gallon capacity each, packed in outside steel or wooden boxes, barrels, or drums.
§ 178.500(b)(2)	Docket HM-148 deleted the "W" notation from the ORM-A and ORM-B, n.o.s. entries in § 172.101. However, the reference to vessel was not deleted from the ORM definition section.	To revise the introductory text of § 178.500(b)(2) to read: (2) An ORM-B material is a material (including a solid when wet with water) capable of causing significant damage to a transport vehicle from leakage during transportation. Materials meeting one or both of the following criteria are ORM-B materials: A. Part 173 to read: 8. Corrosion will be considered to have resulted if the substances in contact with the rabbit skin has caused destruction or irreversible alteration of the tissue on at least two out of each six rabbits tested.
Paragraph (8) of Appendix A, Part 173	To clarify how many of the six rabbits tested must show irreversible tissue destruction to require that the material under test be classed as corrosive. Based on reports from testing laboratories under contract to DOT and on conversations with shippers who do their own corrosion testing, the answer is two rabbits. Using a criterion of one rabbit could give misleading results of possible individual variations among the animals undergoing tests.	To amend the introductory text of § 175.10(a)(12) to include "flood control".
§ 175.10(a)(12)	At present, the provisions of Subchapter C of 49 CFR do not apply, under specified conditions, to the shipment of hazardous materials which are loaded and carried on or in cargo aircraft only and which are to be dispensed or expended during flight for weather control, forest preservation and protection, or avalanche control. There is a definite need to expand this paragraph (8) to include "flood control", in order to break up ice jams and to avoid unnecessary flooding.	To amend the introductory text of § 175.10(a)(12) to include "flood control".
§ 178.245-6(a), § 178.251-7(a), § 178.255-14(a)	To standardize the minimum marking requirements on DOT Specifications 51, 56, 57, and 60 portable tanks with those of the IMCO Dangerous Goods Code which requires the markings to be at least 1/4 inch high for IMCO Types 1 and 2 portable tanks. Also it is anticipated that the proposed amendments of § 178.270-14(a) of Docket HM-167; Notice No. 78-12 (43 FR 58050) will be changed from 1/4 inch high to 1/2 inch high.	To amend §§ 178.245-6(a), 178.251-7(a) and 178.255-14(a) by changing the size of the marking requirements from at least 1/4 inch high to at least 1/2 inch high.
§ 179.102-1	To authorize the use of stainless steel anchor legs as well as carbon steel. The reasons are: 1. The thermal conductivity of Type 304 or 316 stainless steel is approximately one-third of carbon steel; the anchor rivets to the center sill may be exposed for inspection at rail interchange points or shipper plants and easily replaced. Steel anchors have the rivets enclosed in insulation and flashing to reduce heat input. 2. Mechanical properties are comparable to ASTM A-518. 3. Experience has been good on eight HCL 105A800W tank cars with Type 304 stainless steel anchors constructed in 1969. 4. These materials should be exempt from impact tests, since they have excellent impact properties at temperatures well below minus 50° F.	To amend § 179.102-1 by adding the following sentence: As an alternate, anchor legs may be fabricated of stainless steel ASTM A-240, Types 304, 304L, 316, or, 316L, in which case impact tests are not required.
§ 179.102-1(a)(6) and § 179.102-4(a)(4)	The Association of American Railroads has pointed out that this weld cannot be X-rayed because of its location, but may be magnified to determine if welds are free from cracks and other detrimental defects.	To amend § 179.102-1(a)(6) and § 179.102-4(a)(4) by adding the following sentence: Tank anchor to tank shell fillet welds must be examined by a suitable non-destructive testing method to insure that welds are free from cracks and other detrimental weld defects.
§ 179.200-7(d) Table, § 179.220-7(d) Table	The AAR Committee on Tank Cars no longer feels that ASTM A240-70 Type 430A steel is suitable for tank shell fabrication and should be removed from the approved list.	To delete the reference to Type 430A steel in § 179.200-7(d) and 179.220-7(d).
§ 179.200-14(c)	Experience has shown that tank cars which have flued-type domes have performed satisfactorily. Experience with tank cars that do not have a flued-type opening has shown a need for reinforcement in the dome.	To revise § 179.200-14(c) to read: (c) The opening in the tank shell within the dome shall be at least 29 inches in diameter. When the opening in the tank shell exceeds 30 inches in diameter, the opening shall be reinforced in an approved manner. This additional reinforcement may be accomplished by the use of a dome opening of the flued-type as shown in Appendix E, Figure E10C of the AAR Specification for Tank Cars or by the use of reinforcing as outlined in Appendix E, E3.04 and Figures E10K and E10L. When the opening in the tank shell is less than the inside diameter of the dome, and the dome pocket is not closed off in an approved manner, dome pocket drain holes shall be provided in the tank shell with nipples projecting inside the tank at least 1 inch.
§ 179.220-15(b)	To provide less exposure in the loading of flammable liquids in DOT Specification 115 tank cars, to the hazards incident in the accumulation of static electrical charge. In the transportation of flammable liquids in DOT Specification 115 tank cars, the design of the car necessitates a thermal isolation between the inner container and the outer shell. Because of this thermal isolation, it is also possible that the containers may be isolated electrically.	To amend § 179.220-15(b) by adding the following sentence: The inner container and outer shell must be permanently bonded to each other electrically either by a support system used, piping, or by a separate electrical connection of approved design.

(49 U.S.C. 1803, 1804, 1808, 49 CFR 1.59 App. A to Part 1, and paragraph (a)(4) of App. A to Part 106)

**Note.**—The Materials Transportation Bureau has determined that this document will not result in a major economic impact under the terms of Executive Order 12221 and DOT implementing procedures (44 FR 11034) nor require an environmental impact statement under the National Environmental Policy Act (49 U.S.C. 4321 et seq.). A regulatory evaluation and environmental assessment are available for review in the docket.

Issued in Washington, D.C., on December 19, 1980.

**Alan I. Roberts,**

*Associate Director for Hazardous Materials Regulation, Materials Transportation Bureau.*

[FR Doc. 81-259 Filed 1-7-81; 8:45 am]

BILLING CODE 4910-06-M

**Federal Register / Vol. 46, No. 5 / Thursday, January 8, 1981**