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

[49 CFR Parts 173, 178]

[Docket No. HM-117; Notice No. 74-8]

SPECIFICATION 1M GLASS CARBOY IN POLYSTYRENE PACKAGING AND CANCELLATION OF CERTAIN OBSOLETE SPECIFICATION PACKAGINGS

Notice of Proposed Rule Making

The Hazardous Materials Regulations Board is considering amendment of Parts 173 and 178 of the Department's Hazardous Materials Regulations to provide a specification for glass carboys in polystyrene packaging, to authorize use of this packaging with various commodities, and to clarify a shipper's responsibility for compliance with specifications involving certain packagings.

The Manufacturing Chemists Association and a number of holders of outstanding special permits have petitioned the Board to amend the regulations to provide for a new specification for a glass carboy in polystyrene packaging and to authorize use of this packaging with various commodities. This proposal identifies the new packaging as specification DOT-1M.

The Board believes that the assignment of responsibility for compliance th the Department's regulations inving composite packaging specificans must be clearly set forth. In Docket No. HM-69; Amendment No. 178-20 (36 FR 16579), the Board established a manufacturer's registration system for the purpose of identifying manufacturers of containers and to clearly establish responsibility for compliance with the specification. The proposed specification includes, in addition to identification of the manufacturer of each component, identification of the person who assembles the completed unit constituting the specification to clearly specify responsibilities for composite packagings. The Board proposes that each assembler obtain a registration number for identification on the exterior packaging. The assembler's registration number will contain the letter "A" immediately following the numerals. This identification will be in addition to the polystyrene packaging manufacturer's registration number if he is not the assembler.

In addition, the Board proposes an amendment of § 173.22 to clarify shipper responsibility for compliance with specifications when the specifications prescribe functions to be performed by the shipper as described in Parts 173 and 178.

The Board has available information which indicates that certain specification packagings are obsolete. Therefore, by this notice, the Board is proposing to cancel packaging specifications 1B, 1C, 1E, 28, 28A, 31, 34B, and 43A from Part 178 and also proposes to remove the aurizations for their use wherever they pear in Part 173. Any person using one of the above-listed specification packagings who requests that it be continued in the regulations for either construction or use should provide the Board with information concerning its use, including the number being used and the type of use.

In consideration of the foregoing, it is proposed to amend 49 CFR Parts 173 and 178 as follows:

I. PART 173—SHIPPERS

(A) In § 173.22, paragraph (a) would be amended to read as follows:

§ 173.22 Shipper's responsibility.

(a) When a container is supplied by the shipper, the shipper shall be responsible to determine that shipments of hazardous materials are made in containers which, unless otherwise provided in this part (see § 173.9(c)), have been made, assembled with all parts or fittings in their proper place, and properly secured, and marked in compliance with applicable specifications prescribed in Parts 178 and 179 of this subchapter or with specifications of the Department in effect at date of manufacture of container. The shipper may accept the manufacturer's certification or specification marking to determine that completed specification containers were manufactured in accordance with applicable specifications. The shipper must be familiar with the applicable specifications as prescribed in Parts 178 and 179 of this subchapter and he must perform those functions required by the specifications to be performed by the shipper. Where containers are supplied by the carrier, the shipper shall determine that the containers in which commodities are to be loaded are proper containers for the transportation of such commodities by examining the manufacturer's identification plate, specification marking, or certification by the carrier.

* * * * *

(B) In § 173.119, paragraph (a)(1) would be amended to read as follows:

§ 173.119 Flammable liquids not specifically provided for.

(a) * * *

(1) Specification 1A, 1C, 1D, or 1M (§§ 178.1, 178.3, 178.4, 178.17 of this subchapter). Glass carboy packed in a box, keg, or polystyrene packaging. Rated capacity may not exceed 5 gallons for Specification 1A or 1C. Specification 1M carboy may not be used to package liquids where contact with the liquid or its vapor may result in deterioration of the polystyrene.

* * * * *

(C) In § 173.145, paragraph (a)(1) would be amended to read as follows:

§ 173.145 Dimethylhydrazine, unsymmetrical and methylhydrazine.

(a) * * *

(1) Specification 1D or 1M (§§ 178.4, 178.17 of this subchapter). Glass carboy packed in a box or polystyrene packaging.

* * * * *

(D) In § 173.221, paragraph (a)(1) would be amended to read as follows:

§ 173.221 Liquid organic peroxides, n.o.s., and liquid organic peroxide solutions, n.o.s.

(a) * * *

(1) Specification 1A, 1D, or 1M (§§ 178.1, 178.4, 178.17 of this subchapter). Glass carboy packed in a box or polystyrene packaging. Rated capacity may not exceed 5 gallons for Specification 1A.

* * * * *

(E) In § 173.222, paragraph (a)(2) would be amended to read as follows:

§ 173.222 Acetyl peroxide and acetyl benzoyl peroxide, solution.

(a) * * *

(2) Specification 1A, 1D, or 1M (§§ 178.1, 178.4, 178.17 of this subchapter). Glass carboy packed in a box or polystyrene packaging. Rated capacity may not exceed 5 gallons for Specification 1A.

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(F) In § 173.223, paragraph (a)(3) would be amended to read as follows:

§ 173.223 Peracetic acid.

(a) * * *

(3) Specification 1D or 1M (§§ 178.4, 178.17 of this subchapter). Glass carboy packed in a box or polystyrene packaging.

* * * * *

(G) In § 173.245, paragraph (a)(3) would be amended to read as follows:

§ 173.245 Acids or other corrosive liquids not specifically provided for.

(a) * * *

(3) Specification 1D or 1M (§§ 178.4, 178.17 of this subchapter). Glass carboy packed in a box or polystyrene packaging. The package must be such that pressure in the carboy will not exceed 10 pounds per square inch guage at 130 degrees F. and, if vented, there will not be a significant release of any hazardous material to the environment.

* * * * *

(H) In § 173.247, paragraph (a)(3) would be amended to read as follows:

§ 173.247 Acetyl bromide; Acetyl chloride; Acetyl iodide; Antimony pentachloride; Benzoyl chloride; Boron trifluoride-acetic acid complex; Chromyl chloride; Dichloroacetyl chloride; Diphenylmethyl bromide solutions; Pyro sulfuryl chloride; Silicon chloride; Sulfur chloride (mono and di); Sulfuryl chloride; Thionyl chloride; Tin tetrachloride (anhydrous); Titanium tetrachloride; Trimethyl acetyl chloride.

(a) * * *

(3) Specification 1A, 1C, 1D, 1E, 1K, or 1M (§§ 178.1, 178.3, 178.4, 178.7, 178.14, 178.17 of this subchapter). Glass carboy packed in a box, keg, plywood drum, or polystyrene packaging (not permitted for antimony pentachloride or tin tetrachloride, anhydrous).

* * * * *

(I) In § 173.248, paragraph (a)(1) would be amended to read as follows:

§ 173.248 Acid sludge, sludge acid, spent sulfuric acid, or spent mixed acid.

(a) * * *

(1) Specification 1A, 1D, 1E, or 1M (§§ 178.1, 178.4, 178.7, 178.17 of this subchapter). Glass carboy packed in a box, plywood drum, or polystyrene packaging. (For spent sulfuric acid only.)

* * * * *

(J) In § 173.262, paragraph (a)(1) would be amended to read as follows:

§ 173.262 Hydrobromic acid.

(a) * * *

(1) Specification 1A, 1C, 1D, 1E, or 1M (§§ 178.1, 178.3, 178.4, 178.7, 178.17 of this subchapter). Glass carboy packed in a box, keg, plywood drum or polystyrene packaging.

* * * * *

(K) In § 173.263, paragraph (a)(7) would be amended to read as follows:

§ 173.263 Hydrochloric (muriatic) acid, hydrochloric (muriatic) acid mixtures, hydrochloric (muriatic) acid solution, inhibited, sodium chlorite solution (not exceeding 42 percent sodium chlorite), and cleaning compounds, liquids, containing hydrochloric (muriatic) acid.

(a) * * *

(7) Specification 1D, 1E, 1EX, (single-trip), or 1M (§§ 178.4, 178.7, 178.6, 178.17 of this subchapter). Glass carboys packed in a box, plywood drum, or polystyrene packaging. The package must be such that pressure in the carboy will not exceed 10 pounds per square inch gauge at 130 degrees F. and, if vented, there will not be a significant release of any hazardous materials to the environment.

* * * *

(L) In § 173.265, paragraph (c)(1) would be amended to read as follows:

§ 173.265 Hydrofluosilicic acid.

* * * * *

(c) * * *

(1) Specification 1A, 1C, 1D, 1E, or 1M (§§ 178.1, 178.3, 178.4, 178.7, 178.17 of this subchapter). Glass carboys packed in a box, keg, plywood drum, or polystyrene packaging. Use of a rubber stopper and gasket is also authorized for Specification 1A, 1C, 1D, or 1E carboy.

* * * * *

(M) In § 173.266, paragraph (c)(7) would be added to read as follows:

§ 173.266 Hydrogen peroxide solution in water.

* * * * *

(c) * * *

(7) Specification 1M (§ 178.17 of this subchapter). Glass carboy packed in a polystyrene packaging. The package must be such that pressure in the carboy will not exceed 10 pounds per square inch gauge at 130 degrees F. and, if vented, there will not be a significant release of any hazardous material to the environment.

* * * * *

(N) In § 173.267, paragraph (a)(10) would be added to read as follows:

§ 173.267 Mixed acid (nitric and sulfuric acid) (nitrating acid).

(a) * * *

(10) Specification 1M (§ 178.17 of this subchapter). Glass carboy packed in a polystyrene packaging. Authorized only for mixed nitric and sulfuric acid, containing not over 17 percent nitric acid and containing at least 33 percent water. The package must be such that pressure in the carboy will not exceed 10 pounds per square inch gauge at 130 degrees F. and, if vented, there will not be a significant release of any hazardous material to the environment.

* * * * *

(O) In § 173.268, paragraph (f)(3) would be amended to read as follows:

§ 173.268 Nitric acid.

* * * * *

(f) * * *

(3) Specification 1D, 1E, or 1M (§§ 178.4, 178.7, 178.17 of this subchapter). Glass carboy packed in a box, plywood drum, or polystyrene packaging. The package must be such that pressure in the carboy will not exceed 10 pounds per square inch gauge at 130 degrees F. and, if vented, there will not be a significant release of any hazardous material to the environment.

* * * * *

(P) In § 173.269, paragraph (a)(2) would be amended to read as follows:

§ 173.269 Perchloric acid.

(a) * * *

(2) Specification 1A, 1C, 1D, 1E, 1K, or 1M (§§ 178.1, 178.3, 178.4, 178.7, 178.14, 178.17 of this subchapter). Glass carboy packed in a box, keg, plywood drum, or polystyrene packaging.

* * * * *

(Q) In § 173.272, paragraph (i)(16) would be amended to read as follows:

§ 173.272 Sulfuric acid.

* * * * *

(i) * * *

(16) Specification 1D, 1E, or 1M (§§ 178.4, 178.7, 178.17 of this subchapter). Glass carboy packed in a box, plywood drum, or polystyrene packaging.

* * * * *

(R) In § 173.276, paragraph (a)(1) would be amended to read as follows:

§ 173.276 Anhydrous hydrazine and hydrazine solution.

(a) * * *

(1) Specification 1D or 1M (§§ 178.4, 178.17 of this subchapter). Glass carboy packed in a box or polystyrene packaging.

* * * * *

(S) In § 173.277, paragraph (a)(2) would be amended to read as follows:

§ 173.277 Hypochlorite solutions.

(a) * * *

(2) Specification 1A, 1C, 1D, 1E, or 1M (§§ 178.1, 178.3, 178.4, 178.7, 178.17 of this subchapter). Glass carboy packed in a box, keg, plywood drum, or polystyrene packaging.

* * * * *

(T) In § 173.278, paragraph (b) would be amended to read as follows:

§ 173.278 Nitrohydrochloric acid.

* * * * *

(b) * * *

(2) Specification 1A, 1D, 1E, or (§§ 178.1, 178.4, 178.7, 178.17 of subchapter). Glass carboy packed box, plywood drum, or polystyrene p aging. Rated capacity may not exce gallons for Specification 1A.

(U) In § 173.291, paragraph (a) would be amended to read as follow

§ 173.291 Flame retardant compo liquid.

(a) * * *

(2) Specification 1D, 1E, or (§§ 178.4, 178.7, 178.17 of this chapter). Glass carboy packed in a plywood drum, or polystyrene packag The package must be such that pres in the carboy will not exceed 10 pou per square inch gauge at 130 degree and, if vented, there will not be a nificant release of any hazardous terial to the environment.

* * * * *

(V) In § 173.295, paragraph (a) would be amended to read as follows:

§ 173.295 Benzyl chloride.

(a) * * *

(3) Specifications 1A, 1C, 1D, 1E, 1M (§§ 178.1, 178.3, 178.4, 178.7, 178.17 of this subchapter). Glass car packed in a box, keg, plywood drum, polystyrene packaging.

* * * * *

(W) In § 173.346, paragraph (a)(would be amended to read as follows

§ 173.346 Poisonous liquids not spe ically provided for.

(a) * * *

(13) Specification 1A, 1D, 1E, or (§§ 178.1, 178.4, 178.7, 178.17 of this s chapter). Glass carboy packed in a b plywood drum, or polystyrene packag

* * * * *

(X) In § 173.348, paragraph (a) would be amended to read as follows:

§ 173.348 Arsenic acid.

(a) * * *

(2) Specification 1A, 1C, 1D, or (§§ 178.1, 178.3, 178.4, 178.17 of t subchapter). Glass carboy packed in box, keg, or polystyrene packaging.

* * * * *

(Y) In § 173.349, paragraph (a) would be amended to read as follows.

§ 173.349 Carbolic acid (phenol) liqu

(a) * * *

(2) Specification 1A, 1C, 1D, or (§§ 178.1, 178.3 178.4, 178.17 of this su chapter). Glass carboy packed in a b keg, or polystyrene packaging.

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II. PART 178—SHIPPING CONTAINEI SPECIFICATIONS

(A) In Part 178 Table of Conten § 178.17 would be added to read as fo lows:

§ 178.17 Specification 1M; glass carboy in non-reusable polystyrene packaging.

(B) § 178.17 would be added to read as follows:

§ 178.17 Specification 1M; glass carboy in non-reusable polystyrene packaging.

§ 178.17–1 General requirements.

(a) Each package must meet the requirements of § 173.24 of this subchapter.

(b) Polystyrene packaging may not be used again after contents hvae been removed.

§ 178.17–2 Capacity.

Carboy must not exceed 6.5 United States gallons overflow, tolerance plus 10 fluid ounces.

§ 178.17–3 Construction requirements.

(a) Glass carboy:

(1) The glass must be machine-blown and thoroughly and properly annealed.

(2) The top lip portion of each carboy must be smooth and even.

(3) The neck must be provided with threads for closing by screw cap.

(4) The weight of each carboy must be 14 pounds with a tolerance of minus 8 ounces plus 16 ounces.

(5) The minimum thickness of the glass in the carboy must be 0.075 inch.

(b) Outside packaging:

(1) Expandable polystyrene must be olded to form a protective outside ckaging.

(2) This packaging must consist of 2 sections, namely top and bottom portions, which interlock. Each section must be molded with a cavity to maintain a snug fit in all areas of contact with the carboy.

(3) The minimum density of the polystyrene must be 2 pounds per cubic foot.

(4) The minimum thickness of the polystyrene must be 1 inch.

§ 178.17–4 Closure.

(a) Glass carboy:

(1) A gasketed or lined threaded screw cap is required.

(b) Outside packaging:

(1) Weather resistant, pressure sensitive, cloth, or laminated reinforced paper tape must be circumferentially applied at the mating areas of the top and bottom sections to prevent separation. The tape must be at least 2½ inches in width and have a tensile strength of not less than 50 pounds per inch of width.

§ 178.17–5 Tests.

(a) Glass carboy:

(1) *Internal pressure test.* Each carboy must be capable of withstanding a sustained internal pressure of 20 p.s.i.g. for a 15-day period. The carboy manufacturer shall demonstrate to the Bureau of Explosives that the carboy design will meet this test prior to start of production.

(2) *Hydrostatic pressure test.* One carr selected at random from each 200 produced on each mold must be subjected to bursting by an instantaneous hydostatic pressure test. The bursting pressure may not be less than 40 p.s.i.g. If a carboy fails at a pressure less than 40 p.s.i.g., 12 additional samples must be selected from the same lot of 200 carboys and tested in the same manner. All 12 samples must pass the required test, otherwise the entire lot must be rejected.

(3) *Reports and records.* The manufacturer shall prepare a report on the tests described in (a) (1) and (2) of this subsection and shall retain the report on the results of these tests for at least one year following the termination of the production of each carboy design.

(b) Outside packaging:

(1) *Drop tests.* Randomly selected samples of completed packages, with carboys filled with water to capacity and closed as for shipment, must be subjected to drop tests onto solid concrete. A minimum of six packages must be tested, each not required to be subjected to more than one drop. A complete test cycle consists of the following:

(i) Two units dropped flat on bottom from a height of four feet,

(ii) Two units dropped flat on side from a height of four feet, and

(iii) Two units dropped flat on top from a height of four feet.

(2) *Required results.* Each package in one test cycle must pass the test without leakage from or breakage of the inside container. If any failure occurs, the complete cycle must be repeated until the passing requirements have been satisfied.

(3) *Testing frequency.* Tests for the completed package described in paragraph (b) (1) of this subsection must be performed prior to the start of initial production from each mold, each six months thereafter, and upon any change in source of resin, type of resin, or process method. If production is discontinued and then resumed, this requirement will also apply if prescribed tests have not been made within the previous six months. The tests must also be repeated when any component or the design of the package is changed.

(4) *Records.* The manufacturer of the polystyrene packaging or the assembler shall prepare a report on the tests described in (b) (1), (2), and (3) of this subsection and shall retain the report on the results of these tests for at least one year following the sale of the polystyrene packaging. These reports must be available for examination by representatives of the Department.

§ 178.117–6 Markings.

(a) The markings required by this subsection must be legible and in characters at least one inch in height. The marking requirements of § 173.24 of this subchapter with the exception of subparagraphs (c) (1) (ii) and (iv), are applicable to the glass carboy and polystyrene packaging.

(b) No person may mark any carboy with the specification identification "DOT–ID" and any polystyrene packaging with the specification identification "DOT–IM" unless:

(1) The carboy or polystyrene packaging is manufactured in compliance with the requirements of this section, and

(2) For the polystyrene packaging, the manufacturer has a registration number (M**** or M****A) from the Office of Hazardous Materials, Department of Transportation, Washington, D.C. 20590.

(c) No person may mark the polystyrene packaging with the letter "A" immediately following the registration number unless he is responsible for assembly of the complete package. If the assembler is not the polystyrene packaging manufacturer, he must obtain a registration number (M****A) from the Office of Hazardous Materials, Department of Transportation, Washington, D.C. 20590.

(d) The following markings must be embossed in the bottom of each carboy:

(1) Manufacturer's mark (must be registered with Bureau of Explosives),

(2) Year of manufacture,

(3) DOT–ID.

(e) The following markings must be embossed in the bottom of each polystyrene packaging:

(1) DOT–IM.

(2) NRC.

(3) Year of manufacture.

(4) Registration number (M****) of the manufacturer. When manufacturer of the polystyrene packaging is also the assembler, the letter "A" must follow his registration number on the polystyrene packaging.

(5) Registration number (M****A) of the assembler. When assembler is not the polystyrene manufacturer, his registration number must appear on the polystyrene packaging in addition to the polystyrene packaging manufacturer's registration number.

(f) The markings required by subparagraphs (e) (1) and (e) (2) of this subsection must be displayed sequentially on each polystyrene packaging. For example: DOT–1M NRC.

Interested persons are invited to give their views on these proposals. Communications should identify the docket number and be submitted in duplicate to the Secretary, Hazardous Materials Regulations Board, Department of Transportation, Washington, D.C. 20590. Communications received on or before September 30, 1974 will be considered before final action is taken on these proposals. All comments received will be available for examination by interested persons at the Office of the Secretary, Hazardous Materials Regulations Board, room 6215, Trans Point Building, Second and V Streets, SW., Washington, D.C., both before and after the closing date for comments.

(Transportation of Explosives Act (18 U.S.C. 831–835), section 6 of the Department of Transportation Act (49 U.S.C. 1655); Title VI and section 902(h) of the Federal Aviation Act of 1958 (49 U.S.C. 1421–1430, 1472(h), and 1655(c)))

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W. J. BURNS,
Director, Office of Hazardous Materials.

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