

§ 171.7

49 CFR Ch. I (10–1–24 Edition)

Current OMB control No.	Title	Title 49 CFR part or section where identified and described
2137–0557	Approvals for Hazardous Materials	§§ 107.402, 107.403, 107.405, 107.502, 107.503, 107.705, 107.713, 107.715, 107.717, 107.803, 107.805, 107.807, 110.30, 172.101, 172.102, Special Provisions 19, 26, 53, 55, 60, 105, 118, 121, 125, 129, 131, 133, 136, B45, B55, B61, B69, B77, B81, N10, N72, 173.2a, 173.4, 173.7, 173.21, 173.22, 173.24, 173.31, 173.38, 173.51, 173.56, 173.58, 173.59, 173.124, 173.128, 173.159, 173.166, 173.171, 173.214, 173.222, 173.224, 173.225, 173.245, 173.301, 173.305, 173.306, 173.314, 173.315, 173.316, 173.318, 173.334, 173.340, 173.411, 173.433, 173.457, 173.471, 173.472, 173.476, 174.50, 174.63, 175.8, 175.85, 175.701, 175.703, 176.168, 176.340, 176.704, 178.3, 178.35, 178.47, 178.53, 178.273, 178.274, 178.503, 178.509, 178.605, 178.606, 178.608, 178.801, 178.813, 180.213.
2137–0559	(Rail Carriers and Tank Car Tank Requirements) Requirements for Rail Tank Car Tanks—Transportation of Hazardous Materials by Rail..	§§ 172.102, Special provisions: B45, B46, B55, B61, B69, B77, B78, B81; 173.10, 173.31, 174.20, 174.50, 174.63, 174.104, 174.114, 174.204, 179.3, 179.4, 179.5, 179.6, 179.7, 179.11, 179.18, 179.22, 179.100–9, 179.100–12, 179.100–13, 179.100–16, 179.100–17, 179.102–4, 179.102–17, 179.103–1, 179.103–2, 179.103–3, 179.103–5, 179.200–10, 179.200–14, 179.200–15, 179.200–16, 179.200–17, 179.200–19, 179.201–3, 179.201–8, 179.201–9, 179.220–4, 179.220–7, 179.220–8, 179.220–13, 179.220–15, 179.220–17, 179.220–18, 179.220–20, 179.220–22, 179.300–3, 179.300–7, 179.300–9, 179.300–12, 179.300–13, 179.300–15, 179.300–20, 179.400–3, 179.400–4, 179.400–11, 179.400–13, 179.400–16, 179.400–17, 179.400–19, 179.400–20, 179.500–5, 179.500–8, 179.500–12, 179.500–18, 180.505, 180.509, 180.515, 180.517.
2137–0572	Testing requirements for non-bulk packages	§§ 173.168, 178.2, 178.601, appendix C to part 178, appendix D to part 178.
2137–0582	Container Certification Statement	§§ 176.27, 176.172.
2137–0586	Hazardous Materials Public Sector Training and Planning Grants.	Part 110.
2137–0591	Response Plans for Shipments of Oil	Part 130.
2137–0595	Cargo Tank Motor Vehicles in Liquefied Compressed Gas Service.	§§ 173.315, 178.337–8, 178.337–9, 180.405, 180.416.
2137–0612	Hazardous Materials Security Plans	Part 172, subpart I, §§ 172.800, 172.802, 172.804.
2137–0613	Subsidiary Hazard Class and Number/Type of Packagings.	§§ 172.202, 172.203
2137–0620	Inspection and Testing of Meter Provers	Part 173, subpart A, § 173.5a.
2137–0621	Requirements for United Nations (UN) Cylinders	§§ 173.301, 173.304, 173.304b, 178.69, 178.70, 178.74, 178.75, 180.207, 180.209, 180.212, 180.215, 180.217.
2137–0628	Flammable Hazardous Materials by Rail Transportation.	§§ 130.120, 171.16, 173.41, 173.145, 173.150, 174.310, 174.312.

[Amdt. 171–111, 56 FR 66157, Dec. 20, 1991]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §171.6, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

§ 171.7 Reference material.

(a) Certain material is incorporated by reference into subchapters A, B, and

C with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that

specified in this section, PHMSA must publish a document in the FEDERAL REGISTER and the material must be available to the public. All approved incorporation by reference (IBR) material is available for inspection at PHMSA and at the National Archives and Records Administration (NARA). Contact PHMSA at: The Office of Hazardous Materials Standards, East Building, PHH-10, 1200 New Jersey Avenue SE, Washington, DC 20590-0001. For information on the availability of this material at PHH-10, call 1-800-467-4922, or go to: www.phmsa.dot.gov. For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html. The material may be obtained from the source(s) in the following paragraph(s) of this section.

(b) *Air Transport Association of America*, 1301 Pennsylvania Avenue NW., Washington, DC 20004-1707.

(1) ATA Specification No. 300 Packaging of Airline Supplies, Revision 19, July 31, 1996, into §§172.102, 173.168, 173.302, and 173.304.

(2) [Reserved]

(c) *The Aluminum Association*, 1525 Wilson Blvd., Suite 6000, Arlington, VA 22209, telephone 703-358-2960, <http://www.aluminum.org>.

(1) Aluminum Standards and Data, Seventh Edition, June 1982, into §§172.102; 178.65.

(2) Welding Aluminum: Theory and Practice, 2002 Fourth Edition, into §178.68.

(d) *American National Standards Institute, Inc.*, 25 West 43rd Street, New York, NY 10036.

(1) ANSI/ASHRAE 15-94, Safety Code for Mechanical Refrigeration, 1944, into §§173.306; 173.307.

(2) ANSI N14.1 Uranium Hexafluoride—Packaging for Transport, 1971 Edition, into §§173.417; 173.420.

(3) ANSI N14.1 Uranium Hexafluoride—Packaging for Transport, 1982 Edition, into §§173.417; 173.420.

(4) ANSI N14.1 Uranium Hexafluoride—Packaging for Transport, 1987 Edition, into §§173.417; 173.420.

(5) ANSI N14.1 Uranium Hexafluoride—Packaging for Transport, 1990 Edition, into §§173.417; 173.420.

(6) ANSI N14.1 Uranium Hexafluoride—Packaging for Transport, 1995 Edition, into §§173.417; 173.420.

(7) ANSI N14.1 Uranium Hexafluoride—Packaging for Transport, 2001 Edition, into §§173.417; 173.420.

(e) *American Petroleum Institute*, 1220 L Street NW., Washington, DC 20005-4070.

(1) API Recommended Practice Closures of Underground Petroleum Storage Tanks, 3rd Edition, March 1996, into §172.102.

(2) [Reserved]

(f) *American Pyrotechnics Association* (APA), P.O. Box 30438, Bethesda, MD 20824, (301) 907-8181, www.americanpyro.com.

(1) APA 87-1A: Standard for the Construction, Classification, Approval and Transportation of Consumer Fireworks, final draft January 1, 2018 (excluding appendices II through VI), into §§107.402(d); 173.59; 173.64; and 173.65.

(2) APA 87-1B: Standard for the Construction, Classification, Approval, and Transportation of Display Fireworks, final draft January 1, 2018 (excluding appendices II through IV), into §173.64.

(3) APA 87-1C: Standard for the Construction, Classification, Approval, and Transportation of Entertainment Industry and Technical (EI&T) Pyrotechnics, final draft January 1, 2018 (excluding appendices II through IV), into §173.64.

(g) *The American Society of Mechanical Engineers* (ASME), 150 Clove Road, Little Falls, NJ 07424-2139, telephone: 1-800-843-2763, <http://www.asme.org>.

(1) ASME Boiler and Pressure Vessel Code (ASME Code), 2017 Edition, July 1, 2017 (as follows), into §§172.102; 173.3; 173.5b; 173.24b; 173.306; 173.315; 173.318; 173.420; 178.255-1; 178.255-2; 178.255-14; 178.255-15; 178.273; 178.274; 178.276; 178.277; 178.320; 178.337-1; 178.337-2; 178.337-3; 178.337-4; 178.337-6; 178.337-16; 178.337-18; 178.338-1; 178.338-2; 178.338-3; 178.338-4; 178.338-5; 178.338-6; 178.338-13; 178.338-16; 178.338-18; 178.338-19; 178.345-1; 178.345-2; 178.345-3; 178.345-4; 178.345-7;

§ 171.7

178.345-14; 178.345-15; 178.346-1; 178.347-1; 178.348-1; 179.400-3; 180.407;

(i) ASME BPVC.II.A-2017 (vols. 1 and 2), Section II—Materials—Part A—Ferrous Materials Specifications.

(ii) ASME BPVC.II.B-2017, Section II—Materials—Part B—Nonferrous Material Specifications.

(iii) ASME BPVC.V-2017, Section V—Nondestructive Examination.

(iv) ASME BPVC.VIII.1-2017, Section VIII—Rules for Construction of Pressure Vessels Division 1.

(v) ASME BPVC.IX-2017, Section IX—Qualification Standard for Welding, Brazing, and Fusing Procedures; Welders; Brazers; and Welding, Brazing, and Fusing Operators.

NOTE 1 TO PARAGRAPH (g)(1): The requirement for a 6% knuckle radius on torispherical heads are excepted.

(2) ASME B31.4-2012, Pipeline Transportation Systems for Liquids and Slurries, November 12, 2012, into § 173.5a.

(h) *ASTM International*, 100 Barr Harbor Drive, West Conshohocken, PA 1942, telephone (610) 832-9585, <http://www.astm.org>. Copies of historical standards or standards that ASTM does not have may be purchased from: Engineering Societies Library, 354 East 47th Street, New York, NY 10017.

(1) ASTM A 20/A 20M-93a Standard Specification for General Requirements for Steel Plates for Pressure Vessels, 1993, into §§ 178.337-2; 179.102-4; 179.102-1; 179.102-17.

(2) ASTM A 47-68 Malleable Iron Castings, 1968, into § 179.200-15.

(3) ASTM A 53/A 53M-06a (ASTM A 53) Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless, 2006, into § 173.5b.

(4) ASTM A 106/A 106M-06a (ASTM A 106) Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service, 2006, into § 173.5b.

(5) ASTM A 240/A 240M-99b Standard Specification for Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels, 1999, into §§ 178.57; 178.358-5; 179.100-7; 179.100-10; 179.102-1; 179.102-4; 179.102-17; 179.200-7; 179.201-5; 179.220-7; 179.300-7; 179.400-5.

(6) ASTM A 242-81 Standard Specification for High-Strength Low-Alloy Structural Steel, 1981, into § 178.338-2.

49 CFR Ch. I (10-1-24 Edition)

(7) ASTM A 262-93a Standard Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels, 1993, into 179.100-7; 179.200-7; 179.201-4.

(8) ASTM A 285-78 Pressure Vessel Plates, Carbon Steel, Low- and Intermediate-Tensile Strength, 1978, into § 179.300-7.

(9) ASTM A 300-58 Steel Plates for Pressure Vessels for Service at Low Temperatures, 1958, into § 178.337-2.

(10) ASTM A 302/A 302M-93 Standard Specification for Pressure Vessel Plates, Alloy Steel, Manganese-Molybdenum and Manganese-Molybdenum Nickel, 1993, into § 179.100-7; 179.200-7; 179.220-7.

(11) ASTM A 333-67 Seamless and Welded Steel Pipe for Low-Temperature Service, 1967, into § 178.45.

(12) ASTM A 370-94 Standard Test Methods and Definitions for Mechanical Testing of Steel Products, 1994, into §§ 179.102-17; 179.102-1; 179.102-4.

(13) ASTM A 441-81 Standard Specification for High-Strength Low-Alloy Structural Manganese Vanadium Steel, 1981, into § 178.338-2.

(14) ASTM A 514-81 Standard Specification for High-Yield Strength Quenched and Tempered Alloy Steel Plate, Suitable for Welding, 1981, into § 178.338-2.

(15) ASTM A 515/A 515M-03 Standard Specification for Pressure Vessel Plates, Carbon Steel, for Intermediate- and Higher-Temperature Service, 2003, into § 179.300-7.

(16) ASTM A 516/A 516M-90 Standard Specification for Pressure Vessel Plates, Carbon Steel, for Moderate and Lower-Temperature Service, 1990, into § 178.337-2; 179.100-7; 179.102-1; 179.102-2; 179.102-4; 179.102-17; 179.200-7; 179.220-7; 179.300-7.

(17) ASTM A 537/A 537M-91 Standard Specification for Pressure Vessel Plates, Heat-Treated, Carbon-Manganese-Silicon Steel, 1991, into § 179.100-7; 179.102-4; 179.102-17.

(18) ASTM A 572-82 Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Steels of Structural Quality, 1982, into § 178.338-2.

(19) ASTM A 588-81 Standard Specification for High-Strength Low-Alloy Structural Steel with 50 Ksi Minimum

Yield Point to 4 in. Thick, 1981, into § 178.338-2.

(20) ASTM A 606-75 Standard Specification for Steel Sheet and Strip Hot-Rolled and Cold-Rolled, High-Strength, Low-Alloy, with Improved Atmospheric Corrosion Resistance, 1975 (Reapproved 1981), into § 178.338-2.

(21) ASTM A 607-98 Standard Specification for Steel, Sheet and Strip, High-Strength, Low-Alloy, Columbium or Vanadium, or Both, Hot-Rolled and Cold-Rolled, 1998, into § 178.338-2.

(22) ASTM A 612-72a High Strength Steel Plates for Pressure Vessels for Moderate and Lower Temperature Service, 1972, into § 178.337-2.

(23) ASTM A 633-79a Standard Specification for Normalized High-Strength Low-Alloy Structural Steel, 1979 Edition, into § 178.338-2.

(24) ASTM A 715-81 Standard Specification for Steel Sheet and Strip, Hot-Rolled, High-Strength, Low-Alloy with Improved Formability, 1981, into § 178.338-2.

(25) ASTM A 1008/A 1008M-03 Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High Strength Low-Alloy with Improved Formability, 2003, into § 178.338-2; 178.345-2.

(26) ASTM A 1011/A 1011M-03a Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low Alloy and High Strength Low-Alloy with Improved Formability, 2003, into § 178.338-2; 178.345-2.

(27) ASTM B 162-93a Standard Specification for Nickel Plate, Sheet, and Strip, 1993, into § 173.249; 179.200-7.

(28) ASTM B 209-93 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate, 1993, into § 179.100-7; 179.200-7; 179.220-7.

(29) ASTM B 221-76 Aluminum Alloy Extruded Bars, Rods, Shapes, and Tubes, 1976, into § 178.46.

(30) ASTM B 557-84 Tension Testing Wrought and Cast Aluminum and Magnesium-Alloy Products, 1984, into § 178.46.

(31) ASTM B 580-79 Standard Specification for Anodic Oxide Coatings on Aluminum, (Re-approved 2000), into § 173.316; 173.318; 178.338-17.

(32) ASTM D 56-05, Standard Test Method for Flash Point by Tag Closed

Cup Tester, approved May 1, 2005, into § 173.120.

(33) ASTM D 86-07a, Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure, approved April 1, 2007, into § 173.121.

(34) ASTM D 93-08, Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester, approved October 15, 2008, into § 173.120.

(35) ASTM D 1078-05, Standard Test Method for Distillation Range of Volatile Organic Liquids, approved May 15, 2005, into § 173.121.

(36) ASTM D 1238-90b Standard Test Method for Flow Rates of Thermoplastics for Extrusion Plastometer, 1990, into § 173.225.

(37) ASTM D 1709-01 Standard Test Methods for Impact Resistance of Plastic Film by the Free-Falling Dart Method, 2001, into § 173.197.

(38) ASTM D 1835-97 Standard Specification for Liquefied Petroleum (LP) Gases, 1997, into § 180.209.

(39) ASTM D 1838-64 Copper Strip Corrosion by Liquefied Petroleum (LP) Gases, 1964, into § 173.315.

(40) ASTM D 1922-00a Standard Test Method for Propagation Tear Resistance of Plastic Film and Thin Sheeting by Pendulum Method, 2000, into § 173.197.

(41) ASTM D 3278-96 (Reapproved 2004) E1, Standard Test Methods for Flash Point of Liquids by Small Scale Closed-Cup Apparatus, approved November 1, 2004, into § 173.120.

(42) ASTM D 3828-07a, Standard Test Methods for Flash Point by Small Scale Closed Cup Tester, approved July 15, 2007, § 173.120.

(43) ASTM D 4206-96 Standard Test Method for Sustained Burning of Liquid Mixtures Using the Small Scale Open-Cup Apparatus, 1996, into § 173.120.

(44) ASTM D 4359-90 Standard Test Method for Determining Whether a Material is a Liquid or a Solid, 1990 into §§ 130.5, 171.8.

(45) ASTM D7900-13^{e1}, Standard Test Method for Determination of Light Hydrocarbons in Stabilized Crude Oils by Gas Chromatography, Approved December 1, 2013, into § 173.121.

(46) ASTM E 8-99 Standard Test Methods for Tension Testing of Metallic Materials, 1999, into § 178.36; 178.37; 178.38; 178.39; 178.44; 178.45; 178.50; 178.51;

§ 171.7

178.53; 178.55; 178.56; 178.57; 178.58; 178.59; 178.60; 178.61; 178.68.

(47) ASTM E 23-98 Standard Test Methods for Notched Bar Impact Testing of Metallic Materials, 1998, into § 178.57.

(48) ASTM E 112-88 Standard Test Methods for Determining Average Grain Size, 1988, into § 178.44.

(49) ASTM E 112-96 Standard Test Methods for Determining Average Grain Size, 1996 Edition, into § 178.274; part 178, appendix A.

(50) ASTM E 114-95 Standard Practice for Ultrasonic Pulse-Echo Straight-Beam Examination by the Contact Method, 1995, into § 178.45.

(51) ASTM E 213-98 Standard Practice for Ultrasonic Examination of Metal Pipe and Tubing, into § 178.45.

(52) ASTM E 290-97a Standard Test Methods for Bend Testing of Material for Ductility, published February 1998, into § 178.37.

(i) [Reserved]

(j) *American Welding Society*, 550 NW. Le Jeune Road, Miami, Florida 33126.

(1) AWS Code B 3.0; Standard Qualification Procedure; 1972 (FRB 3.0-41, rev. May 1973), into §§ 178.356-2, 178.358-2.

(2) AWS Code D 1.0; Code for Welding in Building Construction (FR D 1.0-66, 1966), into §§ 178.356-2; 178.358-2.

(k) *Association of American Railroads*, American Railroads Building, 50 F Street NW., Washington, DC 20001; telephone (877) 999-8824, <http://www.aar.org/publications.com>.

(1) AAR Manual of Standards and Recommended Practices, Section C—Part III, Specifications for Tank Cars, Specification M-1002, (AAR Specifications for Tank Cars), December 2000, §§ 173.31; 179.6; 179.7; 179.15; 179.16; 179.20; 179.22; 179.24; 179.100-9; 179.100-10; 179.100-12; 179.100-13; 179.100-14; 179.100-18; 179.101-1; 179.102-1; 179.102-4; 179.102-17; 179.103-5; 179.200-7; 179.200-9; 179.200-10; 179.200-11; 179.200-13; 179.200-17; 179.200-22; 179.201-6; 179.220-6; 179.220-7; 179.220-10; 179.220-11; 179.220-14; 179.220-18; 179.220-26; 179.300-9; 179.300-10; 179.300-15; 179.300-17; 179.400-5; 179.400-6; 179.400-8; 179.400-11; 179.400-12; 179.400-15; 179.400-18; 179.400-20; 179.400-25; 180.503; 180.509; 180.513; 180.515; 180.517.

(2) AAR Manual of Standards and Recommended Practices, Section C—

49 CFR Ch. I (10-1-24 Edition)

III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Appendix E, Design Details, implemented April 2010; into §§ 179.202-9, and 179.202-12(f).

(3) AAR Manual of Standards and Recommended Practices, Section I, Specially Equipped Freight Car and Intermodal Equipment, 1988, into § 174.55; 174.63.

(4) AAR Specifications for Design, Fabrication and Construction of Freight Cars, Volume 1, 1988, into § 179.16.

(5) AAR Standard 286; AAR Manual of Standards and Recommended Practices, Section C, Car Construction Fundamentals and Details, Standard S-286, Free/Unrestricted Interchange for 286,000 lb Gross Rail Load Cars (Adopted 2002; Revised: 2003, 2005, 2006), into 179.13.

(1) *Chlorine Institute, Inc.*, 1300 Wilson Boulevard, Arlington, VA 22209.

(1) Chlorine Institute Emergency Kit “A” for 100-lb. & 150-lb. Chlorine Cylinders, Edition 12, Revision 2, January 2014, into § 173.3.

(2) Chlorine Institute Emergency Kit “B” for Chlorine Ton Containers, Edition 11, July 2014, into § 173.3.

(3) Type 1 JQ 225, Dwg., H51970, Revision F, November 1996, into § 173.315.

(4) Type 1 JQ 225, Dwg. H50155, Revision H, November 1996, into § 173.315.

(5) Pamphlet 57, Emergency Shut-Off Systems for Bulk Transfer of Chlorine, Edition 6, June 2015, into § 177.840.

(6) Section 3, Pamphlet 166, Angle Valve Guidelines for Chlorine Bulk Transportation, 1st Edition, October 2002, into § 178.337-9.

(7) Pamphlet 168, Guidelines for Dual Valve Systems for Bulk Chlorine Transport, Edition 2, July 2015, into § 178.337-9.

(8) Standard Chlorine Angle Valve Assembly, Dwg. 104-8, July 1993, into § 178.337-9.

(9) Excess Flow Valve with Removable Seat, Dwg. 101-7, July 1993, into § 178.337-8.

(10) Excess Flow Valve with Removable Basket, Dwg. 106-6, July 1993, into § 178.337-8.

(11) Standards for Housing and Manway Covers for Steel Cargo Tanks, Dwg. 137-1 and 137-2, September 1, 1982, into § 178.337-10.

(12) Typical Manway Arrangement Chlorine Cargo Tank, Dwg 137-5, November 1996, into 178.337-10.

(m) *Canadian General Standards Board*, Place du Portage III, 6B1 11 Laurier Street, Gatineau, Quebec, Canada K1A 1G6.

(1) National Standard of Canada (CAN/CGSB 43.147—2005) Construction, Modification, Qualification, Maintenance, and Selection and Use of Means of Containment for the Handling, Offering for Transport, or Transportation of Dangerous Goods by Rail, into § 171.12.

(2) [Reserved]

(n) *Compressed Gas Association (CGA)*, 8484 Westpark Drive, Suite 220, McLean, VA 22102; telephone 703-788-2700, www.cganet.com.

(1) CGA C-1—2016 (CGA C-1), Methods for Pressure Testing Compressed Gas Cylinders, Eleventh Edition, copyright 2016; into §§ 178.36; 178.37; 178.38; 178.39; 178.42; 178.44; 178.45; 178.46; 178.47; 178.50; 178.51; 178.53; 178.55; 178.56; 178.57; 178.58; 178.59; 178.60; 178.61; 178.65; 178.68; 180.205; 180.209.

(2) CGA C-3—2005 (Reaffirmed 2011) (CGA C-3), Standards for Welding on Thin-Walled Steel Cylinders, Seventh Edition, copyright 2005; into §§ 178.47; 178.50; 178.51; 178.53; 178.55; 178.56; 178.57; 178.58; 178.59; 178.60; 178.61; 178.65; 178.68; 180.211.

(3) CGA C-5 (CGA C-5), Cylinder Service Life—Seamless Steel High Pressure Cylinders, 1991 (Reaffirmed 1995); into § 173.302a.

(4) CGA C-6—2013 (CGA C-6), Standards for Visual Inspection of Steel Compressed Gas Cylinders, Eleventh Edition, copyright 2013; into §§ 172.102; 173.3; 173.198; 180.205; 180.209; 180.211; 180.411; 180.519.

(5) CGA C-6.1—2013 (CGA C-6.1), Standards for Visual Inspection of High Pressure Aluminum Compressed Gas Cylinders, Sixth Edition, copyright 2013 (corrected 4/14/2015); into §§ 180.205; 180.209.

(6) CGA C-6.2 (CGA C-6.2), Guidelines for Visual Inspection and Requalification of Fiber Reinforced High Pressure Cylinders, Third Edition, 1996; into § 180.205.

(7) CGA C-6.3—2013 (CGA C-6.3), Standard for Visual Inspection of Low Pressure Aluminum Alloy Compressed

Gas Cylinders, Third Edition, copyright 2013; into §§ 180.205; 180.209.

(8) CGA C-7—2020 (CGA C-7), Guide to Classification and Labeling of Compressed Gases; Eleventh Edition, 2020 (corrected May 6, 2020); into § 172.400a.

(9) CGA C-8 (CGA C-8), Standard for Requalification of DOT-3HT Cylinder Design, 1985; into §§ 180.205; 180.209.

(10) CGA C-11—2013 (CGA C-11), Practices for Inspection of Compressed Gas Cylinders at Time of Manufacture, Fifth Edition, copyright 2013; into § 178.35.

(11) CGA C-12 (CGA C-12), Qualification Procedure for Acetylene Cylinder Design, 1994; into §§ 173.301; 173.303; 178.59; 178.60.

(12) CGA C-13 (CGA C-13), Guidelines for Periodic Visual Inspection and Requalification of Acetylene Cylinders, Fourth Edition, 2000; into §§ 173.303; 180.205; 180.209.

(13) CGA C-14—2005 (Reaffirmed 2010) (CGA C-14), Procedures for Fire Testing of DOT Cylinder Pressure Relief Device Systems, Fourth Edition, copyright 2005; into §§ 173.301; 173.323.

(14) CGA C-20—2014 (CGA C-20), Requalification Standard for Metallic, DOT and TC 3-series Gas Cylinders and Tubes Using Ultrasonic Examination, Second Edition, 2014; into § 180.205.

(15) CGA C-23—2018 (CGA C-23), Standard for Inspection of DOT/TC 3 Series and ISO 11120, Tube Neck Mounting Surfaces, Second Edition, 2018; into §§ 180.205; 180.207.

(16) CGA C-27—2019 (CGA C-27), Standard Procedure to Derate the Service Pressure of DOT Series Seamless Steel Tubes, First Edition, 2019; into § 180.212.

(17) CGA C-29—2019, (Formerly TB-25) (CGA C-29), Standard for Design Requirements for Tube Trailers and Tube Modules, First Edition, 2019; into § 173.301.

(18) CGA G-1.6—2011 (CGA G-1.6), Standard for Mobile Acetylene Trailer Systems, Seventh Edition, copyright 2011; into § 173.301.

(19) CGA G-2.2 (CGA G-2.2), Guideline Method for Determining Minimum of 0.2% Water in Anhydrous Ammonia, Second Edition, 1985 (Reaffirmed 1997); into § 173.315.

§ 171.7

49 CFR Ch. I (10–1–24 Edition)

(20) CGA G–4.1 (CGA G–4.1), Cleaning Equipment for Oxygen Service, 1985; into §178.338–15.

(21) CGA P–20 (CGA P–20), Standard for the Classification of Toxic Gas Mixtures, Third Edition, 2003; into §173.115.

(22) CGA S–1.1–2011 (CGA S–1.1), Pressure Relief Device Standards—Part 1—Cylinders for Compressed Gases; Fourteenth Edition, copyright 2011; into §§173.301; 173.304a; 178.75.

(23) CGA S–1.2 (CGA S–1.2), Safety Relief Device Standards Part 2—Cargo and Portable Tanks for Compressed Gases, 1980; into §§173.315; 173.318; 178.276; 178.277.

(24) CGA S–7—2013 (CGA S–7), Standard for Selecting Pressure Relief Devices for Compressed Gas Mixtures in Cylinders, Fifth Edition, copyright 2013; into §173.301.

(25) CGA Technical Bulletin TB–2, Guidelines for Inspection and Repair of MC–330 and MC–331 Cargo Tanks, 1980; into §§180.407; 180.413.

(26) CGA Technical Bulletin TB–25 (CGA TB–25), Design Considerations for Tube Trailers, 2008 Edition; into §173.301.

(27) CGA V–9—2019, Compressed Gas Association Standard for Compressed Cylinder Valves, Eighth Edition, 2019; into §173.301.

(o) *Department of Defense (DoD)*, DoD Explosives Safety Board, 4800 Mark Center Drive, Suite 16E12, Alexandria, VA 22350, <https://www.ddesb.pentagon.mil/>; or Defense Logistics Agency, Technical and Quality Assurance Division, 8725 John J. Kingman Rd., Fort Belvoir, VA 22060, <http://www.dla.mil/Pages/default.aspx>.

(1) TB 700–2; NAVSEAINST 8020.8C/TO 11A–1–47; DOD Ammunition and Explosives Hazard Classification Procedures, July 30, 2012, into §173.56.

(2) DLAR 4145.41/AR 700–143/NAVSUPINST 4030.55D/AFMAN 24–210 IP/MCO 4030.40C: Packaging of Hazardous Material, April 21, 2015, into §173.7.

(p) *European Union. Rue de la Loi/Welstraat, 175B–1048 Bruxelles/Brussel Belgique/België*, https://europa.eu/european-union/documents-publications_en.

(1) Directive 2010/35/EU of the European Parliament and of the Council, “on transportable pressure equipment and repealing Council Directives 76/767/

EEC, 84/525/EEC, 84/526/EEC, 84/527/EEC and 1999/36/EC”, June 16, 2010, into §171.23.

(2) [Reserved]

(q) *General Services Administration*, Specification Office, Room 6662, 7th and D Street, S.W., Washington, DC 20407.

(1) Federal Specification RR–C–901D, Cylinders, Compressed Gas: Seamless Shatterproof, High Pressure DOT 3AA Steel, and 3AL Aluminum, February 21, 2003, into §§173.302; 173.336; 173.337.

(2) [Reserved]

(r) *Institute of Makers of Explosives (IME)*, 1212 New York Avenue NW, #650, Washington, DC 20005, Phone: 202–429–9280.

(1) IME SLP–22, Recommendations for the Safe Transportation of Detonators in a Vehicle with Certain Other Explosive Materials, 2019, (IME Standard 22); into §§173.63; 177.835.

(2) IME SLP–23, Recommendations for the Transportation of Explosives, Division 1.5, Ammonium Nitrate Emulsions, Division 5.1, Combustible Liquids, Class 3, and Corrosives, Class 8 in Bulk Packaging, March 2021, (IME Standard 23); into §§172.102 173.66; 173.251; 177.835.

(s) *International Atomic Energy Agency (IAEA)*, P.O. Box 100, Wagramer Strasse 5, A–1400 Vienna, Austria. Also available from: Bernan Associates, 4611–F Assembly Drive, Lanham, MD 20706–4391, USA; or Renouf Publishing Company, Ltd., 812 Proctor Avenue, Ogdensburg, New York 13669, USA.

(1) IAEA Safety Standards for Protecting People and the Environment; Regulations for the Safe Transport of Radioactive Material, Specific Safety Requirements No. SSR–6 (Rev.1), (IAEA Regulations), 2018 Edition, copyright 2018; into §§171.22; 171.23; 171.26; 173.415 through 173.417; 173.435; 173.473.

(2) Code of Conduct on the Safety and Security of Radioactive Sources (International Atomic Energy Agency Code of Conduct), copyright 2004, into §172.800.

(t) *International Civil Aviation Organization (“ICAO”)*, 999 Robert-Bourassa Boulevard, Montréal, Quebec H3C 5H7, Canada, 1–514–954–8219, <http://www.icao.int>. ICAO Technical Instructions available from: ICAO Document Sales Unit, sales@icao.int.

(1) ICAO Doc 9284 Technical Instructions for the Safe Transport of Dangerous Goods by Air, 2023–2024 Edition, 2022; into §§ 171.8; 171.22 through 171.24; 172.101; 172.202; 172.401; 172.407; 172.512; 172.519; 172.602; 173.56; 173.320; 175.10; 175.33; 178.3.

(2) [Reserved]

(u) International Electrotechnical Commission (IEC), 3 rue de Varembé, P.O. Box 131, CH—1211, GENEVA 20, Switzerland.

(1) IEC 62282–6–100:2010(E), Fuel cell technologies—Part 6–100: Micro fuel cell power systems—Safety, Edition 1.0, March 2010, into §§ 173.230; 175.10.

(2) 62282–6–100 Amend. 1 IEC 2012(E), Amendment 1 to IEC 62282–6–100: Fuel cell technologies—Part 6–100: Micro fuel cell power systems—Safety, Edition 1.0, October 2012, into §§ 173.230; 175.10

(v) *International Maritime Organization* (“IMO”), 4 Albert Embankment, London, SE1 7SR, United Kingdom, + 44 (0) 20 7735 7611, <http://www.imo.org>. IMDG Code available from: IMO Publishing, sales@imo.org.

(1) International Convention for the Safety of Life at Sea, 1974, Consolidated Edition (SOLAS), Chapter II–2, Construction—Fire protection, fire detection and fire extinction, Regulation 19, Carriage of dangerous goods, Fifth Edition 2009, into §§ 176.63, 176.84.

(2) International Maritime Dangerous Goods Code (IMDG Code), Incorporating Amendment 41–22 (English Edition), 2022 Edition; 2022; into §§ 171.22; 171.23; 171.25; 172.101; 172.202; 172.203; 172.401; 172.407; 172.502; 172.519; 172.602; 173.21; 173.56; 176.2; 176.5; 176.11; 176.27; 176.30; 176.83; 176.84; 176.140; 176.720; 176.906; 178.3; 178.274.

(i) Volume 1, Incorporating Amendment 41–22 (Vol. 1).

(ii) Volume 2, Incorporating Amendment 41–22 (Vol. 2).

(w) *International Organization for Standardization*, Case Postale 56, CH–1211, Geneve 20, Switzerland, <http://www.iso.org>. Also available from: ANSI 25, West 43rd Street, New York, NY 10036, 1–212–642–4900, <http://www.ansi.org>.

(1) ISO 535–1991(E) Paper and board—Determination of water absorptiveness—Cobb method, 1991, into §§ 178.707; 178.708; 178.516.

(2) ISO 1496–1: 1990 (E)—Series 1 freight containers—Specification and testing, Part 1: General cargo containers. Fifth Edition, (August 15, 1990), into § 173.411.

(3) ISO 1496–3(E)—Series 1 freight containers—Specification and testing—Part 3: Tank containers for liquids, gases and pressurized dry bulk, Fourth edition, March 1995, into §§ 178.74; 178.75; 178.274.

(4) ISO 1516:2002(E), Determination of flash/no flash—Closed cup equilibrium method, Third Edition, 2002–03–01, into § 173.120.

(5) ISO 1523:2002(E), Determination of flash point—Closed cup equilibrium method, Third Edition, 2002–03–01, into § 173.120.

(6) ISO 2431–1984(E) Standard Cup Method, 1984, into § 173.121.

(7) ISO 2592:2000(E), Determination of flash and fire points—Cleveland open cup method, Second Edition, 2000–09–15, into § 173.120.

(8) ISO 2719:2002(E), Determination of flash point—Pensky-Martens closed cup method, Third Edition, 2002–11–15, into § 173.120.

(9) ISO 2919:1999(E), Radiation Protection—Sealed radioactive sources—General requirements and classification, (ISO 2919), second edition, February 15, 1999, into § 173.469.

(10) ISO 3036–1975(E) Board—Determination of puncture resistance, 1975, into § 178.708.

(11) ISO 3405:2000(E), Petroleum products—Determination of distillation characteristics at atmospheric pressure, Third Edition, 2000–03–01, into § 173.121.

(12) ISO 3574–1986(E) Cold-reduced carbon steel sheet of commercial and drawing qualities, into § 178.503; part 178, appendix C.

(13) ISO 3679:2004(E), Determination of flash point—Rapid equilibrium closed cup method, Third Edition, 2004–04–01, into § 173.120.

(14) ISO 3680:2004(E), Determination of flash/no flash—Rapid equilibrium closed cup method, Fourth Edition, 2004–04–01, into § 173.120.

(15) ISO 3807–2(E), Cylinders for acetylene—Basic requirements—Part 2: Cylinders with fusible plugs, First edition, March 2000, into §§ 173.303; 178.71.

§ 171.7

49 CFR Ch. I (10–1–24 Edition)

(16) ISO 3807:2013(E), Gas cylinders—Acetylene cylinders—Basic requirements and type testing, Second edition, 2013–09–01, into §§173.303; 178.71.

(17) ISO 3924:1999(E), Petroleum products—Determination of boiling range distribution—Gas chromatography method, Second Edition, 1999–08–01, into §173.121.

(18) ISO 4126–1:2004(E): Safety devices for protection against excessive pressure—Part 1: Safety valves, Second edition 2004–02–15, into §178.274.

(19) ISO 4126–7:2004(E): Safety devices for protection against excessive pressure—Part 7: Common data, First Edition 2004–02–15 into §178.274.

(20) ISO 4126–7:2004/Cor.1:2006(E): Safety devices for protection against excessive pressure—Part 7: Common data, Technical Corrigendum 1, 2006–11–01, into §178.274.

(21) ISO 4626:1980(E), Volatile organic liquids—Determination of boiling range of organic solvents used as raw materials, First Edition, 1980–03–01, into §173.121.

(22) ISO 4706:2008(E), Gas cylinders—Refillable welded steel cylinders—Test pressure 60 bar and below, First Edition, 2008–04–15, Corrected Version, 2008–07–01, into §178.71.

(23) ISO 6406(E), Gas cylinders—Seamless steel gas cylinders—Periodic inspection and testing, Second edition, February 2005, into §180.207.

(24) ISO 6892 Metallic materials—Tensile testing, July 15, 1984, First Edition, into §178.274.

(25) ISO 7225(E), Gas cylinders—Precautionary labels, Second Edition, July 2005, into §178.71.

(26) ISO 7866(E), Gas cylinders—Refillable seamless aluminum alloy gas cylinders—Design, construction and testing, First edition, June 1999, into §178.71.

(27) ISO 7866:2012(E), Gas cylinders—Refillable seamless aluminium alloy gas cylinders—Design, construction and testing, Second edition, 2012–09–01, into §178.71.

(28) ISO 7866:2012/Cor.1:2014(E), Gas cylinders — Refillable seamless aluminium alloy gas cylinders — Design, construction and testing, Technical Corrigendum 1, 2014–04–15, into §178.71.

(29) ISO 8115 Cotton bales—Dimensions and density, 1986 Edition, into §172.102.

(30) ISO 9809–1:1999(E): Gas cylinders—Refillable seamless steel gas cylinders—Design, construction and testing—Part 1: Quenched and tempered steel cylinders with tensile strength less than 1100 MPa., First edition, June 1999, into §§178.37; 178.71; 178.75.

(31) ISO 9809–1:2010(E): Gas cylinders—Refillable seamless steel gas cylinders—Design, construction and testing—Part 1: Quenched and tempered steel cylinders with tensile strength less than 1 100 MPa., Second edition, 2010–04–15, into §§178.37; 178.71; 178.75.

(32) ISO 9809–1:2019(E), Gas cylinders—Design, construction and testing of refillable seamless steel gas cylinders and tubes—Part 1: Quenched and tempered steel cylinders and tubes with tensile strength less than 1100 MPa., Third edition, 2019–08; into §§178.37; 178.71; 178.75.

(33) ISO 9809–2:2000(E): Gas cylinders—Refillable seamless steel gas cylinders—Design, construction and testing—Part 2: Quenched and tempered steel cylinders with tensile strength greater than or equal to 1 100 MPa., First edition, June 2000; into §§178.71; 178.75.

(34) ISO 9809–2:2010(E): Gas cylinders—Refillable seamless steel gas cylinders—Design, construction and testing—Part 2: Quenched and tempered steel cylinders with tensile strength greater than or equal to 1100 MPa., Second edition, 2010–04; into §§178.71; 178.75.

(35) ISO 9809–2:2019(E): Gas cylinders—Design, construction and testing of refillable seamless steel gas cylinders and tubes—Part 2: Quenched and tempered steel cylinders and tubes with tensile strength greater than or equal to 1100 MPa., Third edition, 2019–08; into §§178.71; 178.75.

(36) ISO 9809–3:2000(E): Gas cylinders—Refillable seamless steel gas cylinders—Design, construction and testing—Part 3: Normalized steel cylinders, First edition, December 2000; into §§178.71; 178.75.

(37) ISO 9809–3:2010(E): Gas cylinders—Refillable seamless steel gas

cylinders—Design, construction and testing—Part 3: Normalized steel cylinders, Second edition, 2010-04; into §§ 178.71; 178.75.

(38) ISO 9809-3:2019(E), Gas cylinders—Design, construction and testing of refillable seamless steel gas cylinders and tubes—Part 3: Normalized steel cylinders and tubes, Third edition, 2019-08; into §§ 178.71; 178.75

(39) ISO 9809-4:2014(E), Gas cylinders—Refillable seamless steel gas cylinders—Design, construction, and testing—Part 4: Stainless steel cylinders with an Rm value of less than 1 100 MPa, First edition, 2014-07; into §§ 178.71; 178.75.

(40) ISO 9978:1992(E), Radiation protection—Sealed radioactive sources—Leakage test methods. First edition, (February 15, 1992); into § 173.469.

(41) ISO 10156:2017(E), Gas cylinders—Gases and gas mixtures—Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets, Fourth edition, 2017-07; into § 173.115.

(42) ISO 10297:1999(E), Gas cylinders—Refillable gas cylinder valves—Specification and type testing. First edition, 1995-05; into §§ 173.301b; 178.71.

(43) ISO 10297:2006(E), Transportable gas cylinders—Cylinder valves—Specification and type testing. Second edition, 2006-01; into §§ 173.301b; 178.71.

(44) ISO 10297:2014(E), Gas cylinders—Cylinder valves—Specification and type testing. Third edition, 2014-07; into §§ 173.301b; 178.71.

(45) ISO 10297:2014/Amd 1:2017(E), Gas cylinders—Cylinder valves—Specification and type testing—Amendment 1: Pressure drums and tubes, Third edition, 2017-03; into §§ 173.301b; 178.71.

(46) ISO 10461:2005(E), Gas cylinders—Seamless aluminum-alloy gas cylinders—Periodic inspection and testing, Second Edition, 2005-02 and Amendment 1, 2006-07; into § 180.207.

(47) ISO 10462:2013(E), Gas cylinders—Acetylene cylinders—Periodic inspection and maintenance, Third edition, 2013-12-15; into § 180.207.

(48) ISO 10462:2013/Amd 1:2019(E), “Gas cylinders—Acetylene cylinders—Periodic inspection and maintenance, Third edition, 2013-12-15, Amendment 1, 2019-06; into § 180.207.

(49) ISO 10692-2:2001(E), Gas cylinders—Gas cylinder valve connections for use in the micro-electronics industry—Part 2: Specification and type testing for valve to cylinder connections, First edition, 2001-08; into §§ 173.40; 173.302c.

(50) ISO 11114-1:2012(E), Gas cylinders—Compatibility of cylinder and valve materials with gas contents—Part 1: Metallic materials, Second edition, 2012-03; into §§ 172.102; 173.301b; 178.71.

(51) ISO 11114-1:2012/Amd 1:2017(E), Gas cylinders—Compatibility of cylinder and valve materials with gas contents—Part 1: Metallic materials—Amendment 1, Second edition, 2017-01; into §§ 172.102, 173.301b, 178.71.

(52) ISO 11114-2:2013(E), Gas cylinders—Compatibility of cylinder and valve materials with gas contents—Part 2: Non-metallic materials, Second edition, 2013-04; into §§ 173.301b; 178.71.

(53) ISO 11117:1998(E): Gas cylinders—Valve protection caps and valve guards for industrial and medical gas cylinders—Design, construction, and tests, First edition, 1998-08-01; into § 173.301b.

(54) ISO 11117:2008(E): Gas cylinders—Valve protection caps and valve guards—Design, construction, and tests, Second edition, 2008-09; into § 173.301b.

(55) ISO 11117:2008/Cor.1:2009(E): Gas cylinders—Valve protection caps and valve guards—Design, construction, and tests, Technical Corrigendum 1, 2009-05; into § 173.301b.

(56) ISO 11117:2019(E), “Gas cylinders—Valve protection caps and guards—Design, construction and tests, 2019-11; into § 173.301b

(57) ISO 11118(E), Gas cylinders—Non-refillable metallic gas cylinders—Specification and test methods, First edition, October 1999; into § 178.71.

(58) ISO 11118:2015(E), Gas cylinders—Non-refillable metallic gas cylinders—Specification and test methods, Second edition, 2015-09; into §§ 173.301b; 178.71.

(59) ISO 11118:2015/Amd 1:2019(E), Gas cylinders—Non-refillable metallic gas cylinders—Specification and test methods, Second edition, 2015-09-15—Amendment 1, 2019-10; into §§ 173.301b; 178.71.

§ 171.7

49 CFR Ch. I (10–1–24 Edition)

(60) ISO 11119-1(E), Gas cylinders—Gas cylinders of composite construction—Specification and test methods—Part 1: Hoop-wrapped composite gas cylinders, First edition, May 2002, into § 178.71.

(61) ISO 11119-1:2012(E), Gas cylinders—Refillable composite gas cylinders and tubes—Design, construction, and testing—Part 1: Hoop wrapped fibre reinforced composite gas cylinders and tubes up to 450 L, Second edition, 2012-08; into §§ 178.71; 178.75.

(62) ISO 11119-2(E), Gas cylinders—Gas cylinders of composite construction—Specification and test methods—Part 2: Fully wrapped fibre reinforced composite gas cylinders with load-sharing metal liners, First edition, May 2002; into § 178.71.

(63) ISO 11119-2:2012(E), Gas cylinders—Refillable composite gas cylinders and tubes—Design, construction, and testing—Part 2: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with load-sharing metal liners, Second edition, 2012-07; into §§ 178.71; 178.75.

(64) ISO 11119-2:2012/Amd.1:2014(E), Gas cylinders—Refillable composite gas cylinders and tubes—Design, construction and testing—Part 2: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with load-sharing metal liners, Amendment 1, 2014-08; into §§ 178.71; 178.75.

(65) ISO 11119-3(E), Gas cylinders of composite construction—Specification and test methods—Part 3: Fully wrapped fibre reinforced composite gas cylinders with non-load-sharing metallic or non-metallic liners, First edition, September 2002; into § 178.71.

(66) ISO 11119-3:2013(E), Gas cylinders—Refillable composite gas cylinders and tubes—Design, construction and testing—Part 3: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with non-load-sharing metallic or non-metallic liners, Second edition, 2013-04; into §§ 178.71; 178.75.

(67) ISO 11119-4:2016(E), Gas cylinders—Refillable composite gas cylinders—Design, construction, and testing—Part 4: Fully wrapped fibre reinforced composite gas cylinders up to 150 l with load-sharing welded metallic

liners, First edition, 2016-02; into § 178.71; 178.75.

(68) ISO 11120(E), Gas cylinders—Refillable seamless steel tubes of water capacity between 150 l and 3000 l—Design, construction, and testing, Second Edition, 1999-03; into §§ 178.71; 178.75.

(69) ISO 11120:2015(E), Gas cylinders—Refillable seamless steel tubes of water capacity between 150 l and 3000 l—Design, construction, and testing, Second edition, 2015-02; into §§ 178.71; 178.75.

(70) ISO 11513:2011(E), Gas cylinders—Refillable welded steel cylinders containing materials for sub-atmospheric gas packaging (excluding acetylene)—Design, construction, testing, use, and periodic inspection, First edition, 2011-09; into §§ 173.302c; 178.71; 180.207.

(71) ISO 11513:2019(E), Gas cylinders—Refillable welded steel cylinders containing materials for sub-atmospheric gas packaging (excluding acetylene)—Design, construction, testing, use, and periodic inspection, Second edition, 2019-09; into §§ 173.302c; 178.71; 180.207.

(72) ISO 11621(E), Gas cylinders—Procedures for change of gas service, First edition, April 1997; into §§ 173.302, 173.336, 173.337.

(73) ISO 11623(E), Transportable gas cylinders—Periodic inspection and testing of composite gas cylinders, First edition, March 2002; into § 180.207.

(74) ISO 11623:2015(E), Gas cylinders—Composite construction—Periodic inspection and testing, Second edition, 2015-12; into § 180.207.

(75) ISO 13340:2001(E), Transportable gas cylinders—Cylinder valves for non-refillable cylinders—Specification and prototype testing, First edition, 2004-04; into § 178.71.

(76) ISO 13736:2008(E), Determination of flash point—Abel closed-cup method, Second Edition, 2008-09; into § 173.120.

(77) ISO 14246:2014(E), Gas cylinders—Cylinder valves—Manufacturing tests and examination, Second Edition, 2014-06; into § 178.71.

(78) ISO 14246:2014/Amd 1:2017(E), Gas cylinders—Cylinder valves—Manufacturing tests and examinations—Amendment 1, Second edition, 2017-06; into § 178.71.

(79) ISO 16111:2008(E), Transportable gas storage devices—Hydrogen absorbed in reversible metal hydride,

First edition, 2008–11; into §§173.301b; 173.311; 178.71.

(80) ISO 16111:2018(E), Transportable gas storage devices—Hydrogen absorbed in reversible metal hydride, Second edition, 2018–08; into §§173.301b; 173.311; 178.71.

(81) ISO 16148:2016(E), Gas cylinders—Refillable seamless steel gas cylinders and tubes—Acoustic emission examination (AT) and follow-up ultrasonic examination (UT) for periodic inspection and testing, Second edition, 2016–04; into §180.207.

(82) ISO 17871:2015(E), Gas cylinders—Quick-release cylinder valves—Specification and type testing, First edition, 2015–08; into §173.301b.

(83) ISO 17871:2020(E), Gas cylinders—Quick-release cylinder valves—Specification and type testing, Second edition, 2020–07; into §173.301b.

(84) ISO 17879:2017(E), Gas cylinders—Self-closing cylinder valves—Specification and type testing, First edition, 2017–07; into §§173.301b; 178.71.

(85) ISO 18172-1:2007(E), Gas cylinders—Refillable welded stainless steel cylinders—Part 1: Test pressure 6 MPa and below, First Edition, 2007–03–01; into §178.71.

(86) ISO 20475:2018(E), Gas cylinders—Cylinder bundles—Periodic inspection and testing, First edition, 2018–02; into §180.207.

(87) ISO 20703:2006(E), Gas cylinders—Refillable welded aluminum-alloy cylinders—Design, construction, and testing, First Edition, 2006–05; into §178.71.

(88) ISO 21172-1:2015(E), Gas cylinders—Welded steel pressure drums up to 3,000 litres capacity for the transport of gases—Design and construction—Part 1: Capacities up to 1000 litres, First edition, 2015–04; into §178.71.

(89) ISO 21172-1:2015/Amd 1:2018(E), Gas cylinders—Welded steel pressure drums up to 3000 litres capacity for the transport of gases—Design and construction—Part 1: Capacities up to 1000 litres, First edition, 2015–04–01, Amendment 1, 2018–11; into §178.71.

(90) ISO 22434:2006(E), Transportable gas cylinders—Inspection and maintenance of cylinder valves, First edition, 2006–09; into §180.207.

(91) ISO 23088:2020, Gas cylinders—Periodic inspection and testing of

welded steel pressure drums—Capacities up to 1000 l, First edition, 2020–02; into §180.207.

(92) ISO/TR 11364:2012(E), Gas cylinders—Compilation of national and international valve stem/gas cylinder neck threads and their identification and marking system, First edition, 2012–12; into §178.71.

(x) *National Board of Boiler and Pressure Vessel Inspectors*, 1055 Crupper Avenue, Columbus, Ohio 43229.

(1) NB–23, National Board Inspection Code, A Manual for Boiler and Pressure Vessel Inspectors, 1992 Edition, into §180.413.

(2) [Reserved]

(y) *National Fire Protection Association*, 1 Batterymarch Park, Quincy, MA, 02169–7471 1–617–770–3000, <http://www.nfpa.org>.

(1) NFPA 58–Liquefied Petroleum Gas Code, 2001 Edition, into §§173.5, 173.315, 173.301(a)(11).

(2) NFPA 498–Standards for Safe Havens and Interchange Lots for Vehicles Transporting Explosives, 2010 Edition, into §177.835.

(z) *National Institute of Standards and Technology*, Department of Commerce, 5285 Port Royal Road, Springfield, VA 22151.

(1) USDC, NBS Handbook H–28 (1957), 1957 Handbook of Screw-Thread Standards for Federal Services, December 1966 Edition, into §§179.2; 178.45; 178.46.

(2) [Reserved]

(aa) *Organization for Economic Cooperation and Development (OECD)*, OECD Publications and Information Center, 2001 L Street NW, Suite 700, Washington, DC 20036; (+33 1 45 24 82 00, <https://www.oecd.org/>).

(1) Test No. 404: Acute Dermal Irritation/Corrosion, OECD Guidelines for the Testing of Chemicals, adopted 28 July 2015, into §173.137.

(2) Test No. 430: In Vitro Skin Corrosion: Transcutaneous Electrical Resistance Test (TER), OECD Guidelines for the Testing of Chemicals, adopted 28 July 2015, into §173.137.

(3) Test No. 439: *In Vitro* Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method, OECD Guidelines for the Testing of Chemicals, 29 July 2015; into §173.137.

§ 171.7

(4) Test No. 435: In Vitro Membrane Barrier Test Method for Skin Corrosion, OECD Guidelines for the Testing of Chemicals, adopted 28 July 2015, into § 173.137.

(bb) *Transport Canada*, Transport Dangerous Goods. Mailstop: ASD 330 Sparks Street, Ottawa, Ontario, Canada K1A 0N5, 416-973-1868, <http://www.tc.gc.ca>.

(1) Transportation of Dangerous Goods Regulations (Transport Canada TDG Regulations), into §§ 107.801; 107.805; 171.12; 171.22; 171.23; 172.401; 172.407; 172.502; 172.519; 172.602; 173.31; 173.32; 173.33; 173.301; 180.205; 180.211; 180.212; 180.413.

(i) SOR 2001-286, including Clear Language Amendments, August 2001.

(ii) SOR/2002-306 August 8, 2002.

(iii) SOR/2003-273 July 24, 2003

(iv) SOR/2003-400 December 3, 2003

(v) SOR/2005-216 July 13, 2005

(vi) SOR/2005-279 September 21, 2005

(vii) SOR/2008-34 February 7, 2008

(viii) SOR/2007-179 July 31, 2007

(ix) SOR/2011-239 November 9, 2011.

(x) SOR/2011-60 March 16, 2011.

(xi) SOR/2011-210 October 12, 2011.

(xii) SOR/2012-245 December 5, 2012.

(xiii) SOR/2014-152 July 2, 2014.

(xiv) SOR/2014-159 July 2, 2014.

(xv) SOR/2014-159 Erratum July 16, 2014.

(xvi) SOR/2014-152 Erratum August 27, 2014.

(xvii) SOR/2014-306 December 31, 2014.

(xviii) SOR/2014-306 Erratum January 28, 2015.

(xix) SOR/2015-100 May 20, 2015.

(xx) SOR/2016-95 June 1, 2016;

(xxi) SOR/2017-137 July 12, 2017.

(xxii) SOR/2017-253 December 13, 2017.

(2) Containers for Transport of Dangerous Goods by Rail, TP 14877E, 12/2013, into § 171.12.

(cc) *Truck Trailer Manufacturers Association*, 1020 Princess Street, Alexandria, Virginia 22314.

(1) TTMA RP No. 61-98, Performance of manhole and/or Fill Opening Assemblies on MC 306, DOT 406, Non-ASME MC 312 and Non-ASME DOT 412 Cargo Tanks, June 1, 1998, into § 180.405.

49 CFR Ch. I (10-1-24 Edition)

(2) TTMA RP No. 81-97, Performance of Spring Loaded Pressure Relief Valves on MC 306, MC 307, MC 312, DOT 406, DOT 407, and DOT 412 Tanks, July 1, 1997 Edition, into §§ 178.345-10; 178.346-3.

(3) TTMA TB No. 107, Procedure for Testing In-Service Unmarked and/or Uncertified MC 306 and Non-ASME MC 312 Type Cargo Tank Manhole Covers, June 1, 1998 Edition, into § 180.405.

(dd) *United Nations*, Bookshop, GA-1B-103, New York, NY 10017, 1-212-963-7680, <https://shop.un.org> or bookshop@un.org.

(1) UN Recommendations on the Transport of Dangerous Goods, Model Regulations (UN Recommendations), 22nd revised edition, (2021); into §§ 171.8; 171.12; 172.202; 172.401; 172.407; 172.502; 172.519; 173.22; 173.24; 173.24b; 173.40; 173.56; 173.192; 173.302b; 173.304b; 178.75; 178.274 as follows:

(i) Volume I, ST/SG/AC.10/1/Rev.22 (Vol. I).

(ii) Volume II, ST/SG/AC.10/1/Rev.22 (Vol. II).

(2) Manual of Tests and Criteria; into §§ 171.24, 172.102; 173.21; 173.56; 173.57; 173.58; 173.60; 173.115; 173.124; 173.125; 173.127; 173.128; 173.137; 173.185; 173.220; 173.221; 173.224; 173.225; 173.232; part 173, appendix H; 175.10; 176.905; 178.274 as follows:

(i) Seventh revised edition (2019).

(ii) Seventh Revised Edition, Amendment 1 (2021).

(3) Globally Harmonized System of Classification and Labelling of Chemicals (GHS), 9th Revised Edition, ST/SG/AC.10/30/Rev.9 (2021); into § 172.401.

(4) Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), copyright 2020; into §§ 171.8; 171.23 as follows:

(i) Volume I, ECE/TRANS/300 (Vol. I).

(ii) Volume II, ECE/TRANS/300 (Vol. II).

(iii) Corrigendum, ECE/TRANS/300 (Corr. 1).

(5) UN/SCETDG/55/INF.27, United Nations' Recommendations on Test Series 8: Applicability of Test Series 8(d), June 14, 2019; into § 172.102(c)(1), special provision 148.

TABLE 1 TO 49 CFR 171.7—MATERIALS NOT INCORPORATED BY REFERENCE

Source and name of material	49 CFR reference
<i>American Biological Safety Association</i> 1202 Allanson Road, Mundelein, IL 60060: Risk Group Classification for Infectious Agents, 1998	173.134.
<i>American Institute of Chemical Engineers (AIChE)</i> , 3 Park Avenue New York, NY 10016–5991: Process Safety Progress Journal, Vol. 21, No. 2, Example of a Test Method for Venting Sizing: OPPSD/SPI Methodology.	Note to § 173.225(h)(3)(vi).
<i>American Society for Testing and Materials</i> , 100 Barr Harbor Drive, West Conshohocken, PA 19428 (Noncurrent ASTM Standards are available from: Engineering Societies Library, 354 East 47th Street, New York, NY 10017): ASTM E 380–89 Standards for Metric Practice	171.10
<i>Association of American Railroads</i> , American Railroads Building, 50 F Street, NW., Washington, DC 20001: AAR Catalog Nos. SE60CHT; SE60CC; SE60CHTE; SE60CE; SE60DC; SE60DE	179.14
AAR Catalog Nos. SE67CC; SE67CE; SE67BHT; SE67BC; SE67BHTE; SE67BE	179.14
AAR Catalog Nos. SE68BHT; SE68BC; SE68BHTE; SE68BE	179.14
AAR Catalog Nos. SE69AHT; SE69AE	179.14
AAR Catalog Nos. SF70CHT; SF70CC; SF70CHTE; SF70CE	179.14
AAR Catalog Nos. SF73AC; SF73AE; SF73AHT; SF73AHTE	179.14
AAR Catalog Nos. SF79CHT; SF79CC; SF79CHTE; SF79CE	179.14
<i>Bureau of Explosives</i> , Hazardous Materials Systems (BOE), Association of American Railroads, American Railroads Building, 50 F Street NW., Washington, DC 20001: Fetterley's Formula (The Determination of the Relief Dimensions for Safety Valves on Containers in which Liquefied gas is charged and when the exterior surface of the container is exposed to a temperature of 1,200 °F.).	173.315
Intermodal Loading Guide for Products in Closed Trailers and Containers, issued June 2001.	174.55; 174.101; 174.112; 174.115.
Pamphlet 6, Illustrating Methods for Loading and Bracing Carload and Less-Than-Carload Shipments of Explosives and Other Dangerous Articles, 1962.	174.55; 174.101; 174.112; 174.115; 174.290.
Pamphlet 6A (includes appendix No. 1, October 1944 and appendix 2, December 1945), Illustrating Methods for Loading and Bracing Carload and Less-Than-Carload Shipments of Loaded Projectiles, Loaded Bombs, etc., 1943.	174.101; 174.290
Pamphlet 6C, Illustrating Methods for Loading and Bracing Trailers and Less-Than-Trailer Shipments of Explosives and Other Dangerous Articles Via Trailer-on-Flatcar (TOFC) or Container-on-Flatcar (COFC), 1985.	174.55; 174.63; 174.101; 174.112; 174.115
Emergency Handling of Hazardous Materials in Surface Transportation, 1989	171.7
<i>Centers for Disease Control and Prevention</i> 1600 Clifton Road, Atlanta, GA 30333: Biosafety in Microbiological and Biomedical Laboratories, Fourth Edition, April 1999 ...	173.134
<i>Department of Commerce</i> , 1401 Constitution Ave. NW, Washington, DC 20230: Federal Standard H–28, Screw-Thread Standards for Federal Services	180.212
<i>National Institutes of Health</i> Bethesda, MD 20892: NIH Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines), January 2001, Appendix B.	173.134
<i>Pantone Incorporated</i> 590 Commerce Boulevard, Carlstadt, New Jersey 07072–3098: Pantone ®Formula guide coated/uncoated, Second Edition 2004	172.407, 172.519
<i>Society of Plastics Industries, Inc.</i> , Organic Peroxide Producers Safety Division, 1275 K Street NW., Suite 400, Washington, DC 20005: Self Accelerating Decomposition Temperature Test, 1972	173.21
<i>The Sulphur Institute</i> , 1020 19th St. NW., Suite 520, Washington, DC 20036. Molten Sulphur Rail Tank Car Guidance document, November 2010	172.102
<i>Truck Trailer Manufacturers Association</i> , 1020 Princess Street, Alexandria, Virginia 22314, telephone (703) 549–3010, http://www.ttmanet.org : TTMA RP No. 96–01, TTMA RP No. 96–01, Structural Integrity of DOT 406, DOT 407, and DOT 412 Cylindrical Cargo Tanks, January 2001 Edition.	178.345–3

[78 FR 1027, Jan. 7, 2013, as amended at 78 FR 15321, Mar. 11, 2013; 78 FR 65468, Oct. 31, 2013; 79 FR 15043, Mar. 18, 2014; 79 FR 40609, July 11, 2014; 80 FR 1114, Jan. 8, 2015; 80 FR 26746, May 8, 2015; 80 FR 79449, Dec. 21, 2015; 81 FR 25617, Apr. 29, 2016; 81 FR 35513, June 2, 2016; 82 FR 15833, Mar. 30, 2017; 83 FR 55806, Nov. 7, 2018; 84 FR 6952, Feb. 28, 2019; 85 FR 27852, May 11, 2020; 85 FR 75704, Nov. 25, 2020; 85 FR 78029, Dec. 3, 2020; 85 FR 85415, Dec. 28, 2020; 87 FR 44980, July 26, 2022; 87 FR 79765, Dec. 27, 2022; 89 FR 15662, Mar. 4, 2024; 89 FR 25469, Apr. 10, 2024]

§ 171.8 Definitions and abbreviations.

In this subchapter,

Administrator means the Administrator, Pipeline and Hazardous Materials Safety Administration.

Adsorbed gas. See §173.115 of this subchapter.

Aerosol means an article consisting of any non-refillable receptacle containing a gas compressed, liquefied or