Designation: D2737 – 12a

Standard Specification for Polyethylene (PE) Plastic Tubing[1]

This standard is issued under the fixed designation D2737; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope*

1.1 This specification covers polyethylene (PE) plastic tubing in outside diameters and SDR's that are pressure rated for water. Included are requirements for PE compounds, and requirements and test methods for PE plastic tubing workmanship, dimensions, elevated temperature sustained pressure, burst pressure and marking.

1.2 The text of this specification references notes, footnotes, and appendixes which provide explanatory material. These notes and footnotes shall not be considered as requirements of the specification. Notes and footnotes in tables and figures, and Supplementary Requirements are requirements of the specification.

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

NOTE 1—Joining PE plastic tubing with fittings that require flaring the tubing is not recommended because Practice D3140, the technique used to make the flare has been withdrawn (discontinued).

NOTE 2—References and PE compound descriptions for PE2305, PE2406, PE3306, PE3406, and PE3408 have been removed due to changes in Specification D3350 and PPI TR-3. For removed designations, refer to previous editions of Specification D2737, Specification D3350, PPI TR-3 and PPI TR-4. The removal of these PE compounds does not affect pipelines that are in service. PE compounds and material designations resulting from changes in Specification D3350 and PPI TR-3 are addressed in Section 5.

1.4 The following safety hazards caveat pertains only to the test methods portion, Section 7, of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D618 Practice for Conditioning Plastics for Testing
D638 Test Method for Tensile Properties of Plastics
D1238 Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer
D1598 Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure
D1599 Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe, Tubing, and Fittings
D1600 Terminology for Abbreviated Terms Relating to Plastics
D1603 Test Method for Carbon Black Content in Olefin Plastics
D2122 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
D2565 Practice for Xenon-Arc Exposure of Plastics Intended for Outdoor Applications
D2837 Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products
D3350 Specification for Polyethylene Plastics Pipe and Fittings Materials
D3140 Practice For Flaring Polyolefin Pipe And Tubing[3]
D4218 Test Method for Determination of Carbon Black Content in Polyethylene Compounds By the Muffle-Furnace Technique
F412 Terminology Relating to Plastic Piping Systems
G154 Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials
G155 Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials

2.2 *APWA Standard:*[4]

APWA Uniform Color Code

[1] This specification is under the jurisdiction of ASTM Committee F17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.26 on Olefin Based Pipe.

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] Withdrawn. The last approved version of this historical standard is referenced on www.astm.org.

[4] APWA, 2345 Grand Boulevard, suite 500, Kansas, City, MO 64108-2641.

***A Summary of Changes section appears at the end of this standard**

2.3 *NSF Standards:*[5]

NSF/ANSI Standard No. 14 for Plastic Piping Components and Related Materials

NSF/ANSI Standard No. 61 for Drinking Water Systems Components—Health Effects

2.4 *PPI Standards:*[6]

PPI TR-3 Policies and Procedures for Developing Hydrostatic Design Basis (HDB), Pressure Design Basis (PDB), Strength Design Basis (SDB), and Minimum Required Strength (MRS) Ratings for Thermoplastic Piping Materials or Pipe

PPI TR-4 HDB/SDB/PDB/MRS Listed Materials, PPI Listing of Hydrostatic Design Basis (HDB), Strength Design Basis (SDB), Pressure Design Basis (PDB), and Minimum Required Strength (MRS) Ratings for Thermoplastic Piping Materials or Pipe

3. Terminology

3.1 *Definitions*—Unless otherwise specified, definitions are in accordance with Terminology F412 and abbreviations are in accordance with Terminology D1600.

4. Tubing Classification

4.1 *General*—This specification covers PE plastic tubing made from PE compounds in three standard dimension ratios and pressure rated for water. Pressure ratings for water are dependent on the PE compound in accordance with the following relationship:

$$PR = \frac{2 \times HDS}{(SDR + 1)} \quad (1)$$

Where:

PR = pressure rating for water, 73°F (23°C), psi (kPa)
HDS = hydrostatic design stress for water at 73°F (23°C), psi (kPa)
SDR = standard dimension ratio

NOTE 3—PR and HDS must have the same units. See Appendix X1 for maximum pressure ratings for water.

4.2 This specification covers PE tubing in standard dimension ratios SDR 7.3, SDR 9, and SDR 11.

5. Materials

5.1 *Polyethylene Compound*—Polyethylene compounds suitable for use in the manufacture of tubing under this specification shall meet thermoplastic materials designation codes PE2708 or PE3608 or PE4608 or PE4710, and shall meet Table 1 requirements for PE2708 or PE3608 or PE4608 or PE4710, and shall meet thermal stability, brittleness temperature and elongation at break requirements in accordance with Specification D3350.

5.1.1 *Color and Ultraviolet (UV) Stabilization*—Polyethylene compounds shall meet Specification D3350 code C, D or E. In addition, Code C polyethylene compounds shall have 2 to 3 percent carbon black, and Code D or E polyethylene compounds shall have sufficient UV stabilizer to protect tubing from deleterious UV exposure effects during unprotected outdoor shipping and storage for at least eighteen (18) months.

NOTE 4—Pipe users should consult with the pipe manufacturer about the outdoor exposure life of the product under consideration. Evaluation of UV stabilizer in Code D or E PE compound using Practice D2565 or

[5] Available from NSF International, P.O. Box 130140, 789 N. Dixboro Rd., Ann Arbor, MI 48113-0140, http://www.nsf.org.

[6] Available from Plastics Pipe Institute (PPI), 105 Decker Court, Suite 825, Irving, TX 75062, http://www.plasticpipe.org.

TABLE 1 Polyethylene Compound Requirements

Requirement	Material Designation			
	PE2708	PE3608	PE4608	PE4710
	Required Value			
Minimum HDB at 140ºF (60ºC), psi (MPa), per Test Method D2837 and PPI TR-3	800 (5.5)[A]	800 (5.5)[A]	800 (5.5)[A]	800 (5.5)[A]
HDS for water at 73°F (23°C) psi (MPa), per Test Method D2837 and PPI TR-3[A]	800 (5.5)	800 (5.5)	800 (5.5)	1000 (6.9)
Melt flow rate per Test Method D1238	≤0.40 g/10 min Cond. 190/2.16 or ≤20 g/10 min Cond. 190/21.6	≤0.15 g/10 min Cond. 190/2.16 or ≤20 g/10 min Cond. 190/21.6	≤0.15 g/10 min Cond. 190/2.16 or ≤20 g/10 min Cond. 190/21.6	≤0.15 g/10 min Cond. 190/2.16 or ≤20 g/10 min Cond. 190/21.6
Specification D3350 Cell Classification Property Requirement	Required Value			
Density (natural base resin)	2	3	4	4
SCG Resistance	7	6	6	7
Color and UV Stabilizer Code[B]	C, D or E	C, D or E	C, D or E	C, D or E

[A] Contact manufacturer or see PPI TR-4 for listed value.
[B] See 5.1.1.

Practice G154 or Practice G155 may be useful for this purpose.

5.1.2 *Colors for solid color, an external color layer or color stripes*—In accordance with the APWA Uniform Color Code, blue shall identify potable water service; green shall identify sewer service; and purple (lavender) shall identify reclaimed water service. Yellow identifies gas service and shall not be used.

5.2 Products intended for contact with potable water shall be evaluated, tested and certified for conformance with NSF/ANSI Standard No. 61 or the health effects portion of NSF/ANSI Standard No. 14 by a certifying organization acceptable to the authority having jurisdiction.

5.3 *Rework Material*—Clean polyethylene compound from the manufacturer's own tubing production that met 5.1 through 5.2 as new PE compound is suitable for re-extrusion into tubing when blended with new PE compound having the same material designation. Tubing containing rework material shall meet all the requirements of this specification.

6. Requirements

6.1 *Workmanship*—The tubing shall be homogeneous throughout and free from visible cracks, holes, foreign inclusions, or other defects. The tubing shall be as uniform as commercially practicable in color, opacity, density, and other physical properties. See 5.1.2.

6.2 *Dimensions and Tolerances:*

6.2.1 *Outside Diameters*—The outside diameters and tolerances shall be as shown in Table 2 when measured in accordance with 7.4.

6.2.1.1 *Out-of-roundness*—Out of roundness shall be in accordance with Table 2 as extruded, but before coiling for packaging when measured in accordance with 7.4.

NOTE 5—Coiling may increase out-of-roundness, depending on the coiling method and coil dimensions.

6.2.2 *Wall Thicknesses*—The wall thicknesses and tolerance shall be as shown in Table 3 when measured in accordance with 7.4. Wall thickness shall be inclusive of all extruded concentric layers.

6.2.3 *Wall Thickness Variation*—The wall thickness variation shall not exceed 12 % when measured in accordance with 7.4.

6.2.4 *Thickness of Outer Layer*—For tubing produced by simultaneous multiple extrusion, the outer concentric layer shall be at least 0.020 in (0.5 mm) thick.

6.3 *Bond*—For tubing produced by simultaneous multiple extrusion, the bond between the layers shall be strong and uniform. It shall not be possible to cleanly separate any two layers with a probe or point of a knife blade at any point.

6.4 *Carbon Black*—Polyethylene tubing produced using Code C polyethylene compound per 5.1.1 shall contain 2 to 3% carbon black when tested in accordance with 7.5.

6.5 *Burst Pressure*—The minimum burst pressure for tubing shall be as given in Table 4, when determined in accordance with 7.6 using a minimum hoop stress of 2520 psi (17.4 MPa) for Table 1 density cell 2 polyethylene compound or 2900 psi (20.0 MPa) for Table 1 density cell 3 or 4 polyethylene compound. In addition, the failure shall be ductile.

6.6 *Elevated Temperature Sustained Pressure*—Elevated temperature sustained pressure tests for each polyethylene compound designation per Table 1 used in production at the facility shall be conducted twice annually per 7.7.

6.7 Inside Surface Ductility for Tubing—Tubing shall be tested for inside surface ductility in accordance with 7.8 or 7.9.

NOTE 6—Tensile elongation testing per 7.9 provides a quantifiable result and is used for referee testing and in cases of disagreement.

7. Test Methods

7.1 *Conditioning*—Condition as specified in the test method. Where conditioning is not specified in the test method, condition the test specimens at 73 ± 3.6°F (23 ± 2°C) without regard to relative humidity for not less than 4 h prior to the test in accordance with Procedure A of Practice D618, or at 73 ± 3.6°F (23 ± 2°C) for not less than 1 h in accordance with Procedure D of Practice D618.

7.2 *Test Conditions*—Conduct tests in accordance with the conditions specified in the test method, or if not specified in the test method, at 73.4 ± 3.6°F (23 ± 2°C) without regard to relative humidity.

7.3 *Sampling*—The number and selection of samples shall be as specified in the test method, or if not specified in the test method, sample selection shall be as agreed upon by the purchaser and seller. In case of no prior agreement, any sample selected by the testing laboratory shall be deemed adequate.

7.3.1 *Test Specimens*—Not less than 50 % of the test specimens required for any pressure test shall have at least a part of the marking in their central sections. The central section is that portion of the tubing sample that is at least one pipe diameter

TABLE 2 Outside Diameters and Tolerances for PE Plastic Tubing

Tubing Size	Outside Diameter, in. (mm)	Outside Diameter Tolerance, in. (mm)	Out-of-Roundness, in. (mm)
½	0.625 (15.87	±0.004 (±0.10)	0.030 (0.76)
⅝	0.750 (19.05)	±0.004 (±0.10)	0.030 (0.76)
¾	0.875 (22.23)	±0.004 (±0.10)	0.030 (0.76)
1	1.125 (28.58)	±0.005 (±0.13)	0.030 (0.76)
1¼	1.375 (34.93)	±0.005 (±0.13)	0.030 (0.76)
1½	1.625 (41.23)	±0.006 (±0.15)	0.030 (0.76)
2	2.125 (53.98)	±0.006 (±0.15)	0.030 (0.76)

TABLE 3 Wall Thickness and Tolerances for PE Plastic Tubing

	Wall Thickness, in.[A]											
	SDR 7.3				SDR 9				SDR 11			
	in.		(mm)		in.		(mm)		in.		(mm)	
Tubing Size, in.	Minimum	Tolerance	Minimum	Tolerance	Minimum	Tolerance	Minimum	Tolerance	Minimum	Tolerance	Minimum	Tolerance
½	0.086	+0.010	(2.18)	(0.25)	0.069	+0.010	(1.75)	(0.25)	0.062	+0.010	(1.57)	(0.25)
⅝	0.103	+0.010	(2.62)	(0.25)	0.083	+0.010	(2.11)	(0.25)	0.068	+0.010	(1.73)	(0.25)
¾	0.120	+0.012	(3.05)	(0.30)	0.097	+0.010	(2.46)	(0.25)	0.080	+0.010	(2.03)	(0.25)
1	0.154	+0.015	(3.91)	(0.38)	0.125	+0.012	(3.18)	(0.30)	0.102	+0.010	(2.59)	(0.25)
1¼	0.188	+0.019	(4.78)	(0.48)	0.153	+0.015	(3.89)	(0.38)	0.125	+0.012	(3.18)	(0.30)
1½	0.233	+0.022	(5.92)	(0.56)	0.181	+0.018	(4.60)	(0.46)	0.148	+0.015	(3.76)	(0.38)
2	0.291	+0.029	(7.39)	(0.74)	0.236	+0.024	(5.99)	(0.61)	0.193	+0.019	(4.90)	(0.48)

[A] The minimum is the lowest wall thickness of the pipe at any cross section. The maximum permitted wall thickness, at any cross section, is the minimum wall thickness plus the stated tolerance. All tolerances are on the plus side of the minimum requirement. Wall thickness variation shall be in accordance with 6.2.3.

TABLE 4 Minimum Burst Pressure for PE Plastic Tubing Pipe

SDR	Minimum Burst Pressure[A] psi (kPa)			
	PE2708		PE3608, PE4608, PE4710	
	psi	(kPa)	psi	(kPa)
7.3	800	(5517)	921	(6352)
9	630	(4345)	725	(5000)
11	504	(3476)	580	(4000)

[A]Minimum burst pressure calculated in accordance with:

$$P_B \frac{2S}{\frac{D_o}{t}} - 1$$

Where:

P_B = burst test pressure, psi (kPa)
S = minimum hoop fiber stress, psi. (kPa)
S = 2520 psi (17,370 kPa) for Specification D3350 density cell 2 PE compound per Table 2.
S = 2900 psi (20,000 kPa) for Specification D3350 density cell 3 and 4 PE compound per Table 2.
D_o = measured average inside diameter, in. (mm)
t = measured minimum wall thickness, in (mm).

Test temperature tolerance ±3.6ºF (± 2ºC). Test pressure tolerance ± 5 psi (± 35 kPa);

away from an end closure. The entire marking shall be documented in testing records.

7.4 *Dimensions and Tolerances*—Use any length of tubing to determine the dimensions. Outside diameter, out-of-roundness, and wall thickness shall be measured in accordance with Test Method D2122.

7.4.1 *Outside Diameter*—Measure the outside diameter of the tubing in accordance with Test Method D2122. The average outside diameter is the arithmetic average of the maximum and minimum diameter at any cross section. The tolerance for out-of-roundness shall apply only to tubing prior to shipment.

7.5 *Carbon Black*—For all tubing manufactured with Code C polyethylene compound, determine in duplicate the carbon black content in accordance with Test Method D1603 or Test Method D4218.

7.6 *Burst Pressure*—The test equipment, procedures and failure definitions shall be as specified in Test Method D1599.

7.7 *Elevated Temperature Sustained Pressure Test*—Elevated temperature sustained pressure tests for each Table 1 material designation used in production of tubing in accordance with this specification at the facility shall be conducted per D1598, and Table 5 using water as the pressurizing medium. The "test sample" shall be three specimens of any tubing size or SDR. One Table 5 Condition for the applicable material designation shall be selected for the test.

7.7.1 For the selected Table 5 Condition, passing results are *(a)* non-failure for all three specimens at a time equal to or greater than the "minimum average time before failure", or *(b)* not more than one ductile specimen failure and the average time before failure for all three specimens shall be greater than the specified "minimum average time before failure" for the selected Table 5 Condition, or *(c)* successful retest per 7.7.3.

7.7.2 For the selected Table 5 condition, failure to meet this requirement is *(a)* brittle failure of any specimen when tested at Table 5 Condition 1 through 6, or *(b)* ductile failure of all three specimens.

7.7.3 *Provision for Retest for Table 5 Conditions 1 through 5*—If a second ductile failure occurs before the "minimum average time before failure", it is permissible to conduct one retest at a Table 5 Condition of lower stress and longer minimum average time before failure for the material designation. The retest sample shall be three additional specimens of the same tubing size and material designation from the same time frame as the test sample per 7.7. For the retest, any specimen failure before the "minimum average time before failure" at the retest condition constitutes failure to meet this requirement. For Table 5 Condition 6 no retest is permissible.

TABLE 5 Elevated Temperature Sustained Pressure Test[A] Requirements

Condition	Test Temperature, ºF (ºC)	PE2708, PE3608, PE4608		PE4710	
		Test Pressure Hoop Stress, psi (kPa)	Minimum Average Time Before Failure, hours	Test Pressure Hoop Stress, psi (kPa)	Minimum Average Time Before Failure, hours
1	176 (80)	670 (4620)	170	750 (5170)	200
2	176 (80)	650 (4480)	340	730 (5020)	400
3	176 (80)	630 (4345)	510	705 (4870)	600
4	176 (80)	610 (4210)	680	685 (4715)	800
5	176 (80)	590 (4070)	850	660 (4565)	1000
6	176 (80)	580 (4000)	1000	640 (4415)	1200

[A] A Calculate internal test pressure in accordance with

$$P = \frac{2S}{\frac{D_o}{t}} - 1$$

Where:

P = test pressure, psi (kPa)
S = test pressure hoop stress, psi. (kPa)
D_o = measured average inside diameter, in. (mm)
t = measured minimum wall thickness, in (mm)

Test temperature tolerance ± 3.6ºF (± 2ºC). Test pressure tolerance ± 5 psi (± 35 kPa); test pressure hoop stress values are rounded to the nearest 5 psi or 5 kPa.

Table 5 conditions are based on PE validation requirements per PPI TR-3 with Condition 6 being 85% of Condition 1 test pressure hoop stress and six times greater minimum average time before failure. Conditions 2 through 5 are linear stress and time interpolations between Conditions 1 and 6. The intent of multiple conditions is to maintain equivalent performance criteria, but provide for retest in the event of ductile failure. The test pressure hoop stress levels for Conditions 2-5 are linear interpolations for arbitrarily chosen time increments. An equivalent performance requirement, however, may be determined by arbitrarily choosing a test pressure hoop stress between Conditions 1 and 6 and linearly interpolating the minimum average time before failure. For example for PE3710 and PE4710 compound designations, at 670 psi test pressure hoop stress, the minimum average time before failure would be 927 hours:

$$927 = 200 + \left((750 - 670) \times \frac{(1200 - 200)}{(750 - 640)} \right)$$

7.8 *Bend-back Test Method:*

7.8.1 Squarely cut four 1 ⅛ to 1 ⅜ in. (29 to 35 mm) wide rings from tubing. Condition the rings per 7.1.

7.8.2 Split each ring longitudinally so that when reverse bent per 7.8.3, the pipe ID for each quadrant around the tubing will be tested.

7.8.3 In a well-lit area, perform the following procedure within 5 min: *(a)* Bend each split ring specimen so that the tubing inside surface is on the outside surface of the bend. *(b)* Using an apparatus such as a bench vise or other suitable equipment, close the legs of the specimen together. When the specimen legs are closed together, the top of the bend-back specimen shall extend above the point of closure by 3 ± ½ times the minimum wall thickness per Table 3. *(c)* With the unaided (naked) eye, visually examine the reverse-bent tubing ID surface.

7.8.4 Visible brittle cracking or crazing indicates failure.

7.9 *Elongation-at-Break Test Method:*

7.9.1 Five Test Method D638 Type III or Type IV specimens cut in the longitudinal direction from locations equally spaced around the circumference of the tubing shall be conditioned per 7.1 and tested in accordance with Test Method D638 at a cross-head separation speed of 2 in. (50.8 mm) min. If the specimen thickness must be reduced by machining, the tubing ID surface shall be left unaltered.

7.9.2 —The percent elongation at break for each test specimen shall exceed 400 %.

NOTE 7—Specimen machining that produces smooth surfaces and uniform thickness is necessary. Surface cuts or scratches and non-uniform thickness in the specimen gage length can detrimentally affect test results.

8. Retest and Rejection

8.1 Except as provided in 7.7.3, if the results of any test(s) do not meet the requirements of this specification, the test(s) shall be conducted again only by agreement between the purchaser and the seller. Under such agreement, minimum requirements shall not be lowered, changed, or modified, nor shall specification limits be changed. If upon retest, failure occurs, the quantity of product represented by the test(s) does not meet the requirements of this specification.

9. Marking

9.1 Marking on the tubing shall include the following information. Marking shall be spaced at intervals of not more than 5 ft (1.5 m). Marking shall be applied such that legibility is maintained after normal handling and installation.

9.1.1 Tubing size (for example, 1 TUBING).

9.1.2 Tubing SDR

9.1.3 The PE material designation in accordance with the material designation prescribed in Table 1 (for example, PE3608).

9.1.4 Pressure rating for water in psi or kPa, (for example, 160 psi. or 1103 kPa)

9.1.5 ASTM designation “ASTM D2737”.

9.1.6 The manufacturer’s name (or trademark) and a code that identifies manufacturing location, PE compound source, manufacturing date and relevant production information such as extrusion line and shift. Upon request the manufacturer shall provide an explanation of the code.

9.1.7 Tubing intended for the transport of potable water shall also include the seal or mark of the laboratory making the evaluation for this purpose, spaced at intervals specified by the laboratory.

NOTE 8—Manufacturers using the seal or mark of a laboratory must obtain prior authorization from the laboratory concerned.

10. Quality Assurance

10.1 When the product is marked with this designation, D2737, the manufacturer affirms that the product was manufactured, inspected, sampled, and tested in accordance with this specification and has been found to meet the requirements of this specification.

11. Keywords

11.1 CTS; CTS tubing; DR; OD controlled; PE pipe; PE tubing; plastic pipe; plastic tubing; potable water pipe; polyethylene pipe; polyethylene tubing; potable water tubing; service pipe; service tubing; SDR; water pipe; water tubing; water service pipe; water service tubing

APPENDIX

(Nonmandatory Information)

X1. SOURCE OF HYDROSTATIC DESIGN STRESSES

X1.1 Maximum tubing pressure ratings for use with water may be determined using PPI recommended hydrostatic design stress (HDS) ratings for the PE compound per Section 5 and Table 1. Maximum internal pressure ratings for cold water are shown in Table X1.1. At the manufacturer's discretion and responsibility, other pressure ratings may be recommended for water or other media, or for variations of internal or external conditions.

X1.2 Information on HDS is available in Table 1, Test Method D2837, PPI TR-3 and PPI TR-4.

TABLE X1.1 Maximum Pressure Rating, PR, for SDR-PR PE Pipe for Use With Water

SDR	Nominal Pressure Rating[A,B] psi (kPa)			
	PE2708, PE3608, PE4608		PE4710	
	psi	(kPa)	psi	(kPa)
7.3†	250	(1725)	315	(2170)
9†	200	(1380)	250	(1725)
11†	160	(1100)	200	(1380)

[A] Minimum burst pressure calculated in accordance with

$$PR = \frac{2HDS}{(SDR - 1)}$$

Where:

P_R = burst test pressure, psi (kPa)
HDS = hydrostatic design stress for water at 73°F (23°C), psi. (kPa) (Table 1)
SDR = standard inside dimension ratio

[B] Table values rounded to nearest 5 psi or 5 kPa.
† Editorially corrected in February 2012.

SUMMARY OF CHANGES

Committee F17 has identified the location of selected changes to this standard since the last issue (D2737–12) that may impact the use of this standard.

(1) Revised Table 1 HDB at 140°F (60°C) to a minimum value of 800 psi (5.5 MPa) for PE2708, PE3608, and PE4608, and PE4710 materials.

Committee F17 has identified the location of selected changes to this standard since the last issue (D2737–03) that may impact the use of this standard.

(1) This edition of Specification D2737 constitutes a major revision of the standard. The reason for the major revision is significant changes to PE compound requirements to accommodate revisions to PE compounds and requirements arising from changes to Specification D3350, PPI TR-3 and PPI TR-4. Obsolete PE compound requirements (Specification D1248) have been removed, and performance requirements and tests have been revised to reflect the product capabilities arising from additional material capabilities.