

The PE Pipe Industry has developed a vast list of standards applicable to working with every aspect of PE pipe. The list compiled below has been developed to provide engineers designing with PE pipe the resources necessary to validate every aspect of PE pipe design.

These applicable standards are issued by widely respected agencies within the municipal pipe industry including the American Water Works Association, the American Society for Civil Engineers, the American Society for Testing and Materials, the Occupational Safety and Health Administration, the North American Society for Trenchless Technology, the Plastics Pipe Institute, the Plastics Pipe Institute Municipal Advisory Board, These robust standards include the following topics: product material design for pipe and fittings, manufacturing quality standards, product testing methods, product labelling standards, standards for the process of butt fusion, socket fusion, saddle fusion, and electrofusion, installation methods, field testing methods and many more.

A. American Water Works Association (AWWA) latest edition:

1. AWWA C622 – Pipe Bursting of Potable Water Mains 4 In. (100 mm) to 36 In. (900 mm)
2. AWWA C651 – Disinfecting Water Mains
3. AWWA C901 - Polyethylene Pressure Pipe and Tubing, ½ Inch Through 3 Inch for Water Service
4. AWWA C906 - Polyethylene Pressure Pipe and Fittings, 4 Inch Through 65 Inch for Water Distribution and Transmission

B. American Society for Civil Engineer's (ASCE) latest edition:

1. ASCE Manual of Practice 108 – Pipeline Design for Installation by Horizontal Directional Drilling (Second Edition)
2. ASCE Manual of Practice 112 – Pipe Bursting Projects
3. ASCE Manual of Practice 125 – Pipelines for Water Conveyance and Drainage
4. ASCE Manual of Practice 132 – Renewal of Potable Water Pipes

C. American Society for Testing and Materials (ASTM) latest edition:

1. ASTM C136 – Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
2. ASTM D422 – Standard Test Method for Particle-Size Analysis of Soils
3. ASTM D1556 – Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method
4. ASTM D638 – Tensile Method for Tensile Properties of Plastics
5. ASTM D790 – Test Materials for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
6. ASTM D2122 – Standard Method of Determining Dimensions of Thermoplastics Pipe and Fittings
7. ASTM D2167 – Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method

8. ASTM D2239 – Standard Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter
9. ASTM D2657 – Practice for Heat-Joining of Polyolefin Pipe and Fittings
10. ASTM D2683 – Standard Specification for Socket Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing
11. ASTM D2774 – Standard Practice for Underground Installation of Thermoplastic Pressure Piping
12. ASTM D2837 – Standard Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products
13. ASTM D2937 – Standard Test Method for Density of Soil in Place by the Drive-Cylinder Method
14. ASTM D3035 – Polyethylene (PE) Plastic Pipe (DR-PE) Based on Controlled Outside Diameter
15. ASTM D3261 – Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
16. ASTM D3350 – Polyethylene Plastic Pipe and Fittings Material
17. ASTM D3740 – Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
18. ASTM D4253 – Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
19. ASTM D4254 – Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density
20. ASTM D4318 – Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
21. ASTM D6938 – Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
22. ASTM F412 – Standard Terminology Relating to Plastic Piping Systems
23. ASTM F714 – Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
24. ASTM F905 – Standard Practice for Qualification of Polyethylene Saddle-Fused Joints
25. ASTM F1055 – Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene Pipe and Tubing
26. ASTM F1056 – Standard Specification for Socket Fusion Tools for Use in Socket Fusion Joining Polyethylene Pipe or Tubing and Fittings
27. ASTM F1290 – Standard Practice for Electrofusion Joining Polyolefin Pipe and Fittings
28. ASTM F1962-11 – Standard Guide for Use of Maxi-Horizontal Directional Drilling for Placement of Polyethylene Pipe or Conduit Under Obstacles, Including River Crossings
29. ASTM F2164 – Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure
30. ASTM F2206 – Fabricated Fittings for Butt-Fused Polyethylene Plastic Pipe

31. ASTM F2620 – Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings
 32. ASTM F2786 – Standard Practice for Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Gaseous Testing Media Under Pressure (Pneumatic Leak Testing)
 33. ASTM F3124 – Standard Practice for Data Recording the Procedure used to Produce Heat Butt Fusion Joints
 34. ASTM F3190 – Standard Practice for Heat Fusion Equipment (HFE) Operator Qualifications on Polyethylene (PE) and Polyamide (PA) Pipe and Fittings
- D. North American Society for Trenchless Technology (NASTT) latest edition:**
1. NASTT’s Horizontal Direction Drilling (HDD) Good Practices Guidelines – 4th Edition
 2. NASTT’s Pipe Bursting Good Practices Guidelines – 3rd Edition
- E. Occupational Safety and Health Administration’s (OSHA) Trench Excavation Standard – 29 C.F.R, s.1926.650, Subpart P latest edition**
- F. Plastics Pipe Institute (PPI) latest edition:**
1. The Plastics Pipe Institute Handbook of Polyethylene Pipe
 2. PPI – TN-36 – General Guidelines for Connecting HDPE Potable Water Pressure Pipes to DI and PVC Piping Systems
 3. PPI – TN-38 – Bolt Torque for Polyethylene Flanged Joints
 4. PPI – TN-44 – Long Term Resistance of AWWA C906 Polyethylene (PE) Pipe to Potable Water Disinfectants
 5. PPI – TN-45 – Mechanical Couplings for Joining Polyethylene Pipe
 6. PPI – TN-46 – Guidance for Field Hydrostatic Testing of High Density Polyethylene Pressure Pipelines: Owner’s Considerations, Planning, Procedures, and Checklists
 7. PPI – TN-49 – Recommendations for AWWA C901 Service Tubes in Potable Water Applications
 8. PPI – TN-54 – General Guidelines for Squeezing Off Polyethylene Pipe in Water, Oil and Gas Applications
 9. PPI – TR-46 – Guidelines for Use of Mini-Horizontal Directional Drilling for Placement of High Density Polyethylene Pipe
- G. Plastics Pipe Institute Municipal Advisory Board (MAB) latest edition:**
1. MAB Generic Electrofusion Procedure for Field Joining of 12 Inch and Smaller Polyethylene Pipe
 2. MAB Generic Electrofusion Procedure for Field Joining of 14 Inch to 30 Inch Polyethylene Pipe
 3. MAB Model Specifications for PE 4710 Buried Potable Water Service, Distribution and Transmission Pipes and Fittings
 4. MAB Guidelines for PE 4710 Pipe Bursting of Potable Water Mains