



Standard Specification for Flexible Pre-Insulated Piping¹

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INTRODUCTION

This specification covers materials and test methods for flexible, pre-insulated piping with non-bonded insulation. For the purpose of this standard, flexible pre-insulated piping system shall refer to a piping system that is supplied complete with carrier pipe, thermal insulation, and outer jacket manufactured as an integrated system, and is supplied in a coil. This specification covers the requirements, material specifications, and test methods of piping systems intended to convey hot and cold fluids. Piping systems may include one or more carrier pipes within a common outer jacket.

1. Scope*

1.1 This specification covers flexible, pre-insulated piping commonly used to convey hot and cold fluids.

1.2 This specification establishes materials and performance requirements for flexible, pre-insulated piping intended for hot and chilled water applications.

1.3 Piping systems may include one or more carrier pipes within a common outer jacket.

1.4 The text of this specification references notes and footnotes that provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered part of this standard.

1.5 *Units*—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.

1.6 The following safety hazards caveat pertains 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 requirements prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

- C168 Terminology Relating to Thermal Insulation
- C177 Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus
- D1600 Terminology for Abbreviated Terms Relating to Plastics
- D2104 Specification for Polyethylene (PE) Plastic Pipe, Schedule 40 (Withdrawn 2010)³
- D2239 Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter
- D3035 Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
- F412 Terminology Relating to Plastic Piping Systems
- F714 Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter
- F876 Specification for Crosslinked Polyethylene (PEX) Tubing
- F877 Specification for Crosslinked Polyethylene (PEX) Hot- and Cold-Water Distribution Systems
- F1281 Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe
- F1282 Specification for Polyethylene/Aluminum/

¹ This specification is under the jurisdiction of ASTM Committee F17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.11 on Composite.

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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 The last approved version of this historical standard is referenced on www.astm.org.