



BUILDINGS BULLETIN 2015-020
OTCR

Supersedes: None

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Purpose: This document establishes acceptance criteria for the use of polypropylene ("PP") piping systems in irrigation systems and water recycling distribution piping systems as alternative materials in the NYC Construction Codes.

Related Code Section(s):	AC 28-113.2.3	AC 1704.13	PC Chapter 7
	MC Chapter 12	AC 1704.15	PC Chapter 11
	MC 1206	PC 312.1.2	PC Appendix C
	MC 1202.4	PC 608	

Related Buildings Bulletin(s):	BB 2010-027	BB 2013-003
	BB 2011-005	
	BB 2011-020	

Subject(s): Hydronic piping, polypropylene; Irrigation system, polypropylene; Water recycling distribution piping system, polypropylene

Background: The Plumbing Code does not include polypropylene (PP) as an acceptable material for water supply and distribution and limits the use of PP for sanitary and storm drainage. The code does not address the use of PP for irrigation and water recycling piping systems. Therefore this bulletin establishes acceptance criteria for PP irrigation and water recycling distribution piping systems as an alternative material within the NYC Construction Codes.

Description: PP is a thermoplastic material made by polymerizing propylene and is used for various applications including the manufacture of piping. PP piping system components include piping, fittings, valves, and manifolds.

Uses: PP piping systems components may be used for irrigation and water recycling distribution piping systems in accordance with this Bulletin. All PP piping systems used with recycled wastewater shall comply with OTCR Buildings Bulletin 2010-027, issued on November 10, 2010.

Evaluation Scope: NYC Construction Codes

Evaluation Criteria: Pursuant to AC section 28-113, the Office of Technical Certification and Research recognizes PP piping system components tested and evaluated in accordance with ASTM F 2389 “*Standard Specification for Pressure-rated Polypropylene (PP) Piping Systems*”¹. Acceptable PP piping systems shall be listed and labeled by an approved agency in accordance with AC section 28-113.2.3 and shall comply with the conditions of this bulletin.

Conditions of Acceptance: PP piping systems shall be designed, installed and manufactured in accordance with the NYC Construction Codes and other applicable provisions including but not limited to the following:

A. Design

Irrigation systems:

- a. When connected to the potable water supply system, the valve isolating the PP irrigation system from the domestic water supply system shall be located after any required building RPZ valve and such valve shall comply with the Plumbing and Mechanical codes for potable water system valves
- b. When connected to water recycling systems, the PP irrigation piping shall:
 - i. be not less than 3 inches in diameter, and
 - ii. be located in the same lot as the water recycling system as per OTCR Buildings Bulletin 2010-027

B. Installation

- 1. Installation requirements shall be in accordance with the manufacturer’s instructions, the NYC Plumbing Code, and the conditions of this bulletin.
- 2. Installation of PP piping system shall be performed by a NYC licensed plumber.
- 3. PP piping systems shall be identified in accordance with PC section 608.8 as carrying nonpotable water even if such systems contain potable water.
- 4. When potable water is provided to PP piping systems as makeup water in water recycling and distribution piping systems, the potable water shall be protected against backflow in accordance with PC section 608 and PC section C101.8.

C. Inspection of Installation

1. Irrigation systems:

Special inspection for irrigation systems shall not be required.

2. Water recycling distribution piping systems:

Pursuant to BC section 1704.14, the installation of PP piping systems shall be subject to special inspection requirements of Chapter 17 of the Building Code and all Department rules covering special inspection. Special Inspectors of PP piping systems shall:

- a. Have qualifications and experience which include Professional Engineer or Registered Architect and 1 year relevant experience.
- b. Have duties and responsibilities in accordance with, but not limited to: 1) verifying compliance with part “A” item 1 of this bulletin, 2) witnessing tests as per PC section 312.1.2 as the approved agency and 3) all code provisions and departments rules regarding special inspections.
- c. Complete the statement of special inspection under “Alternative Materials, BC 1704.14” in section 3.0 of the TR1 form.

<input type="checkbox"/>	<input type="checkbox"/>	Mastic and Intumescent Fire-resistant Coatings	BC 1704.12	
<input type="checkbox"/>	<input type="checkbox"/>	Exterior Insulation and Finish Systems (EIFS)	BC 1704.13	
<input type="checkbox"/>	<input type="checkbox"/>	Alternative Materials - OTCR Buildings Bulletin #	BC 1704.14	
<input type="checkbox"/>	<input type="checkbox"/>	Smoke Control Systems	BC 1704.15	
<input type="checkbox"/>	<input type="checkbox"/>	Mechanical Systems	BC 1704.16	

Use this line to identify PP Piping systems.

D. Labeling

PP piping systems shall be labeled as per AC section 28-113.4 and ASTM F2389, section 12. All shipments and deliveries of materials shall be accompanied by a certificate or label certifying

that the materials shipped or delivered are equivalent to those tested and approved.

- Referenced Standards:** 1. ASTM F 2389 “*Standard Specification for Pressure-rated Polypropylene (PP) Piping Systems.*” (www.astm.org)