# BUILDINGS BULLETIN 2015-020

OTCR

## Supersedes:
None

## Issuer:
Alan Price, P.E.
Director, Office of Technical Certification and Research

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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.

**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:**