

Minor Code Changes and NRC Administrative Changes to the NPC

Administrative Changes

Small Changes

How it may affect you? Ask for the testing.

For BOABC

Kevin Wong: Canadian Codes Manager, Uponor Ltd.

Objective

Create/maintain a more effective communication channel/professional partnership with engineers, and inspectors

Provide information on plumbing system standards and its conformance to the applicable codes based on available certifications

OPEN DOOR POLICY FOLKS.....

Updated Codes and Standards Language

- Standards referenced within the Building Code- with edition
- The Building Code uses two different words
 - Conform with
 - Where a component of a plumbing system is required by this Code to comply with a standard and the compliance is not certified by a testing agency accredited by the Standards Council of Canada for the testing of the component in question and, when an inspector requests proof of the compliance, proof of compliance shall be produced by the person proposing to install or have installed the component, and without such proof the component shall not be installed as a permanent part of any plumbing system
 - Certified to
 - Where a component of a plumbing system is required to be certified to a standard, the certification shall be made by a testing agency accredited for that purpose by the Standards Council of Canada

How to comply

- Manufacturers 3rd Party Listings
 - Approved applications
 - ASK for the testing and certifications

Agenda

- Changes from 2015 to 2020 NPC
- Finding Interpretations for the BC
- Impacts on Permitting and Inspections
- Question and Answer segment

Seemingly Minor Changes to 2020 NPC

- New Defined Terms, abbreviation and wording changes
- Seismic Design (that is a whole new course)
- Piping and tubing material
- Nominal Pipe Size (NPS) (covered last time)
- Asbestos based material (covered last time)
- Water Temperature Control (covered last time)
- Protection from Backflow
- Non-Potable Water System (covered last time)
- Non-Potable Rainwater Harvesting system (covered last time)

New Defined Terms, abbreviation and wording changes

Nominal Pipe Size (NPS)

- The nominal diameter by which a pipe, fitting, trap or other similar items is commercially designated

Sanitary Drainage Pipe

- A pipe in a sanitary drainage system

Stack

- A vertical sanitary drainage pipe that passes through one or more stories and includes any offset that is part of the stack

Not going to talk about seismic...

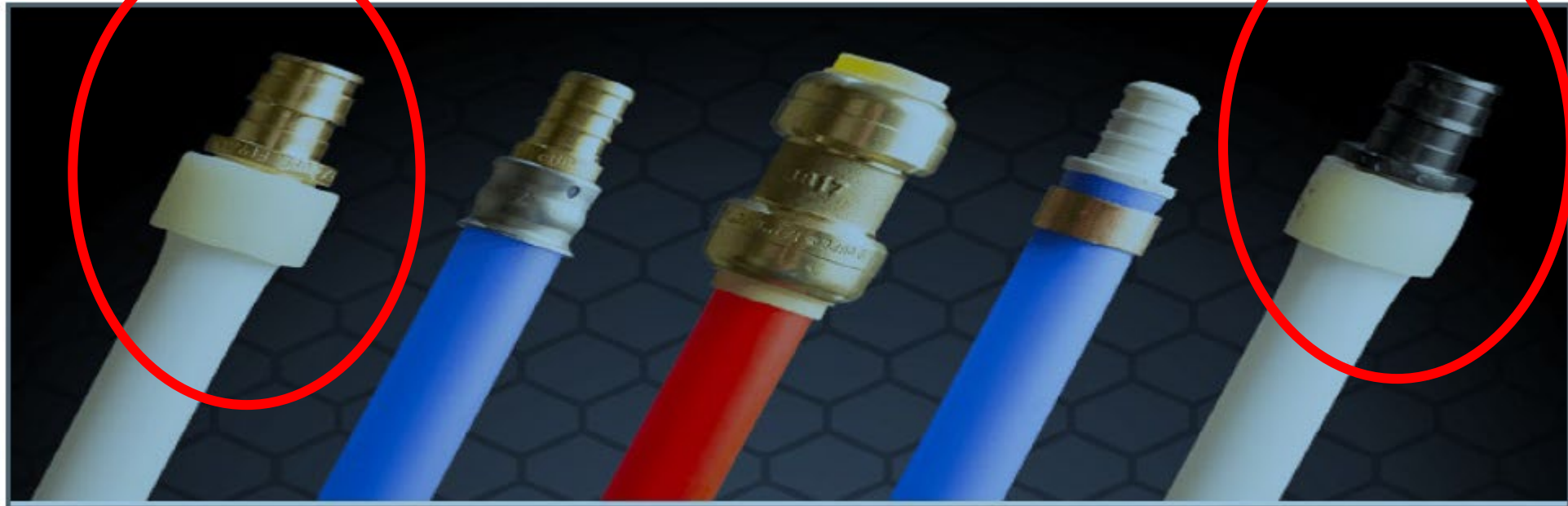
- That is a whole course on to itself



Plastic Piping and tubing material

PE-RT (new to the codes)

- Polyethylene of Raised Temperature



Plastic Piping and tubing material

2.2.5 Non-Metallic Pipe and Fittings

2.2.5.15. Polyethylene of Raised Temperature Tube and Fittings – New

1) Polyethylene of raised temperature (PE-RT) tube and manufacturer-approved fittings used in hot and cold potable water systems shall conform to CSA B137.18, “Polyethylene of raised temperature resistance (PE-RT) tubing systems for pressure applications.” (See Note A-2.2.5.15.(1).)

2) The use of PE-RT tube shall conform to Table 2.2.5.15.

Table 2.2.5.15.
Permitted Uses of Polyethylene of Raised Temperature (PE-RT) Tube
Forming Part of Sentence 2.2.5.15.(2)

Type of Tube	Plumbing Purposes ⁽¹⁾								
	Drainage System		Building Sewer	Venting System		Potable Water System			
	Aboveground inside building	Underground under building		Above-ground	Under-ground	Cold	Hot	Under building	Outside building
PE-RT	N	N	N	N	N	P	P	P	P

Notes to Table 2.2.5.15.:
(1) P – permitted and N – not permitted

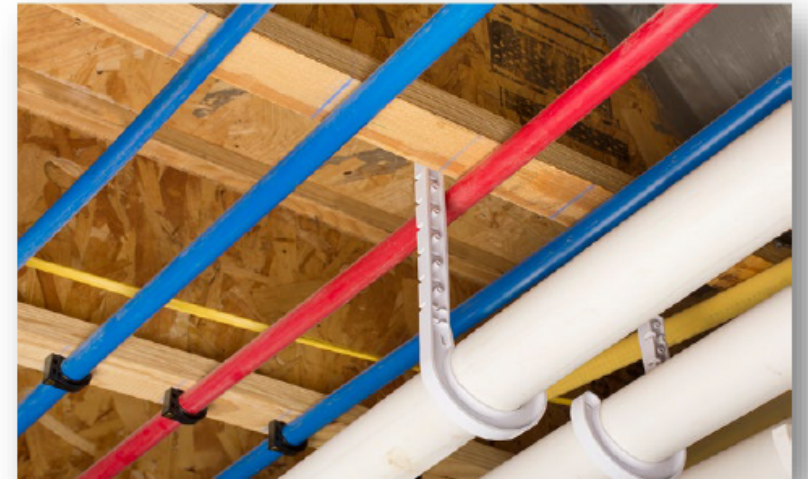
Plastic Piping and tubing material

2.2.5 Non-Metallic Pipe and Fittings

2.2.5.6. Crosslinked Polyethylene Pipe and Fittings

1) Crosslinked polyethylene pipe and manufacturer-approved fittings used in hot and cold potable water systems shall conform to CSA B137.5, “Crosslinked polyethylene (PEX) tubing systems for pressure applications.”

(See note A-2.2.5.6.(1).)



Previously referred to associated fittings, changed to manufacturer approved fittings.

How to comply

- Manufacturers 3rd Party Listings
 - Approved applications
 - ASK for the testing and listings, and certifications

How do pipe manufacturers comply?



Descriptive Report
and Test Results

MASTER CONTRACT: 161671 (LM94423)
REPORT: 1007033
PROJECT: 80102481

FACTORY TESTS

There shall be adequate facilities for producing subsequent products identical to the product tested herein, and provision for tests and inspection to ensure continuing compliance with the requirements of the CSA Standard.

Certification of the products covered by this Report is contingent upon the following minimum Quality Control (QC) being exercised on the products under the direction of the QA Manager for the factory, as identified on the "Profile of Reports" for File LM 94423 (1):

Minimum QC Requirements (2), (3)

Component	Property Tested	Frequency	Requirements
PEX Tubing	Quality of work (Workmanship)	Continuously	B137.0, C1 5.1; B137.5, Clause 4.2.1
	Dimensions	Hourly	B137.5, Clause 5.1
	Density	Weekly	B137.5, Clause 5.4
	Hydrostatic sustained pressure strength	Every 3 months	B137.5, Clause 5.2
	Environmental stress cracking resistance	Yearly	B137.5, Clause 5.5
	Degree of crosslinking	Every 3 days	B137.5, Clause 5.6
	Stabilizer functionality (migration resistance)	Yearly	B137.5, Clause 5.7
	Bent-tube pressure test	Yearly	B137.5, Clause 5.8
	Excessive temperature and pressure capability	Yearly	B137.5, Clause 5.9
	Fittings	Dimensions	Refer to Note 5

Notes re QC Testing:

- Where the QC Manager is changed, CSA is to be informed and supplied with the name of the supervisor and his or her background as applicable to CSA Certification Requirements.

Edition 1: January 13, 2000; Project 1007033 - Toronto
Issued by N. Holm; Reviewed by S.A. Allidina, M. Eng., P. Eng.

Edition 12: June 22, 2021; Project 80067375 - Toronto
Prepared By: Grazyna Blazejewska
Authorized By: Grazyna Blazejewska

Edition 13: August 12, 2021; Project 80092464 - Toronto
Prepared By: Grazyna Blazejewska
Authorized By: Grazyna Blazejewska

Application LM 94423-39:

Information and test data for the following products made for WIRSBO by the manufacturers indicated below are in the manufacturers' CSA Files, and each of the manufacturers authorized CSA to use that information and test data as part of the evaluation of the products they make for WIRSBO:

- copper manifolds made by Alberta Custom Tee (ref CSA File LM 103900)
- copper stubs made by Sioux Chief Manufacturing (ref CSA File LM 62766)
- valves made by Dahl Brothers (Canada) Ltd (ref CSA File LM 20797)
- valves made by Brass Craft of Canada Ltd. (Ref CSA File LM 15310)

Water Temperature Control and Limitations

- More to discuss... especially in complex buildings and care facilities

Temperatures of concern.....

- Legionella 140oF (60oC) (*non-moving, stagnant and non chlorinated*)
- Discharge at 120oF (49oC)
- Healthcare discharge 109 oF (43oC)
- Quebec recirc return temps at 131.3oF (55oC)

Backflow

2.4.6.4 Protection from Backflow

2.4.6.4. Protection from Backflow

- 1) Except as provided in Sentences (2) and (3), where a building drain or a branch may be subject to backflow, a backwater valve shall be installed on every fixture drain connected to them when the fixture is located below the level of the adjoining street.
- 2) Where more than one fixture is located on a storey and all are connected to the same branch, the backwater valve is permitted to be installed on the branch.
- 3) A subsoil drainage pipe that drains into a sanitary drainage system that is subject to surcharge shall be connected in such a manner that sewage cannot back up into the subsoil drainage pipe. (See note A-2.4.6.4.(3).)
- 4) Except as permitted in Sentence (5), a backwater valve or a gate valve that would prevent the free circulation of air shall not be installed in a building drain or in a building sewer.
- 5) A backwater valve is permitted to be installed in a building drain, provided that:
 - a) it is a “normally open” design conforming to:
 - i) CSA B70, “Cast iron soil pipe, fittings, and means of joining,”;
 - ii) CSA B181.1, “Acrylonitrile-butadiene-styrene (ABS) drain, waste, and vent pipe and pipe fittings,”;
 - iii) CSA B181.2, “Polyvinylchloride (PVC) and chlorinated polyvinylchloride (CPVC) drain, waste, and vent pipe and pipe fittings,”; or
 - iv) CSA B182.1, “Plastic drain and sewer pipe and pipe fittings,”; and
 - b) it does not serve more than one dwelling unit.



No longer recognized as options in the National Plumbing Code.

More on Backflow

2.6.2. Protection from Contamination

2.6.2.1. Connection of Systems

- 1) Except as provided in Sentence (2), connections to potable water systems shall be designed and installed so that non-potable water or substances that may render the water non-potable cannot enter the system.
- 2) A water treatment device or apparatus shall not be installed unless it can be demonstrated that the device or apparatus will not introduce substances into the system that may endanger health.
- 3) Backflow preventers shall be selected and installed in conformance with CSA B64.10, "Selection and installation of backflow preventers."



The reference to maintenance of a backflow preventer was removed. Maintenance is not in the scope of the National Plumbing Code.

More on Backflow

2.6.2 Protection from Contamination

2015 NPC

2.6.2.5. Separation of Water Supply Systems

1) No private water supply system shall be interconnected with a public water supply system.

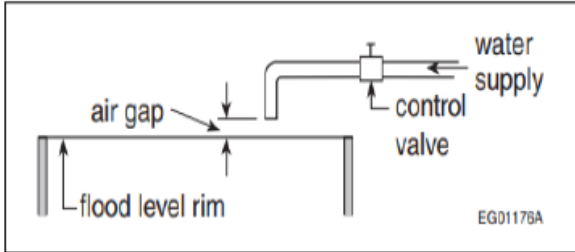


Clause changed for 2020.

2020 NPC

2.6.2.5. Separation of Water Supply Systems

1) Where a private water supply system or a non-potable water system is supplied by a public water supply system, the public water supply system shall be protected in accordance with Article 2.6.2.1.



Finding Interpretations and Notes

- Best place to find the answers you need for what is new in the codes



Calen

About ▾ Membership ▾ Qualification ▾ Certification ▾ Exams ▾ Education & Interpretations ▾ 20

2024 Code Update Handouts of Changes

The BOABC gratefully acknowledges that this content has been developed with the support of the below individuals and with financial contribution from



- Frankie Victor PL Eng, Principal, Andrew Harmsworth M Eng, P Eng, CP, FEC, Founding Principal and their team at GHL Consultants,
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You may find the **Handouts of Changes** for the 2024 Building & Plumbing Codes below. Please click on each link to open and view the changes.

Impacts on Inspections

- Detail matter
- As the AHJ you have the power to ask questions and for evidence of compliance.

What are you looking for?

- Details
- Specifics
- What you are actually looking at and using?
- There is no substitution for what is in front of you

Always circle back to the code requirements!

The choice is yours to use, approve, reject or not.

It is the manufacturers responsibility to make this easy for you not convoluted or confusing....

The Ontario Building Code (7.2.1.3[4]) states that "if a component of a plumbing system is required to be certified to a standard, the certification shall be made by a testing agency accredited for that purpose by the Standards Council of Canada."

Questions???

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