

**BC BUILDING CODE INTERPRETATION COMMITTEE
AIBC, APEGBC, BOABC, POABC**

INTERPRETATION		
Interpretation Date:	July 17, 2002	File No.:
Building Code Edition:	BC Building Code 1998	98-0056
Subject:	Piping in Concrete Slab	
Keywords:	Concrete slab, Sleeving	
Building Code Reference(s):	7.3.5.3.(2) & (3)	Page 1 of 1

Question:

1. If a pipe is installed in a concrete slab, would the piping need to be wrapped in tape, a soft bagging material or in another pipe?
2. If the pipe were taped or put in plastic bags or sheathing, would the pipe be able to expand and contract or move independently of the building?
3. Does cross-linked polyethylene (PEX) tubing require the same protection from the chemical effects of being in contact with concrete and linear expansion and contraction?

Interpretation:

1. Yes, all piping shall be taped or sleeved to allow the effects of expansion and contraction and to protect against corrosion caused when in contact with concrete. Sentence 7.3.5.3.(2) states "All piping shall be installed without undue strains or stresses and provisions shall be made for expansion, contraction and structural movements. Sentence 7.3.5.3.(3) states "No piping shall be embedded in concrete or masonry."
2. If the piping were installed within concrete foundations, grade beams and raft slabs, then one acceptable method would be the installation of a sleeve that is a minimum one pipe diameter larger than the piping being protected from expansion, contraction and building structural movements. If the piping were installed within above grade slabs or light weight concrete topping, then the installation of lightweight "bag-type" sleeving would also be an acceptable method to allow for movement in linear expansion.
3. Yes, cross-linked polyethylene (PEX) tubing requires the same protection against the effects of expansion and contraction in piping and surrounding structural components. The supplementary information contained within the CSA B137.5 Standard for PEX tubing states:
A2.1.1 Thermal Expansion
 "The linear expansion rate for PEX is approximately 15 mm/10°C temperature change for each 10 m (32.8 ft.) of tubing. When installing long runs of tubing allow 10 to 15 mm in longitudinal clearance per metre of run to accommodate thermal expansion. Tubing should not be anchored rigidly to a support but allowed freedom of movement to expand and contract."



 R.J. Light, Committee Chair

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