

**APPROVED EXPRESS TERMS
FOR
BUILDING STANDARDS
OF THE
CALIFORNIA BUILDING STANDARDS COMMISSION (CBSC)**

**REGARDING ADOPTED AMENDMENTS TO THE
2007 and 2010 CALIFORNIA PLUMBING CODE (CPC) FOR THE
CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 24, PART 5**

The California Building Standards Code (California Code of Regulations, Title 24, Parts 1, 2, 3, 4, 5, 6, 7, 8, 10 & 12) is published in its entirety every three years and is effective to all buildings that submit an application for a building permit during its effective period. Each triennial edition of the California Building Standards Code becomes effective 180 days after its publication and is effective at the time an application for a building permit is submitted.

These approved regulations amend the 2007 edition of the California Plumbing Code (CPC) based on the 2006 edition of the Uniform Plumbing Code (UPC) of the International Association of Plumbing and Mechanical Officials (IAPMO) and the 2010 edition of the CPC based on the 2009 UPC for buildings permitted under the California Plumbing Code (CPC). Further, California law makes the UPC standards adopted by the Commission applicable to all occupancies in California.

In January 2009, the Commission adopted "PEX regulations" that allowed the statewide use of PEX Tubing by removing the CPC's exclusion of PEX. The PEX regulations have been the subject of litigation. During the litigation, the court ordered that the PEX regulations must be "vacate[d] and set aside ..." pending the Commission's preparation and certification of the SRDEIR. The Commission complied with the court's order by repealing the previous action taken by the Commission in January 2009. The repeal became effective on July 1, 2010.

The Commission prepared and certified the SRDEIR which supports the adoption of PEX regulations and constitutes full compliance with the California Environmental Quality Act (CEQA). The California Building Standards Commission adopted and approved new PEX regulations and amended other regulations that allow the statewide use of PEX Tubing. The parties involved have reached a tentative settlement agreement that reflects the mitigation measures identified in the SRDEIR and additional conditions and restrictions on the use of PEX that address concerns raised after the release of the SRDEIR. The Commission action implements the terms of the settlement agreement.

The regulations include mitigation measures identified in the Commission's Second Revised Draft Environmental Impact Report (SRDEIR) and additional conditions and restrictions on the use of PEX. The Commission's action allows the statewide use of PEX in hospitals, clinics, schools, residences and commercial structures. **The effective date of this action is August 18, 2010 for the 2007 CPC and January 1, 2011 for the 2010 CPC.** You can view the SRDEIR on the Commission's website: <http://www.documents.dgs.ca.gov/bsc/pex/2010/Final-EIR/SR-FINAL-EIR-PEX-08-09-10.pdf>

Section "A" of these Approved Express Terms describes the Commission's action to adopt the PEX regulations into the 2007 CPC on an emergency basis and will be effective upon filing with the Secretary of State (see above), and Section "B" of these Approved Express Terms describes the Commission's action to adopt PEX regulations into the 2010 CPC effective January 1, 2011.

A. The express terms for adopting PEX regulations into the 2007 CPC are presented in the following amendments to Chapter 6 of the 2007 CPC:

**CHAPTER 6
WATER SUPPLY AND DISTRIBUTION**

TABLE 6-4^{1, 2, 3}

Material	Water Distribution Pipe and Fittings		Building Supply Pipe and Fittings
	Hot	Cold	
Asbestos – Cement			X
Brass	X	X	X
Copper	X	X	X
Cast Iron	X	X	X
CPVC	X	X	X
Galvanized Malleable Iron	X	X	X
Galvanized Wrought Iron	X	X	X
Galvanized Steel	X	X	X
PE			X
PE-AL-PE	X	X	X
PEX ^{1,2}	X	X	X
PEX-AL-PEX ³	X	X	X
PVC			X

¹ When PEX tubing is placed in soil and is used in potable water systems intended to supply drinking water to fixtures or appliances, the tubing or piping shall be sleeved with a material approved for potable water use in soil or other material that is impermeable to solvents or petroleum products.

² PEX tubing shall meet or exceed the requirements of ASTM F 876-08 or an equivalent or more stringent standard when used in continuously recirculating hot water systems and the PEX tubing is exposed to the hot water 100% of the time.

³ The use of PEX-AL-PEX in potable water supply systems is not adopted.

...

604.1.2 PEX All installations of PEX pipe where it is the initial plumbing piping installed in new construction shall be flushed twice over a period of at least one week. The pipe system shall be first flushed for at least 10 minutes and then filled and allowed to stand for no less than 1 week, after which all the branches of the pipe system must be flushed long enough to fully empty the contained volume. This provision shall not apply to the installation of PEX pipe where it replaces an existing pipe system of any material.

(1) *At the time of fill, each fixture shall have a removable tag applied stating:*

"This new plumbing system was first filled and flushed on _____ (date) by _____ (name). The State of California requires that the system be flushed after standing at least one week after the fill date specified above. If this system is used earlier than one week after the fill date, the water must be allowed to run for at least two minutes prior to use for human consumption. This tag may not be removed prior to the completion of the required second flushing, except by the building owner or occupant."

(2) *Prior to issuing a building permit to install PEX pipe, the building official shall require as part of the permitting process that the contractor, or the appropriate plumbing subcontractors, provide written certification that he or she will comply with the flushing procedures set forth in the Code.*

(3) *The building official shall not give final permit approval of any PEX plumbing installation unless he or she finds that the material has been installed in compliance with the requirements of the Code, including the requirements to flush and tag the systems.*

(4) *Any contractor or subcontractor found to have failed to comply with the PEX flushing requirements shall be subject to the penalties in Health and Safety Code, Division 13, Part 1.5, Chapter 6 (Section 17995, et seq.).*

604.11 PEX. Cross-linked polyethylene (PEX) tubing shall be marked with the appropriate standard designation(s) listed in Table 14-1 for which the tubing has been approved. PEX tubing shall be installed in compliance with the provisions of this section. *All PEX pipe installed in California must provide at least 30-day UV protection.*

604.11.1 PEX Fittings. Metal insert fittings, metal compression fittings, and cold expansion fittings used with PEX tubing shall be manufactured to and marked in accordance with the standards for the fittings in Table 14-1. *Brass fittings used with PEX tubing shall meet or exceed NSF 14-2009 standards to prevent dezincification and stress crack corrosion.*

604.11.2 Water Heater Connections. PEX tubing shall not be installed within the first eighteen (18) inches (457mm) of piping connected to a water heater.

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Notation

Authority: Health and Safety Code §§18934.5, 18938(b)

References: Health and Safety Code §§18916, 18929.1, 18938(b)

B. The express terms for adopting PEX regulations into the 2010 CPC are presented in the following express terms amendments to Chapter 6 of the 2010 CPC:

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**CHAPTER 6
WATER SUPPLY AND DISTRIBUTION**

TABLE 6-4

Material	Building Supply Pipe and Fittings	Water Distribution Pipe and Fittings	Referenced Standard(s) Pipe	Referenced Standard(s) Fittings
Asbestos – Cement	X ¹		ASTM ...	
Brass	X	X	ASTM ...	
Copper	X	X	ASTM ...	ASME ...
CPVC	X	X	ASTM ...	ASTM ...
Ductile-Iron	X	X	AWWA...	ASME ...
Galvanized Steel	X	X	ASTM ...	
Malleable Iron	X	X		ASME ...
PE	X ¹		ASTM ...	ASTM ...
PE-AL-PE	X	X	ASTM ...	ASTM ...
PEX ^{2,3}	X	X	ASTM ...	ASTM ...
PEX-AL-PEX ⁴	X	X	ASTM ...	ASTM ...
PVC	X ¹		ASTM ...	ASTM ...
Stainless Steel	X	X	ASTM ...	

² When PEX tubing is placed in soil and is used in potable water systems intended to supply drinking water to fixtures or appliances, the tubing or piping shall be sleeved with a material approved for potable water use in soil or other material that is impermeable to solvents or petroleum products.

³ PEX tubing shall meet or exceed the requirements of ASTM F 876-08 or an equivalent or more stringent standard when used in continuously recirculating hot water systems and the PEX tubing is exposed to the hot water 100% of the time.

⁴ The use of PEX-AL-PEX in potable water supply systems is not adopted.

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604.1.2 PEX All installations of PEX pipe where it is the initial plumbing piping installed in new construction shall be flushed twice over a period of at least one week. The pipe system shall be first flushed for at least 10 minutes and then filled and allowed to stand for no less than 1 week, after which all the branches of the pipe system must be flushed long enough to fully empty the contained volume. This provision shall not apply to the installation of PEX pipe where it replaces an existing pipe system of any material.

(1) *At the time of fill, each fixture shall have a removable tag applied stating:*

(a) *"This new plumbing system was first filled and flushed on _____ (date) by _____ (name). The State of California requires that the system be flushed after standing at least one week after the fill date specified above. If this system is used earlier than one week after the fill date, the water must be allowed to run for at least two minutes prior to use for human consumption. This tag may not be removed prior to the completion of the required second flushing, except by the building owner or occupant."*

(2) *Prior to issuing a building permit to install PEX pipe, the building official shall require as part of the permitting process that the contractor, or the appropriate plumbing subcontractors, provide written certification that he or she will comply with the flushing procedures set forth in the Code.*

(3) *The building official shall not give final permit approval of any PEX plumbing installation unless he or she finds that the material has been installed in compliance with the requirements of the Code, including the requirements to flush and tag the systems.*

(4) *Any contractor or subcontractor found to have failed to comply with the PEX flushing requirements shall be subject to the penalties in Health and Safety Code, Division 13, Part 1.5, Chapter 6 (Section 17995, et seq.).*

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604.11 PEX. Cross-linked polyethylene (PEX) tubing shall be marked with the appropriate standard designation(s) listed in Table 14-1 for which the tubing has been approved. PEX tubing shall be installed in compliance with the provisions of this section. *All PEX pipe installed in California must provide at least 30-day UV protection.*

604.11.1 PEX Fittings. Metal insert fittings, metal compression fittings, and cold expansion fittings used with PEX tubing shall be manufactured to and marked in accordance with the standards for the fittings in Table 14-1. *Brass fittings used with PEX tubing shall meet or exceed NSF 14-2009 standards to prevent dezincification and stress crack corrosion.*

Notation

Authority: Health and Safety Code §§18934.5, 18938(b)

References: Health and Safety Code §§18916, 18929.1, 18938(b)