

## BC BUILDING CODE 2018

# SENTENCE 3.1.5.16.(1), COMBUSTIBLE PIPING MATERIALS

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by Naki Ocran, MASC, P Eng, CP

The BC Building Code 2012 in Division B Sentence 3.1.5.19.(1) addresses the use of combustible piping in buildings required to be of noncombustible construction. The Code permits the use of combustible piping in buildings required to be of noncombustible construction; however, there are limitations depending on the type and characteristics of the piping and the location.

The Building Code requires all combustible piping and tubing and associated adhesives in buildings required to be of noncombustible construction to have a flame-spread rating (FSR) of not more than 25. Combustible piping used in a high-rise building is also required to have a smoke developed classification (SDC) of not more than 50.



Photo Courtesy of Ipex Inc.



Image credit: Anthem Properties /  
Chris Dikeakos Architects

Plastic piping not meeting the required FSR or SDC is allowed only if concealed in a wall or concrete floor slab and is not permitted to project outside of the concrete even if concealed behind other components permitted in noncombustible buildings, such as behind combustible plumbing fixtures or inside cabinets. Combustible drain, waste and vent piping may not be used in vertical services spaces.

ABS piping has an FSR exceeding 25 and therefore cannot be used in buildings required to be noncombustible.

PVC piping may have a FSR less than 25 but its SDC may exceed 50; therefore, it may be used in buildings required to be noncombustible but not in high-rise buildings.

There are several commercially available combustible pipes that meet the required FSR.

Combustible sprinkler piping where permitted by the Building Code is not subject to the limits on FSR and SDC.

### About the Author

**Naki Ocran (MASC, P Eng, CP)** holds a Master of Applied Science Degree in Civil Engineering from Carleton University, specializing in Fire Safety Engineering, and a Bachelor of Science Degree in Civil Engineering from Drexel University in Philadelphia, PA. Naki assists in developing Alternative Solutions and Building Code compliance with a special emphasis on fire modeling, evacuation modeling and heat transfer analysis. Naki is a Professional Engineer and Certified Professional.

*The information in this letter is for discussion purposes only. Refer to applicable Building Codes and Fire Codes for actual requirements.  
The designer should always check with the AHJ for local policies and interpretations regarding the foregoing.*

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