

NOTICE

Intumescent Coatings on Exterior Sheathing

To delay the possible spread of fire during construction, the Alberta Fire Code 2006 (AFC 06) contains provisions requiring fire protection of adjacent buildings during construction. Further guidelines and clarification were provided in a Fire Code Interpretation (STANDATA FCI-09-02) issued in July 2009.

The AFC 06 states:

5.6.1.2. Protection of Adjacent Building

1) Protection shall be provided for exposed adjacent *buildings* or facilities from fire originating from *buildings*, parts of *buildings*, facilities and associated areas undergoing construction, alteration or demolition operations. (See Appendix A.)

The Appendix to the AFC 06 states:

A-5.6.1.2.(1) Methods or materials to protect adjacent buildings or facilities can range from active to passive systems such as spatial separation, installing water curtains, using construction methods and materials that may include gypsum sheathing, or erecting a temporary fire barrier such as a fire tarpaulin.

Background

FCI-09-02 outlines a number of methods that can be utilized by a builder, if approved by a Fire Safety Codes Officer, to comply with the requirement of Article 5.6.1.2. to protect buildings from fire during construction.

Where combustible sheathing is installed on a building, one of the methods outlined in FCI-09-02 is:

- application of an acceptable intumescent or flame-retardant coating in accordance with the manufacturer's directions and the criteria utilized in any performance tests,

A number of products have come into the marketplace and are being marketed as meeting the requirements for protection called for in Article 5.6.1.2. and described in FCI-09-02.

In many instances, these products are also being marketed as an alternative to gypsum sheathing to meet requirements of the Alberta Building Code 2006 (ABC 06). The use of such products as an alternative solution under the ABC 06 is discussed in the "[NOTICE – Fire Resistant Coatings on Exterior Sheathing](#)" issued by Alberta Municipal Affairs – Safety Services Branch on February 1, 2012.

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For further information contact the Safety Services Branch toll-free at 1-866-421-6929.

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Recommendation

Alberta Municipal Affairs recommends that Fire SCOs only consider wood-based sheathing materials, treated with fire-resistant coatings, as one of the acceptable methods of meeting the requirements of Article 5.6.1.2. when the product adequately addresses:

- **Flame Spread** – the product should have flame spread performance characteristics of less than 25 as tested according to CAN/ULC-S102, “Test for Surface Burning Characteristics of Building Materials and Assemblies”). The manufacturer should empirically demonstrate, through listing or marking, compliance to this standard in accordance with the requirements of the Standards Council of Canada.
- **Weather Resistance** – the product should be capable of withstanding expected weather exposures and maintaining flame spread performance characteristics during the period it will be exposed.
- **Water Vapour Transmission** – the product as installed should have no detrimental effects to the building envelope’s ability to shed moisture.
- **Quality Control** – the manufacturer must be able to demonstrate that the product is manufactured and applied to the wood-based substrate in a consistent and verifiable method.
- **Function** - the builder must demonstrate how the installed product will contribute to the fire protection of the exposed structures and facilities and the building which the product is being installed on.
- **Installation** – if the sheathing materials are to be permanently installed on the building under construction the builder must ensure that the installation meets the objectives of the Alberta Building Code.

Intent - the installed product may be considered one of a number of elements which will contribute to the overall approved Fire Safety Plan for the building site.

Other Resources for Fire Safety during Construction

The AFC 06 requirements and STANDATAs FCI-09-01, FCI-09-02, and FCI-09-03 were designed to provide Fire Safety Codes Officers the discretion to evaluate methods of providing this protection in a manner appropriate to the needs, capabilities and capacities of their community, the construction and the surrounding properties.

These documents are found at the following links:

FCI-09-01 Water Supplies and Access for Firefighting:

<http://municipalaffairs.alberta.ca/documents/ss/STANDATA/fire/fci/FCI-09-01.pdf>

FCI-09-02 Protection of Adjacent Building:

<http://municipalaffairs.alberta.ca/documents/ss/STANDATA/fire/fci/FCI-09-02.pdf>

FCI-09-03 FIRE SAFETY PLAN – Building and Construction Sites:

<http://municipalaffairs.alberta.ca/documents/ss/STANDATA/fire/fci/FCI-09-03.pdf>

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