

Building Bulletin

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Use of Thermally Modified Wood Products

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The City of Kitchener Building Division has received inquiries regarding the use and limitations of thermally modified wood products when used in building construction.

What is Thermally Modified Wood?

Thermally modified wood is lumber that has been heated to very high temperatures in a controlled, oxygen-limited environment. This process alters the wood's internal structure without the use of chemical preservatives.

Purpose of Thermal Modification

The thermal modification process is intended to improve a wood product's resistance to moisture, decay, and dimensional changes such as shrinking, swelling and warping. As a result, it is desirable for exterior applications including cladding / siding, decking, fascia, soffits, etc.

Ontario Building Code (OBC) Considerations

While thermal modification is intended to improve moisture and decay resistance, where pressure-treated wood is required by the OBC, it must conform to **CAN/CSA O80 Series (Wood Preservation)** which currently only recognizes chemical pressure treatment. As a result, thermally modified wood products would be considered innovative when pressure-treated lumber is required by the OBC.

City of Kitchener Guidance

Until additional information becomes available, or the OBC is updated, the following guidance will apply;

1. Applications where pressure-treated wood is required by the OBC, or the wood is Structural:

The use of thermally modified wood will require:

- A **Canadian Construction Materials Centre (CCMC) Evaluation**, or
- A **Building Materials Evaluation Commission (BMEC) Authorization**

At this time, the City is not aware of thermally modified wood products that have obtained these approvals.

2. Where pressure-treated wood is **NOT** required by the OBC and is not Structural

(e.g., cladding, skirting, fascia, soffit, or similar non-structural exterior finishes):

Thermally modified wood may be used without CCMC or BMEC approval, provided that all other applicable OBC requirements are satisfied.

The City recognizes that these products may be desirable in certain applications, and are prepared to accept their use where the appropriate approvals are in place and/or where the Code is updated to address their use.

As always thank you for your cooperation and if you have any questions, please contact us.