

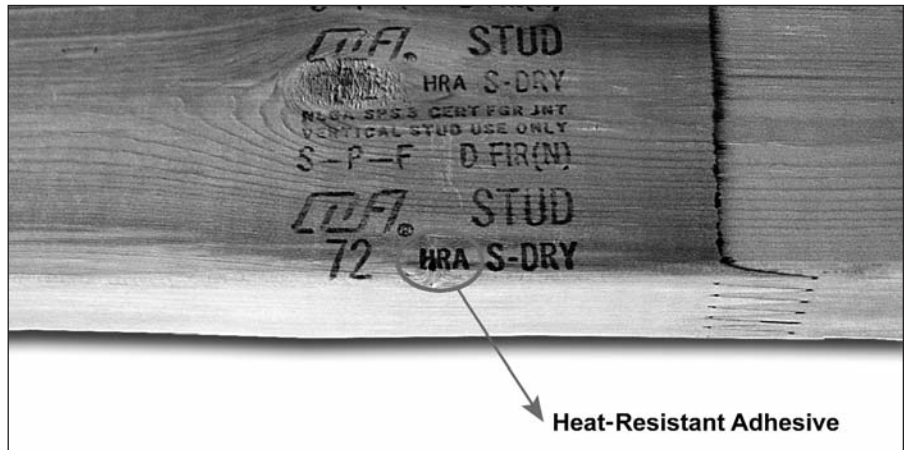
# Construction codes

## New requirements for adhesives used in fire-rated structural wood assemblies

Subject to final approval by the Canadian Commission on Building and Fire Codes, the National Building Code (NBC) of Canada 2010 will contain new requirements for adhesives employed in the manufacture of fingerjoined studs and prefabricated I-joists to be used in assemblies that require a fire-resistance rating in buildings covered in Part 9 of the NBC (e.g., commercial and multi-unit residential buildings).

*The lumber industry quickly responded by developing a fire-testing protocol, as well as an HRA (heat-resistant adhesive) stamp, for fingerjoined lumber intended for use in fire-rated wall assemblies.*

The fingerjoined stud lumber issue arose when the lumber industry asked that its special products standard SPS-3 “Fingerjoined Stud Lumber-Vertical Use Only” be included within the CSA standard O86



“Engineering Design in Wood.” The specific question was whether adhesives currently used in fingerjoined wood studs met fire resistance requirements. The lumber industry quickly responded by developing a fire-testing protocol, as well as an HRA (heat-resistant adhesive) stamp, for fingerjoined lumber intended for use in fire-rated wall assemblies.

To reflect these developments, a footnote would be added to Table A-9.10.3.1.A. of the 2010 NBC stating

that fingerjoined studs for fire-rated assemblies must meet the SPS-3 standard, which specifies that studs shall have the HRA stamp (*see photo*). These HRA adhesives are mostly phenolic-based (usually dark brown in colour), as well as some specifically formulated urethanes and melamines (pale coloured) that pass the test.

In the case of pre-fabricated I-joists, the fire resistance ratings in the 2005 NBC (Table A-9.10.3.1.B.) were derived from the results of tests conducted by the NRC Institute for Research in Construction (NRC-IRC) on I-joists that contained strictly phenolic-based adhesives.

Questions arose when some manufacturers began using adhesives different from those in the NRC tests. The new requirements in the 2010 NBC would clarify the issue by adding two footnotes to Table A-9.10.3.1.B.: one stating that the I-joist adhesive must be a phenolic that complies with CSA standard O112.7.; the other stating that the adhesive used in laminated veneer lumber (LVL) flanges must be a phenolic that complies with CSA standard O112.6.

Questions regarding these new requirements can be directed to Frank Lohmann at (613) 993-9599 or email frank.lohmann@nrc-cnrc.gc.ca.

## Final Public Review for 2010 Codes now taking place

A public review of proposed changes to the National Construction Codes is now taking place and will continue until October 30, 2009 on the National Codes website ([www.nationalcodes.ca](http://www.nationalcodes.ca)). The Canadian Commission on Building and Fire Codes (CCBFC) invites all Canadians to take part in this last opportunity for public review of technical changes proposed for the 2010 Codes.

The technical changes being proposed cover four main topics – care occupancies, climbable guards, protection against falls from residential occupancy windows, and radon. Also included will be proposals for updating the tables of documents currently referenced in the Codes, as well as those for seismic data and localities in National Building Code Appendix C.

If you are interested in receiving more information, please contact Anne Gribbon, Secretary to the CCBFC, at 613-993-5569 or email [codes@nrc-cnrc.gc.ca](mailto:codes@nrc-cnrc.gc.ca).