

## Acceptance of Plastic and Wood/Plastic Composite Deckboards and Railing Systems in Canadian Residential Construction

The use of plastic and wood/plastic composite materials is growing at a very rapid pace in North American residential construction. These innovative products offer durability, strength, aesthetic appeal, often use recycled plastic materials and cellulosic materials that would otherwise be destined to landfill. These materials are an effective and cost-effective replacement for conventional lumber products and a boon to Canadian residential construction.

The acceptability of plastic and wood/plastic composite deckboard and railing systems in Canadian construction would be unquestioned if an applicable performance and/or product standard was referenced in the National Building Code of Canada. Since such a standard does not exist it falls upon each individual product deckboard and railing system manufacturer to obtain an opinion on their product's suitability for use in Canada. This is the responsibility of the CCMC (Canadian Construction Materials Centre) of the National Research Council of Canada. For each individual product manufacturer, CCMC technical staff determines manufacturer-specific material properties and performance criteria that need to be met for the manufacturer's intended application. The manufacturer must then demonstrate to CCMC, by external third-party testing, that his product meets the properties dictated by CCMC. Depending on the type of product type and characteristics and the intended use it can take as long as 5 years to obtain a CCMC evaluation report. The latter is only issued after all the CCMC requirements have been met. To obtain such a report can cost as much as \$150,000.

As a result, Canadian use of these innovative products is often prevented and unfairly delayed by the long and unwieldy CCMC evaluation processes.

Another North American product evaluation system for such innovative products is worthy of comparison to the CCMC approach. The US ICC-ES (International Construction Code – Evaluation Services), like CCMC, examines each manufacturer's product and determines its suitability for residential construction. Also like CCMC, the ICC-ES evaluates product suitability based on product and performance requirements. Unlike CCMC however, ICC-ES relies on an already established, single set of performance requirements, called Acceptance Criteria, to determine product acceptance. This Acceptance Criteria document performs the same role as CCMC Technical Guides but, unlike CCMC's Guides, applies universally to all products of that category and intended use. This greatly reduces the time and costs needed to bring the innovative product to market.

## **SUMMARY:**

- Only suitable products should be allowed in the Canadian residential market. This
  can be accomplished by a fair, rapid and uniform product acceptance process based
  on an established set of performance requirements.
- For the benefit of the manufacturing industry and the Canadian construction industry innovative products must be evaluated efficiently to ensure rapid commercial availability.
- Like the CCMC approval process's intent, the US ICC-ES model is a good product acceptance process model. However North-American manufacturers presently have no option but to use the CCMC technical guide/evaluation report system to obtain product approval in the Canadian marketplace. The present CCMC process is slow, costly and unresponsive to the demands of innovative product manufacturers and industry in general.
- Until the Canadian CCMC approval process is improved, manufacturers and endusers will continue to face long, costly delays before their products are finally deemed acceptable and available to marketplace and the construction industry.

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