

# EPAC Technical Information Bulletin

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## EXPANDED POLYSTYRENE ASSOCIATION OF CANADA

**The Expanded Polystyrene Association of Canada has great news for Designers, Specifiers and Builders: Use EPS insulation for any application, EPAC/NRC Joint Research Project confirms EPS insulation performance and CAN/ULC-S701-97 emphasizes quality.**

### **1. Use EPS insulation for any application:**

The standing committee on Houses recently agreed to the removal of Sentence 9.25.2.2.(4) from the National Building Code (NBC) of Canada. The provisions of this Sentence restricted the use of type 1 EPS insulation in below grade applications the Standing Committee recognized this restriction could not be technically supported.

### **The Standing Committee on Houses decision recognizes that:**

- The above provision was only applicable to Part 9 residential building applications. Use of EPS insulation was already permitted in buildings subject to all other Parts of the NBC including such high stress applications as insulation material beneath freezer floors and ice rinks.
- Type 1 EPS insulation provides builders/owners subject to the provisions of Part 9 an additional cost-effective insulation material. Designers now have the flexibility of an additional source of insulation material proven to perform successfully in below-grade applications.
- The removal of this Sentence in the Code eliminates confusion for designers on product application since all types of EPS insulation are permitted in any applications.

In short, this change to the National Building Code of Canada means that you can use EPS insulation for all types of residential, commercial and industrial construction. A copy of the decision by the Standing Committee on Houses is available upon request.

*More...*





## **2. EPAC/NRC Joint Research Project confirms EPS insulation performance:**

The EPS industry has just completed a joint National Research Council of Canada/Expanded Polystyrene Association of Canada (NRC/EPAC) research project. This project documents the successful performance of all EPS insulation types used as below-grade insulation material based upon a two-year exposure in a below-grade foundation application.

### **Key performance issues highlighted during the project were:**

- The EPS insulation was directly exposed to high moisture content soil conditions; however, the moisture content after the two-year exposure period was found to be less than 0.5% by volume on average.
- The in-situ thermal performance of the EPS insulation was monitored over the two-year exposure period and found to remain constant - i.e., there was no loss in thermal resistance value exhibited based upon actual field monitoring.
- Samples taken from the field exposure included were subjected to laboratory testing to confirm thermal performance and durability. Test results indicated there was no change in material properties after the two-year field exposure.

- The research project included development of a durability test protocol to provide a means of assessing performance of all types of insulation subjected to extreme thermal gradient and environmental cycling. Testing performed by NRC confirmed that all types of EPS insulation retained their specified material properties even after being subjected to freeze-thaw cycling.

The final NRC report will be available in early 1999.

## **3. CAN/ULC-S701-97 emphasizes quality:**

CAN/ULC-S701-97, Standard For Thermal Insulation, Polystyrene, Boards and Pipe Covering, is now the product standard for expanded polystyrene (EPS) insulation in Canada.

CAN/ULC-S701-97 supercedes CAN/CGSB-51.20-M87 and includes some significant revisions that will be of interest to all EPS insulation users, such as:

- Inclusion of standard in-plant quality control procedures for manufacturers
- Minimum requirements for third party certification of product quality

Third party certification of product quality by nationally recognized certification bodies is available upon request.