



## 2 LB CLOSED CELL POLYURETHANE FOAM INSULATION INFORMATION SHEET

### SHUSWAP INDIAN BAND DEVELOPMENT AND BUILDING DEPARTMENT

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## 2 LB CLOSED CELL POLYURETHANE FOAM INSULATION INFORMATION SHEET

The intent of this information sheet is to provide the applicant with information with respect to the requirements when planning to install closed cell (2 lb density) polyurethane foam insulation on the underside of roof sheathing that is installed over top of wood framed structures, engineered wood trusses or engineered wood "I" joists, etc. in a non-vented roof assembly.

Use caution when designing your building envelope using 2 lb density closed cell polyurethane insulation on the underside of the roof sheathing and installing roofing materials directly overtop of the sheathing. There are a number of concerns within the construction industry with respect to this installation and the ability of the structural wood members to dry, when wet from ingress moisture from the topside of the roof assembly as the roofing system ages. The concern is about long term deterioration of these structural wood members due to the potentially limited drying ability and the potential for decay and structural failure.

Use caution when spraying 2 lb closed cell polyurethane foam down onto the bottom chord of trusses at the elevation of the gypsum board ceiling. Certain roofs experience substantial seasonal truss lift that may tear or damage the integrity of the foam's vapour barrier and air barrier qualities.

The Canadian Urethane Foam Contractors Association (CUFCA) and the Spray Foam Institute (SPI) are in the process of raising funds to begin testing with the National Research Council (NRC) and the Canadian Construction Materials Council (CCMC). Fund raising is expected to be completed by late 2009. Upon completion of fund raising CCMC testing will commence with a 2 to 3 year testing program.

CCMC's and NRC's current stance on this issue is that they require these roof systems to be vented as per the 2005 National Building Codes, which is what the 2006 British Columbia Building Code is based on. Therefore, the Shuswap Development and Building Department will not accept this type of assembly under Part 9 of the 2006 British Columbia Building Code.

However, if the proposed system is engineered by a Professional Building Envelope Architect registered in the Province of British Columbia or Building Envelope Engineer registered in the Province of British Columbia and they provide the Shuswap Development and Building Department with a letter approving the assembly and the letter **specifically identifies** that project and is complete with their professional seal and signature, then the system will be accepted for that particular project.

Alternatively, the roof can be sheathing and foamed on the underside of the sheathing if the top side of the sheathing is strapped to achieve the 63mm of clear venting, as required by section 9.19.2.13 Clearances of the 2006 British Columbia Building Code, then re-sheathed and properly vented, creating a vented roof assembly that will assist in drying of the top chords of the structural wood members in question. The roofing waterproofing (shingles, etc) would then be installed over the second layer of sheathing. This WILL comply with Part 9 of the 2006 British Columbia Building Code.

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INFORMATION SHEET**

**Project Name:** \_\_\_\_\_  
\_\_\_\_\_

**Project Address:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Legal Description:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Date:** \_\_\_\_\_

**Applicant's Name:** \_\_\_\_\_  
\_\_\_\_\_

- We have consulted with and attached the required approval letter from a Professional Building Envelope Specialist registered in the Province of British Columbia or Building Envelope Engineer registered in the Province of British Columbia.