



MORRISON HERSHFIELD

October 28, 2013

Ray Snitynsky, M.Sc.
TBC (Canada) Inc.
45016 Rochon Rd.
P.O. Box 577, La Salle, Manitoba
R0G 1B0

Dear Mr. Snitynsky,

Re: Use of Quik-Therm Concrete Insulation System (CIS) in Flood and High Moisture Conditions

We have been asked to discuss the appropriateness of using Quik-Therm CIS in flood and high moisture conditions, in particular the province of Alberta.

Quik-Therm CIS is composed of 2" (or 3") of expanded polystyrene (EPS) insulation, laminated on each side with a reflective and impermeable facing, and high density foam studs with plastic "T-bars" embedded for fastening of interior finishes.

This product is intended for installation inboard of concrete and masonry walls. When installed as per the manufacturer's recommendations, these components form a continuous layer of thermal resistance.

Quik-Therm 2" CIS has been tested by Architectural Testing Inc. (ATI), a certified laboratory, according to the requirements of ASTM C1363-05. It was found to have an effective R-value of 17.18. Based on this result, it is reasonable to assume that the addition of one inch of foam (R-4.8) would result in the 3" Quik-Therm system providing a minimum thermal resistance of R-22.

A code-compliant 2x6 wall with nominal R-20 batt insulation and wood studs has an effective R-value of 15.8 according to ASHRAE 90.1-2010, Table A3.1D. With effective R-values in excess of this level, the 2" and 3" Quik-Therm CIS therefore satisfy the thermal resistance requirements of the Alberta Building Code.

The durability of expanded polystyrene and plastic are not affected by exposure to water, and they do not contain any organic components which are capable of supporting mould growth. In addition, neither of these materials absorbs water. Unlike fibreglass, the impact of moisture on the R-value of foam insulation is negligible. These are advantages in areas which are susceptible to flooding and/or high moisture levels. Quik-Therm CIS must be installed with an independently supported thermal barrier, as noted in their installation instructions. Part 9 lists several materials which can be used to satisfy this requirement, including some which are tolerant to wetting. This product is also more "DIY" friendly than many alternatives, including wood-framed walls.

Additional information regarding MH's opinion on Quik-Therm CIS can be found in letters previously submitted to TBC (Canada) Inc.

Yours truly
Morrison Hershfield Limited




Mark Lawton, P.Eng.
Sr. Building Science Specialist, Principal

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