



## TECHNICAL BULLETIN No. 1019

**DATE: JUNE 15, 2000**

### **SUBJECT: INSULSNAP R-VALUES IN CAVITY WALL CONSTRUCTION**

INSULSNAP™ is Insulfoam’s new scoreboard product for cavity wall applications that is based on our R-TECH™ technology. R-TECH consists of polymer film laminates that are heat fused to a high quality EPS core. One of the films used to manufacture R-TECH is highly reflective and carries a very low emissivity rating. When this low emittance surface is placed toward the air space that exist in cavity wall applications additional thermal resistance or R-Value can be obtained.

In most cavity wall applications 1.5" – 2.5" rigid insulation is placed against a block or gypsum wall. This insulation is held in place by brick ties that are used to secure the facade material (i.e. brick or stone). Next an air space is left in place that ranges from 1" – 2" and the facade is then placed. This creates an air space in the wall assembly that is 1" – 2" in depth.

The American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE) has determined that when a dead air space is bounded by a material that has a low emissivity that the air space increases its capacity as an insulator and its R-Value increases. This is the available design for cavity wall applications that incorporate INSULSNAP. The following chart represents the **effective R-Value** for typical thickness of INSULSNAP when used in cavity wall applications where a dead air space of 1.0" to 3.5" exist:

INSULSNAP Thickness	Design Temp ° F	INSULSNAP R-Value <sup>1</sup>	Effective R-Value INSULSNAP+ Air Space <sup>2</sup>
1.50"	75	5.8	8.1
	40	6.3	<b>8.6</b>
1.75"	75	6.7	9.1
	40	7.3	<b>9.6</b>
2.00"	75	7.7	10.0
	40	8.3	<b>10.6</b>
2.25"	75	8.7	11.0
	40	9.4	<b>11.7</b>
2.50"	75	9.6	11.9
	40	10.4	<b>12.7</b>

<sup>1</sup> Typical Tested R-Value using Type I EPS

<sup>2</sup> Value requires 1" – 3.5" dead air space and R-TECH metalized facer toward air space.

If there are questions regarding the data presented in this document and or questions pertaining to the use of Insulfoam INULSNAP, please feel free to contact Insulfoam LLC-Technical Center @1/800-469-8870.

### **Insulfoam Technical Center**

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