

# ICYNENE AND LEED-SCHOOLS

## LEED for Schools (2007)

LEED is a national third-party certification system that recognizes leadership in green building. The LEED Green Building Rating Systems are voluntary, consensus-based, and market-driven. Based on existing and proven technology, they evaluate environmental performance from a whole building perspective over a building's life cycle, providing a definitive standard for what constitutes a green building in design, construction, and operation.

**The LEED for Schools Rating System** recognizes the unique nature of the design and construction of K-12 schools. It addresses issues such as classroom acoustics, master planning, mold prevention and environmental site assessment.

By addressing the uniqueness of school spaces and children's health issues, LEED for Schools provides a unique, comprehensive tool for schools that wish to build green, with measurable results. LEED for Schools is the recognized third-party standard for high-performance schools that are healthy for students, comfortable for teachers, and cost-effective.



LEED for Schools (2007) Credit	Total Available Points	Relevant Benefit of Icynene Insulation and Air Barrier Material	Maximum Icynene <b>Direct Point</b> Contribution		
			ICYNENE LD-C-50™	ICYNENE LD-R-50™	ICYNENE MD-R-200™
EAP2: Minimum Energy Performance	Prerequisite	Icynene Insulation and air barrier materials may contribute towards meeting minimum energy performance of ANSI/ASHRAE/ IESNA Standard 90.1-2004 or equivalent local code.	Prerequisite	Prerequisite	Prerequisite
EAC1: Energy Performance	10	Up to 11 % energy savings can be achieved with Icynene insulation versus traditional energy options. This can earn up to 3 points, assuming the minimum energy performance requirements for EAP2 were met through other means.  *Icynene insulation products can reduce heating and cooling costs by up to 50%. The 2006 DOE Energy Use study shows that over 40% of building energy consumption is attributed to space heating and cooling. See 2006 U.S. Energy End-Use Split Chart.	3*	3*	3*

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## Icynene insulation products in LEED for Schools (2007)

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MRC4: Recycled Content	2	The 3.4% by weight of recycled content (normalized by adjusting for pre-consumer versus post-consumer) of Icynene's MD-R-200 product can contribute towards the 10-20% of building material, based on cost, required to be made of recycled material in order to earn 1-2 points, respectively.	-	-	<1
MRC5: Regional Materials	2	Projects local to Toronto, Ontario may contribute towards the minimum 10% (1 pt) of local content building material, based on cost, required for credit (20% local content required for 2 pts).  **See Regional Sourcing Reference Map in the "Icynene and Your LEED Projects" brochure for the definition of "local". Additionally, Icynene cannot consistently guarantee the source location of our raw materials.	<1**	<1**	<1**
MRC6: Rapidly Renewable Materials	1	The castor oil renewable material content in Icynene's LD-R-50 product can contribute towards the 2.5% of building material, based on cost, required to be made of renewable material in order to earn credit.	-	<1 (LD-R-50 only)	-
IEQP1: Minimum Indoor Air Quality Performance	Prerequisite	The reduction in air leakage and accompanying moisture movement provided by Icynene's insulation products may contribute towards meeting the minimum requirements of Section 4-7 of ASHRAE 62.1- 2004, Ventilation for Acceptable Indoor Air Quality.	Prerequisite	Prerequisite	Prerequisite
IEQP3: Minimum Acoustical Performance	Prerequisite	Icynene insulation products may contribute towards meeting reverberation time requirements, sound transmission class requirements and maximum background noise levels of 4 dBA in primary learning spaces, as specified in ANSI S12.60-2002.*	Prerequisite	Prerequisite	Prerequisite
IEQC4: Low-Emitting Materials	4	Icynene insulation may contribute towards low-emitting materials within ceiling and wall systems which can earn one point if compliant with California Department of Health Services Standard Practice for Testing of Volatile Organic Emissions From Various Sources Using Small-Scale Environmental Chambers.	1	1	1
IEQC10: Mold Prevention	1	Icynene insulation products offer a range of water vapor permeability but all minimize airborne moisture transfer.  The light density products also allow moisture to dissipate from the building envelope contributing towards the reduction in potential for mold growth in the building envelope.  Additionally, Icynene insulation products have been 3rd party tested to confirm they do not provide a food source for mold.	<1	<1	<1

\*Note: Sound can travel through a variety of mediums, but the most common means of transport is through air. The most effective way to reduce the transmission of airborne sound is therefore to effectively control air movement. As a combined air barrier and insulation material, Icynene products offer an effective means of reducing sound problems that are the result of air leaks, penetrations and alternative (flanking) sound paths. The best practice is to partially fill the cavity, sufficient to provide an air seal but also to provide an air gap discontinuity for the transmission of sound.

