



LEED: Potential Points Obtainable with the use of EMSEAL Preformed Sealants

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News: [USGBC to Revamp LEED Rating System](#)
(Nov. 9, 2007 from ENR)

LEED

[US Green Building Council](#)

Air Barrier Design

[Air Barrier Association of America](#)

Building Envelope

[National Building Envelope Council](#)

EMSEAL supports the use of sustainable and green building practices and energy efficient design in all new and remedial construction. EMSEAL manufactures preformed joints sealant systems that are used below grade, in parking, plaza, and stadium decks building envelopes, and the interiors of the buildings. The unique features of these products are synchronous with LEED design principles and can contribute towards achieving LEED points.

As the USGBC moves to revamp its LEED rating system, one of the changes will be the addition of life-cycle analysis. Durability has long been a hallmark of EMSEAL's throughout the product line. Discerning designers recognize the high cost of lower quality materials in shorter usable lifespans. The full cost, and environmental impact of replacing lower-cost materials goes far beyond the cost of the product. Air-borne pollution from grinding dust and cleaning solvents, solid waste from substrate repair and discarded failed product, noise, staging, and retrofit labor costs are the true life-cycle expenses in lower performing material selections.

[Hybrid preformed joints sealant systems](#) ([COLORSEAL](#), [BACKERSEAL](#), [SEISMIC COLORSEAL](#), [DSM SYSTEM](#) and [SJS-SEISMIC JOINT SYSTEM](#)) that are used in the building envelope and the interior and exterior structure of a building may contribute towards achieving LEED points. Based on the standards set forth by the LEED Rating System 2.1 pre-formed sealants may contribute in the following categories:

LOW-EMITTING MATERIALS: Adhesives & Sealants

EMSEAL's hybrid impregnated materials use emulsions of 100% acrylic that are water based, not solvent based and do not contain any chlorinated wax, isobutylene or other deleterious chemicals. The silicone is applied and cured before leaving the factory ensuring that any remaining volatiles are effectively zero and/or only in trace amounts.

The VOC of the liquid silicone shipped for use in limited amounts as an accessory to EMSEAL's silicone-coated products is around 50 grams / liter depending on the type and color. The BAAQMD (Bay Area Air Quality Management District) in Northern California - the most restrictive in the nation - require VOC's for Architectural sealants to be less than 250 grams/liter. This product easily meets this requirement.

OPTIMIZE ENERGY PERFORMANCE—REDUCTION

According to the US Department of Energy, up to 40% of the costs to heat and cool a building are consumed due to air leakage through the building envelope. Preformed hybrid sealants designed to resist uncontrolled air movement through structural expansion joints and control joints through the building envelope can substantially reduce the amount of this leakage, resulting in reduced building energy consumption and are a key component of [air-barrier assembly design](#).

In addition, preformed, impregnated foam sealants from EMSEAL feature [R-Values](#) that can restore or preserve continuity of insulation across a wall design thereby ensuring that thermal breaks are substantially eliminated.

INDOOR ENVIRONMENTAL QUALITY--Controllability of Systems

Preformed hybrid sealants in the building envelope provide for watertight sealing.

They seal the building from water intrusion which can mitigate against the formation of molds, which need moisture to grow. Preformed sealants also help seal against outside contaminants. This translates into helping HVAC systems achieve more precise control of the indoor environment by reducing the amount of uncontrolled outside air entering the building.

INNOVATION & DESIGN PROCESS: Materials and Resources

EMSEAL preformed foam sealants ([COLORSEAL](#), [BACKERSEAL](#), [SEISMIC COLORSEAL](#), [DSM SYSTEM](#) and [SJS-SEISMIC JOINT SYSTEM](#)) as well as [THERMAFLEX](#) solid-slab deck joints, [MIGUTAN](#) sandwich-slab systems, and [MIGUTRANS](#) interior floor joints conserve resources due to the long life-cycle of the products. Installations of these products, or the predecessors from which they evolved, are in place and functioning well in excess of 15 years. In comparison to other materials used to seal building envelopes and structural expansion joints with significantly shorter replacement periods this translates into a materials replacement cost savings in addition to the mitigation of seen and unseen instances of damage to building components and contents as a result of moisture ingress through unidentified sealant failure. This long life cycle postpones the need for retrofit work which, among other costs, uses energy, generates solid waste, and can release silica into the atmosphere from substrate preparation.

INNOVATION & DESIGN PROCESS: Sound Absorption

A wall with an expansion joint or control joint that is sealed with a preformed sealant from EMSEAL ([COLORSEAL](#), [BACKERSEAL](#), [SEISMIC COLORSEAL](#)) will have its sound absorption properties restored to a level approximate to that of a solid wall. To provide an effective acoustical barrier, the specific normal acoustic resistance value must amount to more than 100,000 Rayl/m. Impregnated foam seals at 20% of their original thickness have values in excess of 150,000 Rayl/m. Hybrid preformed foam sealants acting as an acoustical seal under these conditions would thus show superior sound absorbing properties.

REGIONAL MATERIALS--500 MILE RADIUS:



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Expansion joints and precompressed joint sealants by EMSEAL

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