



Helping Achieve LEED™ Green Building Status

The BASF Engineered Building Envelope system can help your construction project attain Leadership in Energy and Environmental Design (LEED™) Green Building status. The LEED Rating System Version 2.1 “represents the U.S. Green Building Council’s effort to provide a national standard for what constitutes a “green” building.”

The BASF Engineered Building Envelope system consists of BASF ELASTOSPRAY® Spray Polyurethane Foam on the roof and BASF WALLTITE® Insulating Air Barrier on the walls, in combination with appropriate primers, transition membranes, other sealants and an optional vapor barrier. It can contribute to attaining LEED credits, including:

Sustainable Sites: Credit 7.2 Heat Island Effect: Roof (1 Point)

Reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat. Use ENERGY STAR® compliant (highly reflective) AND high emissivity roofing for a minimum of 75% of the roof surface.

When combined with appropriate coatings, BASF SPF roofing systems are ENERGY STAR® compliant, working to reduce urban heat island effect and reducing HVAC loads.

Energy Efficiency Prerequisite 2: Minimum Energy Performance (Required) and Indoor Environmental Quality: Credit 7.1 Thermal Comfort (1 Point)

Design the building to comply with ASHRAE/IESNA Standard 90.1-1999 (without amendments) or the local energy code, whichever is more stringent. Design the building envelope and systems to maximize energy performance.

BASF SPF offers superior insulation R value for energy efficiency and occupant comfort.¹

Indoor Environmental Quality: Credit 4 Ozone Protection (1 point)

Reduce ozone depletion and support early compliance with the Montreal Protocol.

BASF SPF systems are available with zero ozone-depleting blowing agent technology. Next-generation blowing agents offered by BASF are approved by the Environmental Protection Agency (EPA) Significant New Alternatives Policy (SNAP) program.

Indoor Environmental Quality: Credit 2 Increase Ventilation Effectiveness

For mechanically ventilated buildings, design ventilation systems that result in an air change effectiveness (Eac) greater than or equal to 0.9 as determined by ASHRAE 129-1997. Design the building envelope to optimize air change effectiveness.

BASF WALLTITE® Insulating Air Barrier system reduces uncontrolled air leakage, allowing mechanical engineers to design adequate ventilation at maximum energy efficiency.²

Materials and Resources: Credit 1.1 Building Reuse: Maintain 75% of Existing Building Structure and Shell (1 Point) & Credit 2.1 Construction Waste Management: Divert 50% from Landfill (1 Point)

Extend the life cycle of existing building stock, conserve resources, retain cultural resources, reduce waste and reduce environmental impacts of new buildings as they relate to materials manufacturing and transport. Maintain at least 75% of existing building structure or shell (exterior skin and framing, excluding window assemblies and non-structural roofing material).

BASF SPF can be applied to a variety of substrates including Built Up Roofing (BUR), modified bitumen, concrete, wood, asphalt shingles, clay tile and metal as a recover system over existing roofs without tear-off, greatly reducing the amount of construction debris in landfills.

Materials and Resources: Credit 4.1 Recycled Content: 5% Post-Consumer + 1/2 Post-Industrial (1 Point)

Increase demand for building products that incorporate recycled content materials, therefore reducing impacts resulting from extraction and processing of new virgin materials.

BASF SPF contains 10-20% post-industrial and/or post-consumer recycled content.

SPF's on-site manufacture and application generates very little debris and waste. A typical 10,000 ft² roofing project produces less than 1/2 cubic yard of scrap, tape and plastic, and from one pint to three gallons of waste solvent.

Life Cycle Assessment

BASF SPF roofing systems offer a lifespan of 20 to 30 years with minimal maintenance. SPF roofing systems are also renewable: while BUR and single-ply membrane systems must be removed and replaced after their usable service, SPF systems can be scarfed down and recoated. SPF roofing also offers the highest wind uplift resistance rating available.

The recommendations contained in this document are for information purposes only. It is suggested that a full review of the LEED Green Building Rating System be made prior to applying for the listed prerequisites and credits. For more information, visit www.usgbc.org

¹ A 1985 study by Gerald Scott P.E. of Texas A&M University showed significant energy savings on 27 different buildings on the campus that had received an SPF roof from 1980 to 1984. The University was able to cover the complete cost of the roof application through energy savings in an average of 4.5 years.

² The US Department of Energy (DOE) reports that 40% of the energy cost of heating and cooling a building is wasted by uncontrolled air leakage through the building envelope. Controlling this waste is seen by the DOE as an essential step towards its long-term goal of zero net energy use buildings. The BASF WALLTITE Insulating Air Barrier system complies with State Energy Codes, and is approved by the Air Barrier Association of America (ABAA) for new construction projects.

ZONE3® is a registered trademark of BASF Corporation
ELASTOSPRAY® is a registered trademark of BASF Corporation
WALLTITE® is a registered trademark of BASF Corporation
ENERGY STAR® is a registered trademark of the U.S. Government
LEED™ is a registered trademark of the U.S. Green Building Council

General inquiries: 800 547-4004

spfinfo@basf.com

www.basf.com/spray

355-1432-04

BASF Corporation
1609 Biddle Avenue
Wyandotte, MI 48192

HELPING MAKE PRODUCTS BETTER™

BASF