

BASF

The Chemical Company

How do you raise
performance
and lower
environmental
impact?



**WALLTITE
ECO™**

Find the answers with WALLTITE **ECO**™

Polyurethane Insulation /Air Barrier System

Your mission—to choose products that deliver on performance and price. Your dream—to select products that are also environmentally responsible. Finding a balance between ecology and economy can be daunting.

We believe the new WALLTITE *ECO*™ insulating air barrier system provides that balance. Based on the decades of proven performance achieved by the original WALLTITE® system—and the result of dedication to continuous product improvement through research and development—WALLTITE *ECO* makes no compromise. We challenge you to ask the tough questions. We are ready to share the answers.

Can I meet – or even exceed – my performance criteria?

You can if you choose a system that does more than just insulate. More than just air seal. If you choose a system that balances people, the planet and the pocketbook.

WALLTITE *ECO* exceeds the requirements of the National Building Code of Canada. In fact, WALLTITE air barrier systems are the only products available on the market today that have successfully met the polyurethane durability test of appendix D of the “Canadian Construction Materials Centre (CCMC) Technical Guide for Air Barrier Systems for Exterior Walls of Low-Rise Buildings.” WALLTITE systems also conform to CAN/ULC-S705.1 (including amendments 1 and 2).

■ Does it have design limitations?

The only limitation is your imagination. Domes, turrets, curved walls, multi-story atria and cathedral ceilings—all are possible with WALLTITE *ECO*. As a spray-applied system, WALLTITE *ECO* offers tenacious adhesion to almost any substrate and almost any shape. It will not shrink, sag or settle over time.

■ Does it improve energy efficiency?

The WALLTITE *ECO* system combines superior insulation performance with an industry-leading air leakage rating. As a spray-applied, seamless system requiring no fasteners, WALLTITE *ECO* does not lose insulating performance to thermal bridging or convection looping. By maximizing the performance of the building envelope, WALLTITE *ECO* allows HVAC systems to operate more efficiently. In many cases, mechanical equipment can be downsized at the design phase of the project.



■ Does it improve durability and structural strength?

WALLTITE *ECO*[™] has the ability to last the life of the building and withstand positive and negative wind pressures without displacement. By virtually eliminating uncontrolled air leakage, the WALLTITE *ECO* insulating air barrier system helps control vapour movement, reducing the risk of condensation, mold, moisture, ice damming, spalling and premature deterioration of building materials. In addition, testing conducted by the CCMC¹ and the United States National Association of Homebuilders² (NAHB) showed that closed-cell, spray-applied polyurethane foam insulation systems like WALLTITE *ECO* actually increase structural strength. When applied between wood and steel stud wall panels onto gypsum board and vinyl siding, closed-cell foam increased rack and shear two to three times. It also increased racking strength 50% when sprayed on oriented strandboard (OSB).

■ Does it improve occupant comfort, health and safety?

WALLTITE *ECO* makes significant contributions to healthy, comfortable indoor environments by creating a draft-free, airtight building envelope that prevents the infiltration of pollutants, toxins and allergens. It also helps to prevent the growth of mold and fungi by controlling the movement of moisture and vapour through the building envelope and helping to eliminate condensing surfaces. Testing has proven that WALLTITE *ECO* does not off-gas any harmful toxins or volatile organic compounds (VOCs) after installation and indoor air quality is safe for occupancy 24 hours after the application.

¹ Effect Of Spray-Applied Polyurethane Foam Insulation on the Racking Load of a Plywood Sheathed Wood Frame Wall, Council of Forest Industries of B.C., Canada, March 1991

² Testing and Adoption of Spray Polyurethane Insulation for Wood Frame Building Construction, National Association of Home Builders (NAHB) Research Center, 1992.





Can I meet my goals for environmental stewardship?

You know 'being green' isn't enough. You need to be responsible. Economically and ecologically. We believe you have to measure your impact to know how to reduce it.

■ Is it responsible?

WALLTITE *ECO*[™] is environmentally responsible in every stage of its lifecycle. It uses less energy during production than traditional insulation materials³. As a lower density, closed-cell foam, it takes less material to produce the performance you need. It burns less fuel during transportation because it's transported as a liquid, then expands 32 times its volume during application—that's a lot of insulation in every drum. WALLTITE *ECO* also lowers impact through installed performance, with outstanding in-place insulation and air barrier energy efficiency, unparalleled durability, improved occupant comfort, health and safety, complete design freedom with less wasted material and the lowest lifecycle cost compared with traditional materials.

WALLTITE *ECO* is also economically responsible. Labour accounts for a large portion of the cost on any project. WALLTITE *ECO* provides three integral systems in one application—insulation, air barrier and vapour barrier (depending on the way it's applied and where it is installed). Steps are reduced and so are labour costs. As a spray-applied, fully self-adhering system, detailing is less complicated so it also installs faster than membrane, torch-applied, batt and board materials for a further reduction in labour requirements.

■ Does it use recycled content?

WALLTITE *ECO* uses polyols made of recycled material. In order to obtain EcoLogo[®] certification, WALLTITE *ECO* contains significant rates of recycled content. Polyethylene terephthalate (PET) is among the most common plastics used for packaging, bottles and containers. Post-consumer and post-industrial recycled material is processed to make raw material for new applications like WALLTITE *ECO*.

■ Does it use bio-based, renewable materials?

WALLTITE *ECO* uses bio-based polyols from rapidly-renewable materials. WALLTITE *ECO* includes polyols from castor oil, which do not need to be chemically processed and enhance the performance of the spray foam. Considerations for selecting renewable raw materials to replace fossil fuel based resources include availability at competitive prices and suitability for industrial applications—all without compromising food production and depleting natural resources. For WALLTITE *ECO*, BASF Canada chose to use renewable content from non-edible crops that do not jeopardize global food production.

Castor (*Ricinus communis* L.) is an important non-edible oilseed crop boasting an average yield of 2000–2,750 kg of oil for each hectare planted every year⁴.

This is an important step in the continuous improvement of BASF products, with the goal of including more bio-based content while enhancing product performance.

³ Plastic building products use less energy from all sources than alternative products. For example, closed-cell, spray-applied polyurethane insulation saved 3.4 trillion BTUs in manufacturing energy over glass fiber in 1990.

⁴ www.castoroil.in

■ Will it harm the ozone layer?

WALLTITE ECO™ uses zero-ozone-depleting blowing-agent technologies approved by the United States Environmental Protection Agency's Significant New Alternatives Program to meet the requirements of the Montreal Protocol on Substances that Deplete the Ozone Layer. BASF was the first polyurethane manufacturer in Canada to meet Montreal Protocol requirements with the development of its zero-ozone-depleting polyurethane foams for industrial pipe and tank applications.

■ Does it contribute to global warming?

WALLTITE ECO boasts a near-zero global warming potential (GWP) score. In addition, the performance attributes it brings to the table—reduced fossil fuel consumption in production and during transportation to the job site, reduced waste, increased durability and installed energy efficiency—help to lower the overall impact of every building in which it is installed.

■ Do you know its total environmental impact?

Designed to harmonize ecology and economy, the award-winning⁵ BASF Eco-Efficiency Analysis methodology assesses the lifecycle impact of a product or manufacturing process from the “cradle to the grave.” The goal is continuous product improvement. The original WALLTITE system outperformed all other insulation materials on its test scores. Then we set out to make it better. The WALLTITE ECO insulation/air barrier system is a direct result of this analysis and improvement process—and the Eco-Efficiency Analysis proves it lives up to expectations.

■ Has it been third-party verified?

WALLTITE ECO has attained the EcoLogo[®] certification—North America's most widely recognized and respected multi-attribute environmental certification mark. Certification criteria include “aggressive rates of recycled content, reductions in a variety of undesirable chemicals, and the promotion of products that conserve resources. In addition to the strict environmental requirements of the Program, these products and services must meet or exceed accepted industry performance and durability standards in their respective classes.”

■ Can it help my project achieve LEED[®] points?

Attaining certification under Leadership in Energy and Environmental Design standards from the Canada Green Building Council (CaGBC) is an increasing goal of designers and developers coast to coast. WALLTITE ECO can help your project achieve points in several categories⁶, including:

EAc1 – Optimize Energy Performance (1-10 points)

MRc8 – Durable building

MRc5.1-5.2 – Regional materials⁷

MRc4 – Recycled content

EQc7.1 – Thermal Comfort: Compliance

⁵ To-date, the BASF Eco-Efficiency Analysis process has won three major awards of interest to the building and construction industry: the Design for Sustainability Award (Society of Plastics Engineers), the Presidential Green Chemistry Challenge Award (U.S. Environmental Protection Agency), and the Best Sustainable Practice Award in the Sustainable Research, Development, Construction Process and Demonstration (Sustainable Buildings Industry Council).

⁶ Consult your LEED Accredited Professional.

⁷ Spray-applied polyurethane foam is considered to be manufactured on site.





Can I be sure of a high-quality application?

You know that even the highest-performing system will not work if it is not installed correctly. We make sure it's done right.

■ Can any contractor install it?

Only certified, approved applicators who have undergone rigorous training can install WALLTITE *ECO*[™]. No one else. Under our Raising Performance to New Heights[®] program, the training is rigorous and only the best make it through. The result? Dedication. Professionalism. Experience. Your job done right the first time.

■ Is there a quality assurance program?

An in-field quality assurance and control program is part of our CCMC approval. In fact, we mandate it. As a third-party resource, Morrison Hershfield Limited—one of Canada's leading multidisciplinary engineering and management firms—certifies our training program and provides follow-up review of installers in the field. The WALLTITE and WALLTITE *ECO* quality assurance program calls for periodic audits of the installers to ensure you get a quality end product.

■ Does it come with a warranty⁸?

When you chose WALLTITE *ECO*, the contractor will provide you with a minimum two-year warranty. Our third-party warranty program for all WALLTITE CCMC approved materials also provides an additional warranty up to \$ 25,000 per project. If you're not satisfied, Morrison Hershfield completes a thorough inspection. BASF also provides a two-year limited product warranty from the date of installation.

⁸ Statements made in this brochure do not constitute a binding legal warranty agreement. Approved warranty details are available online at www.walltite.com.

What are the BASF credentials for leadership?

BASF products are found in almost every aspect of building and construction—from roofs and ceilings to floors and foundations, from walls and windows to doors, trim and coatings, to roads, bridges and levies—contributing to the highest levels of energy, environmental and economic performance.

The comprehensive BASF product line for building and construction is strengthened with access to global R&D resources that contribute to the development of new products, as well as continuous improvement of the existing product portfolio.

Not just a leader in its industry, BASF is a global leader in sustainability and corporate social responsibility. The company is included in the Innovest Global 100 list—among the world's most successful companies in the areas of environmental protection, social affairs and corporate governance. BASF is also listed on the Dow Jones Sustainability Index, the FTSE4Good Index and Storebrand SRI Funds.

With the goal of promoting energy efficient homes, WALLTITE *ECO* has been used to meet the stringent energy performance requirements for the following homes participating in Canada Mortgage and Housing Corporation's EQuilibrium™ (Net Zero Energy) Sustainable Housing Demonstration Initiative: ÉcoTerra™, Now House™ and Alstonvale Net Zero Energy House. In addition, WALLTITE *ECO* has been used in the Maison Pur Énergie net-zero energy home, as well as the Greenpeace Canadian Headquarters.

Similar projects are underway in other areas, including Germany, Minneapolis, New Jersey and the rejuvenation of the East Parkside neighborhood of Philadelphia. Under a partnership with the United Nations, BASF is providing much-needed technologies for tsunami relief projects in India and Sri Lanka. In China, environmental futurist William McDonough is using BASF technologies to help build seven new cities over the next 12 years, with housing for 400 million people. As part of the Gulf Coast rebuild, BASF has been in discussions with those charged with the restoration of the Gulf Coast area after Hurricane Katrina. Visit www.HighPerformanceCommunity.com for more information.

"I have a good, ongoing relationship with BASF. I believe WALLTITE® is the best way to insulate. They stand behind their product and are constantly improving it with research and development. It's a top quality product that's number-one in the marketplace."

– Mike Holmes



WWW.FOAMMASTERS.CA
WWW.WALLTITE.COM

Western Region
Toll-Free: 1-800-891-0671
500 Railway Avenue, Box 369
Blackie, AB T0L 0J0
Fax: (403) 684-3561

Eastern Region
Toll-Free: 1-866-474-3538
162 Barr Street
Montreal, QC H4T 1Y4
Fax: (514) 340-1248

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