SPRAYTITE®
Insulation and Air Barrier
Contractor Frequently Asked Questions

What is the SPRAYTITE® insulation and air barrier material?

The SPRAYTITE product is a closed-cell, spray-applied polyurethane foam (SPF) insulation system that creates a seamless, insulating air barrier to improve the energy efficiency, comfort and durability of homes and buildings.

How is it applied?

The SPRAYTITE system is a sprayed application of a liquid, two-component, non-fibrous product that includes an isocyanate (A-Side Component) and a resin (B-Side Component). It is not a pre-formed, friction-fit batt. It is not a wet application – no water is used. During application, there is a chain reaction between the two components that creates a bond to the substrate as it foams up. It dries, cures and hardens very quickly. This product should always be installed by a trained applicator.

What equipment is required?

The SPRAYTITE insulation system requires specific spray-applied polyurethane foam application equipment, including pumps, proportioners and spray guns. BASF Polyurethane Foam Enterprises LLC offers a selection of top-quality equipment for the proper application of SPF insulation, from leading manufacturers such as Graco.

Are there any special handling considerations?

Always use personal protective equipment, avoid all contact with skin and eyes and do not inhale the vapors of the isocyanate. Before opening the resin, unscrew the bung slowly to release the gas pressure in the drums.

While spraying, always work with adequate ventilation. Protective gloves and face mask are strongly recommended. When atmospheric levels may exceed the occupational exposure limit (PEL or TLV), approved air purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change-out schedules are in place. Persons with known respiratory allergies must avoid exposure to the isocyanate component. *For more information, please consult the Material Safety Data Sheet (MSDS).*

BASF Polyurethane
Foam Enterprises LLC

BASF
The Chemical Company

Insulation and air barrier material for energy-efficient homes and buildings

What is its insulation R-value?

SPRAYTITE polyurethane foam insulation is a closed-cell system with a superior effective R-value of over 6.0 per inch[1].

What are the differences between closed-cell and open-cell foams?

There are three major differences. First, SPRAYTITE technology uses the versatility of polyurethane chemistry to offer a closed-cell content of greater than 90 percent, and open-cell foams commonly used as insulation systems have approximately 60 percent open-cell content. Second, closed cell content offers an R-value of over 6.0 per inch and open cell offers between 3.0 and 3.6 per inch. Third, closed cell foam is virtually impermeable to air, while open cell foam allows far more air and vapor into the building interior.

Does SPRAYTITE technology control air leakage?

The SPRAYTITE material has been tested and is certified to be an air barrier material at an application of 1.5-inch thickness. It is fully-adhered and does not allow air to flow around, behind or through the insulation system.

The U.S. Department of Energy (DOE) has shown that 15 percent of traditional insulation materials' effectiveness is lost due to convection loops through and behind board and batt systems. SPRAYTITE polyurethane technology eliminates this by forming a fully adhered, seamless insulation and air barrier.

Can it be used for unvented cathedral ceilings?

Yes, in cathedral ceilings and cathedralized attics, SPRAYTITE does not promote deterioration of the existing roof sheathing, because a properly designed spray foam application does not allow condensation between the foam / roof deck interface. Some traditional insulation systems have high air / vapor permeance and moisture retention, which could lead to water accumulation against the underside of the sheathing. SPRAYTITE insulation can be applied without roof ventilation, because it is fully adhered and air / vapor impermeable (at over 2" thickness). See the 2006 International Codes for additional acceptance criteria for unvented roof designs.

Can an insulation system add structural strength?

Spray-applied closed-cell polyurethane foam (SPF) has been proven to add substantial structural integrity throughout the wall system. Testing[2] shows SPF insulation installed between wood-and steel-stud wall panels increased racking (shear) strength two to three times compared with standard stick-built components with fiberglass insulation, when sprayed onto gypsum wallboard, vinyl and plywood siding, and oriented strand board (OSB).

What about moisture and mold?

When used as insulation at appropriate thickness, the use of SPRAYTITE polyurethane as insulation eliminates condensing surfaces and reduces the potential to accumulate moisture. It also eliminates air movement within the wall cavity. Other insulations are less successful at control air and moisture movement, and providing adequate insulation to eliminate condensing surfaces, thus these systems increase the possibility of an environment susceptible to mold.

Are there any fire protection requirements?

SPRAYTITE insulation meets Class 1 flame and smoke characteristics in accordance with ASTM E84[3]. Once installed, it must be covered by a 15-minute thermal barrier or ignition barrier, depending on the application. Check with local Building Codes for final determination.

This fact sheet complies with the Federal Trade Commission labeling and advertising of home insulation rules and regulations, Federal Register, 16 CFR Part 460 Labeling and Advertising of Home Insulation: Trade Regulation Rule; Final Rule, Tuesday, May 31, 2005.

[1] R means resistance to heat flow. The higher the R-value, the greater the insulating power.
[2] Studies performed by the National Association of Home Builders (NAHB).
[3] Test method for determining surface burning characteristics of building materials.

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