BASF
We create chemistry

WALLTITE® One Series Closed-cell Spray Foams

BUILDING ENVELOPE INSULATION MATERIAL

Description:

WALLTITE One is a two-component closed-cell spray polyurethane foam system utilizing an EPA-approved, zero ozone-depleting hydrofluoroolefin (HFO) blowing agent having extremely low (less than 1) global warming potential (low-GWP). It is designed for use in residential construction and commercial insulation applications. **WALLTITE One** is classified a medium density foam with a nominal density of 2 pcf that complies with IRC R303.5.11 and IBC 2063.4.1.13. It is compatible with most common construction materials and can only be processed with BASF ELASTOSPRAY® 8000A and ELASTOSPRAY BMB isocyanates.

The benefits of **WALLTITE One** include:

- Superior thermal insulation
- Control of moisture infiltration
- Air Infiltration Control
- Non-fibrous material
- Offers structural improvement
- Performs as an Air and Water-Resistive Barrier (AWB) assembly
- Installation speed
- Classified as FEMA Class 5 flood damage resistant material

AVAILABLE REACTIVITIES	AMBIENT TEMPERATURE RANGE
WALLTITE One R	40 – 120 °F
WALLTITE One W	20 – 55 °F

Physical Properties (1)

PROPERTY	METHOD	WALLTITE One
Resin		
Specific Gravity at 70°F	ASTM D1638	1.2
Viscosity at 77°F (cps)	Brookfield	500 – 700
Cured Foam		
Density, center at 2"-3" per pass (pcf)	ASTM D1622	2.0-2.3 core density
Closed Cell Content (%)	ASTM D6226	>90
Thermal Resistance (2) (Aged)		
R-value (ft^2 hr °F/Btu in)	ASTM C518	7.5/ inch @ < 3.5" thick
R-value (ft^2 hr °F/Btu in)		7.2/ inch @ ≥ 3.5" thick
Compressive Strength (psi) (3)	ASTM D1621	36
Tensile Strength (psi) (3)	ASTM D1623	64
Dimensional Stability (% change) 158°F / 97% RH / 168 hrs	ASTM D2126 (168hrs)	-7.6% total change
Water Vapor Transmission		
Vapor Permeance	ASTM E96	1.32 Perms
	(Calculated)	<1.0 Perms @ 1.5" (Class II Vapor Retarder)
Air Leakage (4) (L/s*m2 @ 75 Pa ΔP)	ASTM E2178	Meets <0.02 @ 0.5 Inch (Air impermeable insulation)
Air Barrier Assembly (per ABAA S0012 – Type 1)	ASTM E2357	Meets <0.02 L/s*m2 @ 75 Pa ΔP @ 1.0 Inch
Water Absorption (Vol %)	ASTM D2842	< 1.2
Surface Burning Characteristics		
Flame Spread Index	ASTM E84	≤ 25
Smoke Development Index	ASTM E84	≤ 450

(1) These values and physical property data are typical for SPF material applied in a development facility and from samples prepared using equipment configurations relevant to controlled laboratory conditions. Actual SPF performance and physical properties may vary with differences in application (i.e., environmental conditions, process equipment and configuration, material performance, etc.). As a result, these published properties should be used as guidelines for evaluation purposes only.

(2) The physical property graph shows the R-value of this spray foam insulation. "R" refers to resistance to heat flow. The higher the R-value, the higher the insulating power. See the installation card and the fact sheet on R-values.

(3) Minimum value necessary to meet ASTM C1029 Type II standard is > 25 for compressive and > 32 for tensile strength, and < 5% for water absorption. (4) Using a conversion factor of 1 L/s m^2 = 0.196850394 c/ft^2, the value <0.02 L/s*m^2 = <0.00393 cfm/ft^2*

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Additional Testing, Compliance, and Certifications:

- ASTM E84 Class A Fire Performance
- ASTM C1029 – Type II Compliant
- Intertek Design Listing BASF/SFAB E2357-01 for Air Barrier Assembly and Water-Resistive Barrier Performance
- ICC-1100 Standard for Spray-Applied Polyurethane Foam Plastic (ANSI)
- ICC-ES Acceptance Criteria AC377 including Appendix X- Approved for Attics & Crawl Spaces with and without prescriptive ignition barriers
- ICC Evaluation Service Report ICC-ESR-2642
- INTERTEK Code Compliance Research Report CCRR-0374, including Supplement validating Air Barrier Assembly and Water Resistive Barrier Performance
- NFPA 285 commercial wall assembly fire performance, including DuPont™ Thermax™ Wall assemblies
- UL 263 Fire-Resistance Rated assemblies available
- Approved by California Bureau of Household Goods and Services BHGS – Department of Consumer Affairs DCA
- GREENGUARD and GREENGUARD Gold Certification for VOC emissions
- UL Solutions Environmental Claims Validation (ECV)
    - ASTM D6866 for Bio-based Content Verification – 2%
    - ASTM C1338 – Mold resistant “Pass” rating (no growth)
    - California CA Section 01350 – Meets the requirements for VOC emissions and formaldehyde

Please contact your local sales or technical representative if you have specific questions about additional WALLTITE One properties, approvals, or certifications.

Product Overview:

WALLTITE One is a spray polyurethane foam (SPF) system intended for installation by qualified contractors trained in the processing and application of SPF systems, as well as the plural-component polyurethane dispensing equipment required to do so. Contractors and applicators must comply with all applicable and appropriate storage, handling, processing and safety guidelines. BASF technical service personnel should be consulted in all cases where application conditions are questionable.

For high-lift and back-to-back applications of up to 3.5”, WALLTITE One has an estimated theoretical yield range of 5,000-5,500 board feet per set. For applications less than 2.5” per pass, coverage may be in the range of 4,500-5,000 board feet per set. Actual coverage can be in excess of or below the referenced estimated theoretical range based on factors affecting density including, however, not limited to: multiple lifts, substrate texture, substrate temperature, overspray loss, windy conditions, altitude, container residue, equipment characteristics & temperatures, applicator technique, etc. For help estimating yield for this and other spray foams, please consult Spray Polyurethane Foam Alliance’s SPFA-121 SPF Estimating Reference Guide.

Installation recommendations and precautions:
WALLTITE One is designed for an application rate of a ½” minimum to a 3.5” maximum, with optimized coverage in high lift applications at 3 – 3.5” inches thick. Installation in multiple, thinner passes could lead to increased density and reduced yield. Dual lifts can be applied back-to-back with no dwell time between passes up to a maximum of 3.5” per lift for a total of 7” in two lifts. For installations over 7” or more than two passes, allow cooling time of 10 minutes per inch. Be aware that applications not following these recommendations may develop high exothermic temperatures. Care should be taken to allow cooling of thick passes, and to avoid excess application thickness.

WALLTITE One is designed for installation to most standard construction materials such as wood, wood-based products, plastics, metal and concrete. WALLTITE One has performed successfully when sprayed onto wood substrates down to 20°F when using cold weather application techniques such as flash passes and/or picture framing to wet the studs. For heat sink-materials such as metal or concrete, WALLTITE One can be sprayed onto substrates down to 30°F, using a flash pass method. Supplemental heat and wetting the studs may be required to avoid thermal shock with severe cold conditions or substrates. **The maximum operating temperature for BASF spray foam chemistries is 180°F.**

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WALLTITE One is NOT designed for use as an EXTERIOR roofing system. BASF offers a separate line of products for exterior roofing applications. Cold-storage structures such as coolers and freezers demand special design considerations with regard to thermal insulation and moisture-vapor drive. WALLTITE One should NOT be installed in these types of constructions, unless the structure was designed by a design professional for specific use as cold storage. For more information, please contact your sales or technical representative.

BASF recommends the use of mockups or sample spray before starting the full-scale project. This will provide an opportunity to see how all materials are installed and evaluate their properties prior to proceeding.

See BASF WALLTITE Series Application Guidelines for additional information or consult a BASF Representative for further information about applications using our liquid compounds.

Proper Ventilation, Re-entry and Reoccupancy:

Application space must be properly ventilated during and after application of SPF. Consult the EPA's "Ventilation Guidance for Spray Polyurethane Foam Application" document, the American Chemistry Council's "Ventilation Considerations for Spray Polyurethane Foam" documents for specific requirements, and the BASF Technical Tip on Jobsite Ventilation Re-occupancy & Re-entry time for Open & Closed cell Spray Polyurethane Foam SPF. Re-entry of trades without PPE and re-occupancy of the space in commercial applications can be achieved at the times indicated in the table below. In residential applications, re-occupancy for homeowners can be achieved at 24 hours after application has ended, with a minimum mechanical ventilation rate of 0.3 ACH for the duration.

BASF Product	Re-entry @ 20 ACH*,**	Re-entry with minimal ventilation	Re-occupancy
WALLTITE Series	2 hours	8 hours	24 hours

ACH: Air Changes per Hour

* Ventilation rates based upon ventilation used DURING the time of application and for the time frame listed.

**Determination of re-entry times based on testing according to ASTM D8445-22a

Foam plastic materials installed in walls or ceilings may present a fire hazard unless protected by an approved, fire-resistant thermal barrier with a finish rating of not less than 15 minutes as required by building codes. Rim joists/header areas, in accordance with the IRC and IBC, may not require additional protection. Foam plastic must also be protected against ignition by code prescribed or properly tested materials in attics and crawl spaces. See relevant Building Codes and www.iccsafe.org for more information.

Important Material Preparation Note: Product should be stored at 50-80°F. Materials should be prepared for processing by being warmed to 70°F minimum at least 24 hours prior to installation and maintained at 70-75°F during the install process.

EQUIPMENT PROCESSING PARAMETERS:

Conditions	Side A, Side B, Hose Temperature (Adjust in ± 3°F increments)	Proportioner set Pressure ***(Spray pressure)***
Cold	**115 – 130 °F**	1150 – 1450 psi ***(900 – 1200 psi)***
Warmer	**110 – 125 °F**	1150 – 1450 psi ***(900 – 1200 psi)***

Caution - Failure to follow the application precautions, safety data sheet (SDS) information as well as accepted industry practices (www.spraypolyurethane.org) may result in unwanted foam physical properties and applications that may not provide the desired results. This also includes unwanted health risks such as possible respiratory issues, sensitization or eye irritations for applicators and workers located in the area being sprayed. A full understanding of the foam processing and all safety risks must be completed before spraying.

In addition to reading and understanding the SDS, all contractors and applicators must use appropriate respiratory, skin and eye Personal Protective Equipment (PPE) when handling and processing polyurethane chemical systems. Personnel

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should review related industry and best practice documents published by organizations such as Spray Polyurethane Foam Alliance (SPFA), OSHA, Spray Foam Coalition (SFC) and complete the American Chemistry Council's online Spray Polyurethane Foam Chemical Health & Safety Training course at www.spraypolyurethanefoam.org/training.

Also the following document is available from the Center for the Polyurethanes Industries (CPI): *Model Respiratory Protection Program for Compliance with the Occupational Safety and Health Administration's Respiratory Protection Program Standard 29 C.F.R. §1910.134*

As with all SPF systems, improper application techniques should be avoided. Examples of improper application techniques include, but are not limited to excessive thickness of SPF, off-ratio material and spraying into or under rising SPF. Potential results of improperly installed SPF include dangerously high reaction temperatures that may result in fire and offensive odors that may or may not dissipate. All areas that are sprayed incorrectly or result in A only material, B only material, improperly mixed or off ratio materials, or excessively thick applications, are to be removed and replaced with properly processed spray foam. LARGE MASSES of SPF should be removed to an outside safe area, cut into smaller pieces and allowed to cool before discarding into an appropriate trash receptacle. All cleaning solvents and others materials are to be captured and properly disposed of and not left at the job site.

Odor level of spray polyurethane foam is dependent on proper application using the recommended processing parameters and proper ventilation.

SPF insulation is combustible. High-intensity heat sources such as welding or cutting torches must not be used in contact with or in close proximity to WALLTITE One or any polyurethane foam. The insulation must not be used in areas that have a minimum service temperature greater than 180°F(82°C).

Shelf Life and Storage Conditions:

WALLTITE One has a shelf life of approximately six (6) months from the date of manufacture when stored in original, unopened containers at 50-80°F. As with all industrial chemicals this material should be stored in a covered, secure location and never in direct sunlight. Storage temperatures above the recommended range will shorten shelf life. Storage temperatures above the recommended range may also result in elevated headspace pressure within packages.

LIMITED WARRANTY INFORMATION - PLEASE READ CAREFULLY:

The information herein is to assist customers in determining whether our products are suitable for their applications. Our products are only intended for sale to industrial and commercial customers. Customer assumes full responsibility for quality control, testing and determination of suitability of products for its intended application or use. We warrant that our products will meet our written liquid component specifications. We make no other warranty of any kind, either express or implied, by fact or law, including any warranty of merchantability or fitness for a particular purpose. Our total liability and customers' exclusive remedy for all proven claims is replacement of nonconforming product and in no event shall we be liable for any other damages.

TECHNICAL ASSISTANCE

For more detailed information, contact Inside Technical Support at:
Toll-Free: 1-800-706-0712, Option 2
Email: spf.techsales@basf.com
Website: www.sprayfoam.basf.com/us
Technical Document Resource Center

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