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ENERTITE® G Open-cell Spray Foam

BUILDING ENVELOPE INSULATION MATERIAL

Description:

ENERTITE G is a two-component low-density open-cell spray polyurethane foam system designed for use in residential construction and common commercial insulation applications. **ENERTITE G** is compatible with most common construction materials but can only be processed with BASF ELASTOSPRAY® 8000A and ELASTOSPRAY BMB isocyanates.

The benefits of **ENERTITE G** include:

- Superior insulation
- Sound control
- Non-fibrous material
- Simplified processing and application in a no-mix resin
- Installation speed
- Unvented Attic configuration (no IB required in limited access attics)

Physical Properties (1)

PROPERTY	METHOD	ENERTITE G
Resin		
Specific Gravity at 77°F	ASTM D1638	1.135
Viscosity at 77°F (cps)	Brookfield	200 – 350
Cured Foam		
Density, center at 4" per pass (pcf)	ASTM D1622	0.5 (nominal)
Open Cell Content (%)	ASTM D6226	>90
Thermal Resistance (2) (Aged)		
R-value (ft^2 hr °F/Btu in)	ASTM C518	3.9/ inch @ < 4" thickness
R-value (ft^2 hr °F/Btu in)		3.7/ inch @ ≥ 4" thickness
Tensile Strength (psi) (3)	ASTM D1623	5.9
Thermal and Humidity Aging 158°F / 97% RH / 168 hrs	ASTM D2126 (% Calculated)	< -2.0%
Water Vapor Transmission		
Vapor Permeance	ASTM E96	59 Perms
	(Calculated)	<19.8 Perms @ 6" (Class II Vapor Retarder)
Air Leakage (4) (L/s*m2 @ 75 Pa ΔP)	ASTM E2178	Meets <0.02 @ 3.50" thickness (Air impermeable insulation)
Water Absorption (Vol %)	ASTM D2842	> 40
Surface Burning Characteristics		
Flame Spread Index	ASTM E84	≤ 25
Smoke Development Index	ASTM E84	≤ 450
Noise Reduction Coefficient	ASTM C423	0.65

(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 values are reported, as necessary to meet ASTM C1029 Type II standards.

(4) Using a conversion factor of 1 L/s m2 = 0.196850394 cfm/ft2, the value <0.02 L/s*m2 = <0.00393 cfm/ft2*

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Additional Testing, Compliance, and Certifications:

- ASTM E 84 (Class I) with Product Listing
- ICC-1100 Standard for Spray Applies Polyurethane Foam Plastic
- International Code Council (ICC) Evaluation Service Report ESR-3102
- ICC-ES AC377 Appendix A1.2.2 Appendix X- Approved for certain Attic & Crawl Space installations with and without prescriptive ignition barriers per unvented attic protocol
- Test Method U Compliant, for Unvented Attic Assemblies, per ICC 1100 2026
- INTERTEK Code Compliance Research Report CCRR-1032
- UL263 Fire-Resistant Rated assemblies available
- NFPA 285 complying assemblies available
- Thickness is not limited when installed behind a code-prescribed thermal barrier (per ICC-ES AC377)
- ASTM E970 Critical Radiant Flux (attic insulation)- 0.26 kW/cm2 @ 4-in and 0.25 kW/cm2 @ 6-in
- GREENGUARD and GREENGUARD Gold Certification for VOC emissions
- UL Solutions Environmental Claims Validation (ECV)
    - ASTM D6866 for Bio-based Content Verification – 3% (6% on resin)
    - ASTM C1338 – Mold resistant “Pass” rating (no growth)
    - Meets requirements of CA Section 01350 for VOC emissions and formaldehyde

Please contact your local Sales or Technical Representative for specific questions regarding **ENERTITE G** properties, approvals, or certifications.

Product Overview:

ENERTITE G 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.

ENERTITE G has an estimated theoretical yield range of 17,000-21,000 board feet per set. Actual yield performance can be in excess of or below the referenced estimated theoretical range based on factors affecting density including, however, not limited to: multiple lifts, spray pass thickness, 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:

ENERTITE G is designed for an application rate of ½ inch minimum to 8 inches maximum per pass. Proper cooling or dwell time will allow for optimal results between passes (5 minutes per max pass applied). Once installed and material has cooled, it is possible to add additional applications in order to increase the overall installed thickness of SPF. Thicker installations are allowed based on large scale testing. Please see ESR-3102 for additional information.

ENERTITE G is NOT designed for use as an EXTERIOR roofing system. BASF offers a separate line of products for exterior roofing applications. For more information, please contact your sales representative.

Cold-storage structures such as coolers and freezers demand special design considerations with regard to thermal insulation and moisture-vapor drive. ENERTITE G should NOT be installed in these types of constructions unless the structure was designed by a design professional for specific use as cold storage.

ENERTITE G is designed for installation in most standard construction configurations using common materials such as wood and wood products, metal and concrete. ENERTITE G has performed successfully when sprayed onto wood substrates down to 20ºF and can be used in colder temperatures using special cold weather application guidelines.

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For heat sink-materials such as metal or concrete, ENERTITE G can be sprayed onto substrates down to 30ºF, using a flash pass method to enhance adhesion. **The maximum operating temperature for BASF spray foam chemistries is 180**°F**.**

BASF recommends the use of mockups or test spray areas 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 ENERTITE Application Guidelines for additional information or please consult a BASF Representative for further information about applications using our liquid compounds.

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.

Proper Ventilation, Reentry 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	Reentry @ 20 ACH*, **	Reentry with minimal ventilation	Reoccupancy
ENERTITE G	2 hours	4 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.

RESIN PREPARATION DETAILS:

ENERTITE G resin requires the following for proper processing:

- Recommended material temperature (in the drum) at the time of application should be approximately 70ºF-80ºF.
- Heating and recirculation are not required if the material is 70ºF or higher.
- If drum temperatures are below 70°F, recirculation or drum heaters should be used to bring the material to a minimum 70°F prior to spraying.

Refer to the ENERTITE G Open-cell Spray Foam Application Guide for more detailed preparation guidelines.

DO NOT MIX ENERTITE G WITH ANY OTHER PRODUCTS

EQUIPMENT PROCESSING PARAMETERS:

Conditions	Side A, Side B, Hose Temperature (Adjust in ± 3°F increments)	Proportioner set Pressure ***(Spray pressure)***
Cold	**125 – 135 °F**	1150 – 1450 psi ***(900 – 1200 psi)***
Warmer	**105 – 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

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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 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 ENERTITE G or any polyurethane foam. The insulation must not be used in areas that have a maximum service temperature greater than 180°F (82°C).

Shelf Life and Storage Conditions:

ENERTITE G 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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