

CertaSpray® Closed Cell Foam

PRODUCT DESCRIPTION

Basic Use: CertaSpray Closed Cell Foam is a two-component closed cell spray foam with a zero-ozone-depleting HFC blowing agent. When CertaSpray A-side closed cell is mixed with CertaSpray B-side closed cell under pressure in a 1:1 volumetric ratio, they react and expand into a medium-density closed cell foam with an in-place core density of nominal 2.0 pcf.



Benefits: CertaSpray Closed Cell Foam provides thermal insulation for the interior or exterior of the building and reduces air infiltration through the building envelope.

Applications: The closed cell 2-pcf foam can be spray-applied into open wall cavities, perimeter joists, cathedral ceilings, garage ceilings, attics, exterior walls and crawlspaces. Product can be installed up to 12" thick in ceilings and 8" thick in walls when covered with a code approved 15-minute thermal barrier. Product must be finished according to local code, and must be applied by a qualified applicator.

Composition and Materials: CertaSpray Closed Cell Foam is a medium-density, MDI-based polyurethane thermoset foam.

Limitations:

Foam Plastic Insulation: CertaSpray Closed Cell Foam is defined by the building codes as a foam plastic insulation.

Thermal Barrier: Many building codes require that foam plastic insulation be covered with an approved 15-minute thermal barrier. Consult local building code officials to ensure the application meets local building codes and regulations.

Air Barrier: CertaSpray Closed Cell Foam is approved and certified as an air barrier by the Air Barrier Association of America (ABAA).

Vapor Retarder: CertaSpray Closed Cell Foam must be installed at a thickness of at least 1" to be considered as a vapor retarder. Check local building code for climate-specific vapor retarder requirements.

Lighting Fixtures: The National Electrical Code prohibits installation of any insulation over or within 3" (76 mm) of recessed light fixtures, unless approved insulated ceiling (IC) light fixtures are used.

Maximum Use Temperature: CertaSpray foam should not be in contact with equipment or materials that have operating temperatures greater than 180°F.

INSTALLATION

All application surfaces must be free of oil, grease, dust and debris. Surface must be dried prior to application of spray foam. Excess humidity may cause poor adhesion, and result in product failure. To avoid overspray, product should not be applied when conditions are windy.

Prior to application, substrate temperature must reach:

- Summer Blend – 10°C (50°F)
- Winter Blend – -4°C (25°F)
- Extreme Winter Blend – -12°C (10°F)

The final product yield is dependent on spray conditions and spray techniques.

Typical End Use Properties: The thermal performance values are achieved at the thickness specified when installed as recommended.

Product Name	CertainTeed CertaSpray® Closed Cell Foam
Manufacturer	CertainTeed Corporation
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Website	www.certainteed.com/insulation

TECHNICAL DATA

Applicable Standards

- ASTM C1029, Type I and Type II
- ICC-ES, AC-377 (ESR-2669)
- 2012 International Residential Code (IRC) Section R316
- 2012 International Building Code (IBC) Section 2603
- 2012 International Energy Conservation Code (IECC) Section R 303
- NFPA 285 (2012 IBC Types I & II Construction)
- Approved for Type I, II, III, IV & V Construction under IBC and dwellings under IRC
- AC-377 Appendix X (Attic & Crawl Spaces)

FIRE PERFORMANCE**		
	TEST METHOD	RESULT
Flame Spread Index, 6***	ASTM E84	< 25
Smoke Index, 6***	ASTM E84	< 450
≤ 12" in ceilings	AC-377	Meets requirements
≤ 8" in wall	Appendix X	

** The results of the test method may not be indicative of real-life fire performance. All plastic insulation must be separated from the interior building by an approved thermal barrier of 1/2" gypsum wallboard or equivalent thermal barrier material as required by the building code.

CHEMICAL PROPERTIES		
	CERTASPRAY A	CERTASPRAY B
Viscosity at 25°C, cps	150-250	Winter = 450 Summer = 750
Specific Gravity at 25°C, g/ml	1.23	1.14

CAUTION: CertainTeed recommends that you consult an HVAC expert and comply with guidelines established by applicable building codes prior to using any closed or open cell spray foam insulation product in an attic retrofit application. If not installed correctly, adding spray foam to a vented attic may significantly impair the performance of the HVAC system and may cause other damage to the building. CertainTeed will not assume any liability or responsibility for any personal injury or property damage occurring as a result of the improper installation of spray foam insulation that is not in accordance with the instructions accompanying the product, that is not in conformance with any applicable building codes, or that is contrary to the advice given by a duly qualified HVAC expert.

HANDLING AND STORAGE

Storage: It is recommended that the CertaSpray-B and CertaSpray-A drums should be stored between 55-80°F. Keep containers tightly closed and store in a dry, well-ventilated area protected from freezing, rain, direct sunlight and excess heat. The storage life of B-side is up to 6 months and A-side up to 12 months when stored according to the recommended conditions.

Handling: When opening the drums, loosen the cap slowly to release pressure in the drum. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing aerosols, vapor or mist. Wash skin thoroughly after handling.

The Material Safety Data Sheet (MSDS) for CertaSpray-A and CertaSpray-B closed cell must be read before using this product.

HEALTH AND SAFETY

The health and safety information in this data sheet does not contain sufficient detail for safe handling in all cases. For detailed safety and health information refer to the MSDS for this product.

AVAILABILITY AND COST

Distributed and sold throughout the United States. For availability and cost contact your local Territory Manager, contractor or distributor, or call CertainTeed Sales Support Group in Valley Forge, PA at 800-233-8990.

WARRANTY

Refer to CertainTeed's Lifetime Limited Warranty for CertaSpray® Foam Insulation (30-50-012).

MAINTENANCE

No maintenance required.

TECHNICAL SERVICES

Technical assistance can be obtained either from the local CertainTeed sales representative, or by calling CertainTeed Sales Support Group in Valley Forge, PA at 800-233-8990.

FILING SYSTEMS

CertainTeed Pub. No. 30-50-011. Additional product information is available upon request.

EMERGENCY CALLS:

CertainTeed Emergency Response Center
800-424-9300

CHEMTREC—Spills, Leak, Fire
800-424-9300 (in USA and Canada)

RECOMMENDED PROCESSING CONDITIONS

	VALUE
Preheater Temperature	
Winter & Summer Blend	110 – 135
Extreme Winter Blend	120 – 135
Hose temperature, °F	≤ 135
Pressure, psi	1100 – 1500
A/B volumetric ratio	1/1
Cream time*, sec	1 – 2
Tack free time*, sec	4 – 8
Maximum thickness per pass, inches	2

*Tested in accordance with ASTM C518 and/or C177 at 75°F (24°C) mean temperature.

*Aged 90 days at 140°F.

THERMAL PERFORMANCE

THICKNESS		AGED R-VALUE*	
in.	mm	R	RSI
1	25	6.4	1.13
1½	38	9.6	1.69
2	51	12.8	2.26
2½	64	16.0	2.82
3	76	19.2	3.38
3½	89	22.4	3.95
4	102	25.6	4.51
4½	114	28.8	5.07
5	127	32.0	5.64
5½	140	35.2	6.20
6	152	38.4	6.76
7	178	44.8	7.89
8	203	51.2	9.02
9	229	57.6	10.14
10	254	64.0	11.27
11	279	70.4	12.40
12	305	76.8	13.53

PHYSICAL AND MECHANICAL PROPERTIES

PROPERTY	ASTM METHOD	VALUE
Core Density, pcf	D1622	1.9-2.4
Thermal Resistance (aged) at 75°F, (h-ft ² -°F)/Btu	C518	6.4
Thermal Resistance (initial) at 75°F, (h-ft ² -°F)/Btu	C518	6.7
Closed Cell Content, %	D2842	88-95%
Compressive Strength, psi	D1621	> 25
Tensile Strength, psi	D1623	60
Water Absorption, % by volume	D2842	< 2%
Dimensional Stability, 75°F/95% RH, 28 Days, vol %	D2126	< 9%
Water Vapor Transmission (Permeability), perm-inch	E96	1.51
Vapor Permeance (perms)	E96	1.51@1" 0.76@2" 0.50@3" 0.38@4" 0.30@5" 0.25@6"
Air Permeability, at 1" thickness, L/s/m ²	E283	0.013
Fungi Resistance	C1338	Pass, with no growth

* The typical properties were obtained on samples produced with a Gusmer/Graco H25 spray machine using an air-purged Fusion spray gun. The foam was sprayed at a thickness of approximately 4", in two passes of 2" each. Please see Recommended Processing Conditions for additional information.



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