



HEATLOK SOY® 200

Technical Data Sheet

Rigid, Spray-applied Polyurethane Foam Insulation Zero Ozone Depletion Substance, Class I ASTM

HEATLOK SOY® 200 is two component spray applied rigid polyurethane foam, green in color, having a nominal density 2lbs/ft³. This spray foam has been specially formulated to meet the intent of the International Code Council (ICC) building codes and is used primarily as a moisture/vapor barrier, air barrier and thermal insulation on above and below grade interior and exterior applications. Complies with FEMA floodplain insulation requirements. Approved by the USDA for Incidental Food Contact.

HEATLOK SOY® 200 is environmentally-friendly foam developed from recycled plastic materials and rapidly renewable soy oils, while the blowing agent is the HFC 245fa. Certified Insulation Material approved by California Department of Consumer Affairs. *GREENGUARD* and *GREENGUARD Children and Schools* certified. Meets LEED requirements in various categories.

Physical Properties

| Method | Description | Imperial units | Metric units |
|-----------------|---|--------------------------------------|--|
| ASTM D 1622-08 | Density (core) | 2.1 lb/ft ³ | 34 Kg/m ³ |
| ASTM C 518-04 | Aged Thermal Resistance, 180 days @ 23°C (R-Value) | R-7.4 @ 1 Inch, R-26.6 @ 4 inches | 1.32 K·m ² /W 4.55 K·m ² /W |
| ASTM D 1621-04a | Compressive Strength (10%) | 20.6 psi | 142 kPa |
| ASTM D 1623-09 | Tensile Strength | 45.4 psi | 313 kPa |
| ASTM D 2126-09 | Dimensional Stability @ 158°F (70°C), 97% R.H. (168 hrs, sample without any substrate) L/W/T | % Change +4.9/+5.6/+7.7 | |
| ASTM D 2842-06 | Water Absorption (Serves as moisture barrier and drain plane) | 0.3% Volume | |
| ASTM E 96-05 | Water Vapor Permeance @ 1.5" (Note: Is a vapor barrier per IBC Section 202, Definitions at 1.2".) | 0.79 perms | 45.6 ng/Pa.sm ² |
| ASTM E 283-04 | Air Permeance @ 75Pa @ 1" (Note: Air Barrier Association of America (ABAA) approved air barrier) | 0.004 L/sm ² | |
| ASTM E2178-03 | Air Permeance @ 75Pa @ 1" | 0.001 L/sm ² | |
| ASTM E 84-09 | Surface Burning Characteristics @ 4"thick <ul style="list-style-type: none"> Flame spread index Smoke development | Class I 20 400 | |
| ASTM D 1929-01 | Ignition Properties Spontaneous Ignition Temperature | 1004°F | 540°C |
| VOC Content | VOC Emissions from Polyurethane Foam Complies with GREENGUARD Children and Schools and LEED requirements | Pass | |
| ASTM C 1338-08 | Fungi Resistance | No fungal growth | |
| ASTM D 2856 | Closed Cell Content | > 92% | |
| ASTM D 6866-08 | Bio-based Content (Rapidly Renewable Natural Content) | 3% | |
| ASTM D 2863-08 | Oxygen Index | 23% | |
| ASTM E 2357-05 | Air Leakage of Air Barrier Assembly (static loading to 600 Pa and gust loading to 1,200 Pa) Complies with ABAA requirements | < 0.0022 L/sm ² Pass | |

Fire Test Results

| | | |
|-----------------|--|-------------|
| NFPA 286 | Compliant with 2006 IBC Chapter 2603.9, the 2006 IRC 314.6 (2009 IRC 316.6) and the ICC-ES AC 377, Appendix X, for use in attics and crawl spaces without a prescriptive ignition, thermal barrier or intumescent coating. | Pass |
| NFPA 285 | Complies with the 2006 IBC Chapter 2603.5, Exterior Walls of Type I, II, III and IV buildings of any height. | Pass |
| NFPA 286 | Complies with the 2006 IBC Chapter 803.1.2, Interior finish without a 15 min. thermal barrier with 4 DFT Blazelok TB 200 Primer and 8 DFT Blazelok TB 200 coating. | Pass |

Recycled Content of Finished Foam

| | |
|---------------------------------------|-------------------------------------|
| Pre-Consumer Content = 9.9% | Post-Consumer Content = 4.7% |
| Total Recycled Content = 14.6% | |

Liquid Components Properties

| Property | Isocyanate A 100 | Resin B 200 |
|------------------------------|---------------------------|---------------------------|
| Color | Brown | Blue |
| Specific gravity | 1.24@ 77°F (25°C) | 1.2-1.25@ 77°F (25°C) |
| Shelf life | 1 Year | 1 Year |
| Mixing ratio (volume) | 100 | 100 |
| Viscosity | 180-220 cps @ 77°F (25°C) | 350-500 cps @ 77°F (25°C) |

See MSDS for more information.

Note: Store the resin at temperatures between 59 - 77°F (15 - 25°C). Keep away from direct sunlight.

Processing Parameters

Recommended Processing Conditions

| | Processing Parameters | | Recommended Processing Conditions | | |
|---|---|-----------------|--|----------------|--------------|
| | Imperial units | Metric units | | Imperial units | Metric units |
| Type of machine | Graco® Reactor E-30 with Fusion gun and O2 Mixing Chamber | | Mixing ratio A:B | 1:1 | |
| Components A & B temperature | 105°F | 41°C | Mixing temperature | 100 – 120°F | 38 – 49°C |
| Components A & B pressure | 850 – 1000 psi | 5860 – 6900 kPa | Mixing pressure | 800 psi | 5516 kPa |
| Ambient temperature | 73°F | 23°C | Substrate & Ambient temperature | >23°F | >(-5)°C |
| Maximum Thickness per pass | 2 in. | 50 mm | Curing temperature | >23°F | >(-5)°C |

Reactivity Profile

| Cream time | Gel time | Tack free time | End of rise |
|-------------|-------------|----------------|-------------|
| 0-1 Seconds | 3-4 Seconds | 4-5 Seconds | 5-6 Seconds |

General Information: It is recommended that the foam is covered with an approved thermal barrier in accordance to the local and national building codes when used in buildings and a protective coating when used outside. This product should not be used when the continuous service temperature of the substrate is outside the range of -76°F (-60°C) to 176°F (80°C). Spraying too thick sections too fast may result in charring of the foam, or in extreme conditions a fire may result.



Disclaimer: The information herein is to assist customers in determining whether our products are suitable for their applications. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, express or implied, including any warranty of merchantability or fitness, nor is protection from any law or patent infringement. All patent rights are reserved. The foam product is combustible and must be covered by an approved thermal barrier. Protect from direct flame and sparks contact. The exclusive remedy for all proven claims is replacement of our materials.