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 requirements as a Class 4 insulation.

HEATLOK SOY® 200 is environmentally-friendly foam developed from recycled plastic materials and 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	Density (core)	**2.1 lb/ft³**	**34 Kg/m³**
ASTM C 518 **(R-Value)**	Initial Thermal Resistance, 1” Aged Thermal Resistance, 180 days @ 23ºC, 1”	**7.3 ft²hºF/BTU** **TBD In testing**	**1.29 m²ºC/W** **TBD In testing**
ASTM D 1621	Compressive Strength (10%)	**20.6 psi**	**142 kPa**
ASTM D 1623	Tensile Strength	**45.4 psi**	**313 kPa**
ASTM D 2126	Dimensional Stability @ 158ºF (70ºC), 97% R.H. (168 hrs) (sample without any substrate) Length / Width / Thickness	**% Change** **+4.9/+5.6/+7.7**	
ASTM D 2842	Water Absorption (Serves as moisture barrier)	**0.3% Volume**	
ASTM E 96	Water Vapor Permeance, 1.5” (Note: Is a vapor barrier per IBC Section 202, Definitions)	**0.16 perms**	**9.1 ng/Pasm²**
ASTM E 283-04	Air Permeance @ 75Pa @ 1” (Note: Air Barrier Association of America approved air barrier)	**0.004L/sm²**	
ASTM E2178-03	Air Permeance @ 75Pa @ 1”	**0.001L/sm²**	
ASTM E 84-05	Surface Burning Characteristics @ 4”thick • Flame spread index • Smoke development	**Class I** **20** **450**	
VOC Content	VOC Emissions from Polyurethane Foam Complies with GREENGUARD Children and Schools and LEED requirements	**Pass**	
ASTM C 1338	Fungi Resistance	**No fungal growth**	
ASTM D 2856	Closed Cell Content	**> 92%**	
ASTM D 6866	Bio-based Content	**3%**	
ASTM D 2863	Oxygen Index	**23%**	

DEMILEC (USA) LLC® • 2925 Galleria Drive • Arlington, TX 76011
(817) 640-4900 phone • 1.877.DEMILEC (336-4532) toll-free • (817) 633-2100 fax
www.DemilecUSA.com • Info@DemilecUSA.com

Fire Test Results		
NFPA 286	Compliant with 2006 IBC Chapter 2603.9, the 2006 IRC 314.6 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 259	Complies with the 2006 IBC Chapter 2603.5, Exterior Walls of Type I, II, III and IV buildings of any height.	Pass

Natural and Recycled Content of Finished Foam	
Natural Content = 6.30%	Post-Consumer Content = 4.6%
Pre-Consumer Content = 9.89%	Total Recycled Content = 14.57%
Post-Consumer + ½ Pre-Consumer Recycled Content = 9.63%	

Liquid Components Properties		
Property	Isocyanate A 100	Resin B 200
Color	Brown	Blue
Specific gravity	1.20 – 1.24	1.20 – 1.24
Shelf life*	1 Year	1 Year
Mixing ratio (volume)	100	100
Viscosity @ 77°F (25°C)	10^{-7} psi	7 – 9 psi

* See MSDS for more information.

Note: Store the resin at temperatures 59 - 77ºF (15 – 25ºC). Keep away from direct sunlight.

Processing Parameters			**Recommended Processing Conditions**		
	Imperial units	**Metric units**		**Imperial units**	**Metric units**
Type of machine	Graco® Reactor E-30 with Fusion gun and 02 Mixing Chamber		**Mixing ration 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**	>14°F	>(-10)°C
Maximum Thickness per pass	2 in.	500 mm	**Curing temperature**	>14°F	>(-10)°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 -76ºF (-60ºC) to 176ºF (80ºC). 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.

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