



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.

HEATLOK SOY® 200 is approved for use as USDA Incidental Food Contact material.

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	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 • 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		
	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
Ambient temperature	73°F	23°C	Substrate & Ambient temperature	Regular > 50°F Winter > 23°F SuperWinter > 14°F	Regular > 10°C Winter > -5°C SuperWinter > -10°C
Maximum Thickness per pass	2 in.	50 mm	Moisture content of substrate	≤ 19%	

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.

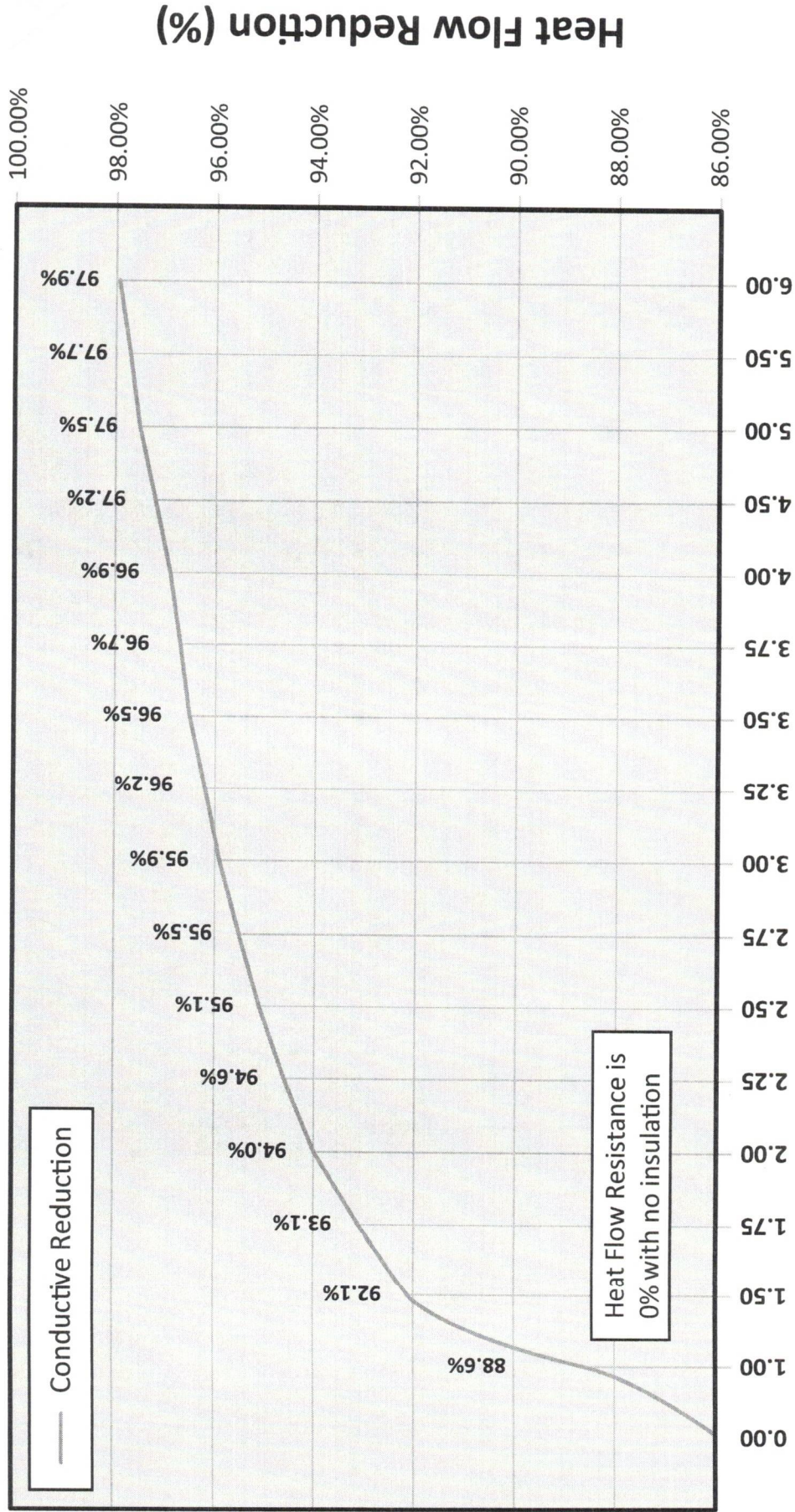
Heat Flow Resistance Data

Thickness (inches)	Outside Air Film	Inside Air Film	R-value	Heat Flow (kBtu)	Heat Flow Reduction
0	0.17	0.68	0	47,058.82	0.0%
1	0.17	0.68	6.6	5,369.13	88.6%
1.5	0.17	0.68	9.9	3,720.93	92.1%
1.75	0.17	0.68	11.55	3,225.81	93.1%
2	0.17	0.68	13.2	2,846.98	94.0%
2.25	0.17	0.68	14.85	2,547.77	94.6%
2.5	0.17	0.68	16.5	2,305.48	95.1%
2.75	0.17	0.68	18.15	2,105.26	95.5%
3	0.17	0.68	19.8	1,937.05	95.9%
3.25	0.17	0.68	21.45	1,793.72	96.2%
3.5	0.17	0.68	23.1	1,670.15	96.5%
3.75	0.17	0.68	24.75	1,562.50	96.7%
4	0.17	0.68	26.4	1,467.89	96.9%
4.5	0.17	0.68	29.7	1,309.33	97.2%
5	0.17	0.68	33	1,181.68	97.5%
5.5	0.17	0.68	36.3	1,076.72	97.7%
6	0.17	0.68	39.6	988.88	97.9%

Based on a temperature delta of 40°F and an insulated area of 1,000 ft²



Conductive Heat Flow Resistance



Insulation Thickness (inches)

Note: DEMILEC HEATLOK SOY™ is an air-impermeable insulation in accordance with the 2007 Supplement to the 2006 IRC, Chapter 2, Definitions, which defines an air-impermeable insulation as having an air permeance equal to or less than 0.02 L/s-m² at 75 PA pressure differential according to ASTM E 283.