DEMILEC (USA) LLC.
POLYURETHANE SYSTEMS MANUFACTURER

TECHNICAL DATA SHEET
HEATLOK SOY®
INSULATION

RIGID, SPRAY-APPLIED POLYURETHANE FOAM
Zero Ozone Depletion Substance, Class I ASTM

HEATLOK SOY® 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 US Building Codes and is used primarily in air barrier and insulation applications.

HEATLOK SOY® is environmentally-friendly foam developed from recycled plastic materials and renewable soy oils, while the blowing agent is the HFC 245fa.

Method	Description	Imperial units	Metric units
ASTM D1622	Density (core)	**2.1-2.3 lb/ft^3**	**34-37 Kg/m^3**
ASTM C518	Initial Thermal Resistance, 1”	**7.2 ft^{2}hºF/BTU**	**1.26 m^{2}ºC/W**
(R-Value)	Aged Thermal Resistance, 180 days @ 23ºC, 1”	**6.6 ft^{2}hºF/BTU**	**1.17 m^{2}ºC/W**
ASTM D1621	Compressive Strength (10%)	**28.3 psi**	**195 kPa**
ASTM D1623	Tensile Strength	**51.5 psi**	**355 kPa**
ASTM D2126	Dimensional Stability (28 days)	**% Volume Change**	
	(sample without any substrate)		
	-4ºF (-20ºC), ambient RH	**-0.03**	
	176ºF (80ºC), ambient R.H.	**+ 2.9**	
	158ºF (70ºC), 97% R.H.	**+ 9.8**	
ASTM D2842	Water Absorption	**0.8% Volume**	
ASTM E96	Water Vapor Permeance, 1”	**1.2 perms**	**69ng/Pasm^2**
CCMC 07273	Air Permeance @ 75Pa, 1”	**13.1*10^{-8}ft^3/sft^2**	**0.00004L/sm^2**
ASTM E84-05	Surface Burning Characteristics, 3”thick		
	• Flame spread index	**20**	
	• Smoke development	**450**	
CAN/ULC S774	VOC Emissions from Polyurethane Foam	**Pass (1 day)**	
ASTM C1338	Fungi Resistance	**No fungal growth**	
ASTM D2856	Closed Cell Content	**> 92%**	

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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LIQUID COMPONENTS PROPERTIES		
PROPERTY	**ISOCYANATE A 100**	**RESIN B 200**
Color	**Brown**	**Greenish**
Viscosity @ 77ºF	**150 – 250 cps**	**150 – 350 cps**
Specific gravity	**1.20 – 1.24**	**1.20 – 1.24**
Shelf life*	**6 months**	**6 months**
Mixing ratio (volume)	**100**	**100**
Vapor pressure @25°C	**10^{-7} psi**	**7 – 9 psi**

***See MSDS for more information.**

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

PROCESSING PARAMETERS		
	Imperial units	**Metric units**
Type of machine	**Graco Reactor E-30 with Fusion Gun and 02 Mixing chamber**	
Components A&B Temperature	**100ºF**	**38ºC**
Components A & B pressure	**850-1000psi**	**5860-6900 kPa**
Ambient temperature	**73ºF**	**23ºC**
Thickness per pass	**1 1/4 inches**	**30 mm**
Number of passes	**2**	
Substrate	**Polyethylene Board**	

REACTIVITY PROFILE			
Cream time, s	**Gel time, s**	**Tack free time, s**	**End of rise, s**
0 – 1	**2**	**4 – 5**	**4**

RECOMMENDED PROCESSING CONDITIONS		
	Imperial units	**Metric units**
Mixing ratio A/B	**1/1**	
Mixing temperature	**100 – 120ºF**	**38 – 49ºC**
Mixing pressure	**800 psi**	**5516 kPa**
Substrate & Ambient temperature	**> 14ºF**	**>(-10)ºC**
Curing temperature	**> 14ºF**	**>(-10)ºC**
Maximum thickness per pass	**2in**	**50mm**

GENERAL INFORMATIONS

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.