

# HEATLOK<sup>®</sup> // HP<sup>™</sup> SOYA

**HEATLOK<sup>®</sup> SOYA HP<sup>™</sup>** is a two component, low GWP, closed cell, spray applied, rigid polyurethane foam system. This foam product has been tested by an independent recognized laboratory and HBS Heatlok SOYA HP surpasses the requirements outlined in the most recent and stringent standard CAN/ULC S705.1-18 “Standard for thermal insulation – Spray applied rigid polyurethane foam, medium density – Material Specification”, also satisfies the CAN/ULC S705.1-15 Standard referred in the NBC. Heatlok Soya HP material complies with the requirements of the National Building Code of Canada. This product is commonly used as a thermal insulation product, air barrier, vapour retarder for interior, exterior applications above and below grade. Heatlok Soya HP uses recycled plastic materials, rapidly renewable soy oils, and 4th generation blowing agent with zero ozone depleting potential and < 1 global warming potential. This product meets all the requirements of the Paris, Kyoto and Montreal protocols. Heatlok Soya HP is a GREENGUARD GOLD certified insulation material. Heatlok Soya HP is applied exclusively by CALIBER QAP licensed installers and contractors in accordance with the CAN/ULC S705.2. standard.

**PHYSICAL PROPERTIES - CAN/ULC S705.1-18, CCMC 14505-L**

ASTM D 1622-14	Apparent Core Density	2.20lb/ft <sup>3</sup>	35.32 kg/m <sup>3</sup>
CAN/ULC S770-09	Long Term Thermal Resistance LTTR 100 mm 75 mm 50 mm 25 mm	R-25.6 R-18.5 R-11.7 R-5.2	4.50 RSI 3.25 RSI 2.06 RSI 0.92 RSI
ASTM C 518	Initial Thermal Resistance	R-14 @ 2.061”	2.53 RSI@52.35mm
ASTM D 1621-16	Compressive Strength	37 lb./in <sup>2</sup>	253 kPa
ASTM D 1623-09	Tensile Strength	69 lb./in <sup>2</sup>	475 kPa
ASTM D 6226-15	Open Cell Content	3 %	
ASTM D 2842	Water Absorption	2 %	
ASTM E 96	Water Vapour Permeance (50 mm thick)	0.55 perm	31 ng/Pa.s.m <sup>2</sup>
ASTM E 2178	Air Permeance - 75 Pa @ 25mm	0,010 cfm/ft <sup>2</sup>	0.0051 L/s.m <sup>2</sup>
CAN/ULC S102-10 CAN/ULC S127	Flame Spread Index Corner wall test Required and Declared Value (building code)	300	
ASTM D 2126-15	Dimensional Stability (28 days) (% volume change, sample without any substrate) @ -20°C @ +80°C @ +70°C & 97±3%R.H.	+0.2 +2.7 +7.3	
CAN/ULC S774-09 (R2014)	Time of Occupancy (VOC)	Pass (25 hours)	
ASTM C 1338-14	Fungi Resistance	No Fungal Growth	

**PHYSICAL PROPERTIES – Additional Testing**

UL Greenguard	Interior Air Quality	Certified Gold
CAN/ULC S101	UL LISTED design wall FW FO7. EW24, 150mm, X Wall, Exterior Insulation (NBC 2015 art. 3.2.3.8)	Conform
CAN/ULC S101	UL LISTED design wall FWFO7. EW25, 204mm D-Max wall, Int. Insulation (NBC 2015 art. 3.2.3.8)	Conform
CAN/ULC S134-18	Intertek Report D-Max Wall CNB 2015 art. 3.1.5.6)	Conform
Radon Protection System	UL Certification and Report (CNB 2015 art. 5.4.1.1 & 9.13.4)	UL-ER40477-02
K124/02/95* (ISO/TS 11665-13)	Radon gas resistance (for 50mm) Radon gas diffusion coefficient	<237 910.10 <sup>6</sup> s/m <(2,5±0,3).10 <sup>-11</sup> m <sup>2</sup> /s
ASTM C 411	Hot-Surface Performance of High-Temperature Thermal Insulation. @+80°C	Conform
CAN/ULC S 741-20	Air Barrier Material (NBC-2015 Art: 5.4.1.2 & 9.36.2.10)	0.0006 L/s.m <sup>2</sup> @ 25mm

CAN/ULC S742-20	Air Barrier System: Sustained P1: 1000 Pa, Gust wind P3: 3820 Pa**	Exterior Insulation, X Wall: 0,03 L/s.m <sup>2</sup> Interior Insulation D-Max Wall : 0.04 L/s.m <sup>2</sup>
ASTM E 331 after CAN/ULC S742 testing	Standard Test Method for Water Penetration	Exterior Insulation, X Wall: 1000 Pa Interior Insulation, D-Max Wall : 300Pa
ASTM E 96-A Dry ASTM E 96-B Wet	Water vapour permeance with 2 skins (surface and adhesion)	30mm: 0.55 perm / 31 ng/Pa.s.m <sup>2</sup> 40mm: 0.72 perm / 41 ng/Pa.s.m <sup>2</sup>

\*\*Air leakage results are directly related to the P1 and P3 pressure loads applied during testing. To compare different compliant wall systems, you need to ensure that the P3 load is identical. See our documents and standards on air-barrier systems.

RECYCLED & RENEWABLE CONTENT	
Recycled Content	15.3%
Renewable Content	4.7%

RECOMMENDED PROCESSING PROCEDURES		
Mixing Ratio A/B (volume)	1/1	
Initial Processing Setpoint Pressure	1000 – 1200 psi	6895 – 8274 kPa
Moisture Content of Substrate	≤19%	≤19%
PRODUCT VERSION	APPLICATION TEMPERATURES AIR, SUBSTRATE & CURING (24HRS)	LIQUID TEMPERATURES
Summer Version	5 @ 30°C (41 @ 86°F)	35 @ 46°C (95 @ 115°F)
Winter Version	-10 @ 10°C (14 @ 50°F)	38 @ 49°C (100 @ 120°F)
Super Winter	-20 @ 0°C (-4 @ 32°F)	35 @ 49°C (95 @ 120°F)

\*Foam application temperatures and pressures can vary widely depending on temperature, humidity, elevation, substrate, equipment, and other factors. While processing, the applicator must continuously observe the characteristics of the sprayed foam and adjust processing temperatures and pressures to maintain proper cell structure, adhesion, cohesion, and general foam quality. It is the sole responsibility of the applicator to process and apply this product within specification

REACTIVITY PROFILE			
Cream Time	Gel Time	Tack Free Time	End of Rise
0 - 1	3 seconds	5 - 6 seconds	5 - 6 seconds

LIQUID COMPONENT PROPERTIES *		
PROPERTY	ISOCYANATE	RESIN
Color	Brown	Blue
Viscosity @ 25°C	150 – 350 cps	230-330 cps
Specific Gravity	1.20 – 1.24	1.19 – 1.21
Shelf Life of unopened drum properly stored	6 months	6 months
Storage Temperature	15 @ 25°C (59 @ 77°F)	15 @ 25°C (59 @ 77°F)
Mixing Ratio (volume)	100	100

\*See SDS for more information

**General Requirements:** Equipment must be capable of delivering the proper ratio (1:1 by volume) of polymeric isocyanate (PMDI) and polyol blend at adequate temperatures and spray pressures. Substrate must be at least 5 degrees above dew point, with best processing results when ambient humidity is below 80%. Substrate must also be free of moisture (dew or frost), grease, oil, solvents, and other materials that would adversely affect adhesion of the polyurethane foam. This product should not be used to cover flexible ductwork. This product must not be used when the continuous service temperature of the substrate or foam is outside the range -60°C to 80°C (-76°F to 180°F). This product must be separated from the interior of the building by an approved thermal barrier or an approved finish material equivalent to a thermal barrier in accordance with applicable codes.

**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, expressed or implied, including any warranty of merchantability or fitness, nor is protection from any law or patent inferred. All patent rights are reserved. The foam product is combustible and must be protected in accordance with applicable codes. Protect from direct flame and spark contact, around hot work for example. The exclusive remedy for all proven claims is replacement of our materials.

