SEALECTION® 500

DEMILEC

TECHNICAL DATA SHEET

Sealection® 500 is a two component, open cell, spray applied, semi-rigid polyurethane foam system. This product is a fully water blown foam system with a low in-place density with excellent adhesion to various substrates and to itself. Sealection 500 incorporates the single phase solution technology developed by Demilec for excellent shelf life and consistent processing. Sealection 500 complies with the intent of the International Code Council's residential and commercial building codes for spray polyurethane foam plastic insulation. Sealection 500 has been approved by the EcoLogo (formerly Environmental Choice) Program of Canada and is an NAHB Green Approved Product. Sealection 500 meets the USDA guidelines for incidental food contact.

PHYSICAL PROPERTIES			
ASTM D 1622	Density	0.45 – 0.5 lb/ft³	7.2 – 8 kg/m³
ASTM C 518	Aged Thermal Resistance (R-value @ 1 inch)	3.81 ft²h°F/BTU	0.67 Km²/W
ASTM E 283	Air Leakage (air impermeable IAW 2006, 2009 & 2012 IRC, IBC & IECC requirements)		
	Air Permeance @ 75 Pa @ 3.5" Sustained wind load for 60 minutes @ 1000 Pa (90 mph wind) Gust wind load test @ 3000 Pa (160 mph wind)	0.001 L/sm² No Damage No Damage	
ASTM E 2178	Air Permeance @ 50 Pa @ 3.5" Air Permeance @ 100 Pa @ 3.5" Air Permeance @ 300 Pa @ 3.5"	0.001 L/sm² 0.003 L/sm² 0.008 L/sm²	
ASTM E 96	Water Vapor Permeance @ 3.5" Water Vapor Permeance @ 5.5" Water Vapor Permeance @ 7" Water Vapor Permeance @ 10" Qualifies as a Class III vapor retarder at normal installed thicknesses	6.33 perms 4.03 perms 3.17 perms 2.20 perms	362 ng/Pa•s•m² 231 ng/Pa•s•m² 181 ng/Pa•s•m² 126 ng/Pa•s•m²
ASTM E 413	Sound Transmission Class (STC) (see website for assembly specs)	49 – 51	
ASTM C 423	Noise Reduction Coefficient (NRC)	75	
CAN/ULC-S774-09	VOC Emissions Standard	24 hr re-occupancy time, 2 hour ventilation period before PPE is no longer required	
ASTM D 1621	Compressive Strength	0.7 psi	4.8 kPa
ASTM D 1623	Tensile Strength	5.6 psi	38.6 kPa

FIRE TEST RESULTS		
ASTM E 84	Surface Burning Characteristics, 6" thick Flame Spread Index Smoke Developed	Class I 21 216
NFPA 286	Ignition Barrier – Compliant with 2006, 2009 & 2012 IBC and IRC, and ICC-ES AC-377 Appendix X, for use in attics and crawl spaces with: Blazelok™ IB4 at 3 mils dry film thickness, 5 mils wet film thickness, or Andek Firegard at 10 mils dry film thickness, 16 mils wet film thickness, or No Burn Plus XD at 4 mils dry film thickness	Pass
NFPA 286	Thermal Barrier – Compliant with the 2006, 2009 & 2012 IBC and IRC, as an interior finish without a 15 minute thermal barrier with Blazelok™ TBX at 11 mils dry film thickness.	Pass
NFPA 285	Compliant with the 2006, 2009 & 2012 IBC for exterior walls of Type I, II, III and IV buildings of any height. See ICC-ES ESR 1172, Section 4.6 for specific assembly. Contact the Demilec Engineering Department for assistance with alternate assemblies.	Pass
ASTM E 970	Sealection 500 may be left exposed on attic floors up to 14" thick.	Pass
ASTM E 119	Non load-bearing, 1 hour, wall assembly test. See ICC-ES ESR 1172, Section 4.5 for specific assembly. Contact the Demilec Engineering Department for assistance with alternate assemblies.	Pass
ASTM D 1929	Ignition Properties (spontaneous ignition temperature)	1040°F (560°C)

REACTIVITY PROFILE			
Cream Time	Gel Time	Tack Free Time	End of Rise
1 – 2 seconds	3 – 4 seconds	6 – 7 seconds	6 – 7 seconds

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SEALECTION® 500

LIQUID COMPONENT PROPERTIES*		
PROPERTY	A-PMDI ISOCYANATE	SEALECTION 500 RESIN
Color	Brown	Amber
Viscosity @ 77°F (25°C)	180 – 220 cps	150 – 300 cps
Specific Gravity	1.24	1.08 – 1.12
Shelf Life of unopened drum properly stored	12 months	12 months
Storage Temperature	50 – 100°F (10 – 38°C)	50 – 100°F (10 – 38°C)
Mixing Ratio (volume)	1:1	1:1

*See SDS for more information.

RECOMMENDED PROCESSING CONDITIONS*		
Initial Recirculating Setpoint Temperature	90 – 100°F	32 – 38°C
Initial Primary Heater Setpoint Temperature	110 – 130°F	43 – 54°C
Initial Hose Heat Setpoint Temperature	110 – 130°F	43 – 54°C
Initial Processing Setpoint Pressure	1100 – 1500 psi	7584 – 10342 kPa
Substrate & Ambient Temperature	> 23°F	> -5°C
Moisture Content of Substrate	≤ 19%	≤ 19%
Moisture Content of Concrete	Concrete must be cured, dry and free of dust and form release agents.	

*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 Sealection 500 within specification.

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.

Sealection 500 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. Sealection 500 must be sprayed at a minimum thickness of 3" per pass. This product must not be used when the continuous service temperature of the substrate or foam is below -60°F (-51°C) or above 180°F (82°C). Sealection 500 should not be used in contact with bulk water, below grade or to cover flexible ductwork.

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.