



SEALECTION® 500

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 Huntsman Building Solutions 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/ft ³ | 7.2 – 8 kg/m ³ |
| ASTM C 518 | Aged Thermal Resistance (R-value @ 1 inch) | 3.81 ft ² h°F/BTU | 0.67 Km ² /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/sm ² No Damage No Damage | |
| ASTM E 2178 | Air Permeance @ 50 Pa @ 3.5" | 0.001 L/sm ² | |
| | Air Permeance @ 100 Pa @ 3.5" | 0.003 L/sm ² | |
| | Air Permeance @ 300 Pa @ 3.5" | 0.008 L/sm ² | |
| ASTM E 96 | Water Vapor Permeance @ 3.5" | 6.33 perms | 362 ng/Pa•s•m ² |
| | Water Vapor Permeance @ 5.5" | 4.03 perms | 231 ng/Pa•s•m ² |
| | Water Vapor Permeance @ 7" | 3.17 perms | 181 ng/Pa•s•m ² |
| | Water Vapor Permeance @ 10" Qualifies as a Class III vapor barrier at normal installed thicknesses | 2.20 perms | 126 ng/Pa•s•m ² |
| ASTM E 413 | Sound Transmission Class (STC) (see website for assembly specs) | 49 – 51 | |
| ASTM C 423 | Noise Reduction Coefficient (NRC) | 0.75 | |
| 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 2012, 2015, 2018 & 2021 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 DC 315 at 3 mils dry film thickness, 4 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 2012, 2015, 2018 & 2021 IBC and IRC, as an interior finish without a 15 minute thermal barrier with: Blazelok™ TBX at 11 mils dry film thickness, 17 mils wet film thickness, or DC 315 at 12 mils dry film thickness, 18 mils wet film thickness. | Pass |
| NFPA 285 | Compliant with the 2012, 2015, 2018 & 2021 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 Huntsman Building Solutions 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 Huntsman Building Solutions Engineering Department for assistance with alternate assemblies. | Pass |
| | | Pass |
| ASTM D 1929 | Ignition Properties (spontaneous ignition temperature) | 1040°F (560°C) |

REACTIVITY PROFILE

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

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 PPROCESSION PARAMETERS*

| | | |
|--|-----------------|------------------|
| 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.

