

## Technical Data Sheet

### Product Use and Design

VPC-CC SuperYield is a two-component, closed-cell, spray-applied, rigid polyurethane foam system. This product uses recycled plastic materials and rapidly renewable soy oils. VPC-CC SuperYield complies with the intent of the International Code Council's residential and commercial building codes and is commonly used as a thermal insulation, air barrier, vapor retarder, and water-resistive barrier in above grade, below grade, interior and exterior applications.

### Physical Properties

ASTM D 1622	Core Density	2.23 lb/ft <sup>3</sup>	35.7 kg/m <sup>3</sup>
ASTM C 518	Aged Thermal Resistance (R-value @ 1 inch)	6.7 ft <sup>2</sup> h°F/BTU	1.18 Km <sup>2</sup> /W
ASTM E 283	Air Leakage @ 75 Pa @ 1"	< 0.02 L/sm <sup>2</sup>	
ASTM E 2178	Air Permeance @ 75 Pa @ 1"	< 0.02 L/sm <sup>2</sup>	
ASTM E 2357	System Air Leakage Rating		
	Opaque Wall: Air Exfiltration 75 Pa (1.57 pcf)	0.0039	
	Penetrated Wall: Air Exfiltration 75 Pa (1.75 pcf)	0.0001	
ASTM E 96	Water Vapor Permeance (Summer @ 1.625", Winter @ 1.1")	< 1 perm	< 57.2 ng/Pa•s•m <sup>2</sup>
	Qualifies as a Class II vapor barrier per IBC Section 202		
ASTM D 2842	Water Absorption (volume)	0.87%	
ASTM D 1621	Compressive Strength at 10% Deformation	18.0 PSI	124 kPa
ASTM D 1623	Tensile Strength	37.9 PSI	261 kPa
ASTM D 2126	Dimensional Stability @ 158°F (70°C) 97% R.H. (168 hours)	5.45% (% volume change)	
VOC Emissions	UL Environment (Greenguard Gold)	Meets criteria	
ASTM C 1338	Fungi Resistance	No fungal growth	
ASTM D 6226	Closed Cell Content	93.1%	

### Fire Test Results

ASTM E 84	Surface Burning Characteristics, 4" thick	Class I
	Flame Spread Index	0-5
	Smoke Developed	350-400
AC 377 Appendix X	Ignition Barrier - Compliant with 2009, 2012 & 2015 IBC and IRC, and ICC-ES AC-377 Appendix X, for use in attics and crawlspaces without a prescriptive ignition barrier or intumescent coating.	Pass
NFPA 286	Thermal Barrier - Compliant with the 2009, 2012 & 2015 IBC and IRC, as an interior finish without a 15-minute thermal barrier when coated with DC-315 at 18 mils wet film thickness, 12 mils dry film thickness, or Blazelok™ TBX at 18 mils wet film thickness, 12 mils dry film thickness.	Pass
ASTM D 1929	Ignition Properties (spontaneous ignition temperature)	1,010°F (543°C)

### Reactivity Profile

Cream Time	Gel Time	Tack Free Time	End of Rise
0 - 1 seconds	2 seconds	3-4 seconds	3-4 seconds

### Recycled and Renewable Content of VPC-CC SuperYield Resin

Finished Foam Renewable and Recycled Content	22.7%
Polyol Renewable Content	8%
Polyol Recycled Content	37.4%

### Liquid Component Properties\*

Property	VPC-SuperYield ISO-A	VPC-CC SuperYield B Resin
Color	Brown	Blue
Viscosity @ 77°F (25°C)	180-220 cps	Summer - 250-350 cps Winter - 200-300 cps
Specific Gravity	1.24	Summer - 1.17-1.21 Winter - 1.20-1.22
Shelf Life of Unopened Drum Properly Stored	12 months	6 months
Storage Temperature	50-100°F (10-38°C)	59-77°F (15-25°C)
Mixing Ratio (volume)	1:1	1:1

\*See SDS for more information.

### Recommended Processing Conditions\*

Initial Primary Heater Setpoint Temperature	Summer 100-105°F Winter 95-100°F	Summer 38-41°C Winter 35-38°C
Initial Hose Heat Setpoint Temperature	Summer 100-105°F Winter 95-100°F	Summer 38-41°C Winter 35-38°C
Initial Processing Setpoint Pressure	1,200-1,400 PSI	8,274-9,653 kPa
Substrate & Ambient Temperature	Summer > 50°F Winter > 15°F	Summer > 10°C Winter > -12°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 VPC-CC SuperLift 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. Applicators should limit the application of this product to no more than a thickness of 2" (50mm) per pass (after expansion) to avoid fire hazards (including spontaneous combustion) resulting from excessive heat generation. A second 2" (50mm) layer may be applied immediately after the first one has fully risen. If subsequent passes are needed, applicators should wait until the core temperature of the foam has dropped below 100°F to allow any reaction heat to dissipate from the prior applications before attempting to reapply the product.

VPC-CC SuperYield 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. VPC-CC SuperYield must be sprayed at a minimum thickness of 1" 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). VPC-CC SuperYield should not be used to cover flexible ductwork.

### Disclaimer

The data presented herein are not intended for use by non-professional applicators, or those persons who do not purchase or utilize this product in the normal course of their business. The potential user must perform any pertinent tests in order to determine the product's performance and suitability in the intended application, since final determination of fitness of the product for any particular use is the responsibility of the buyer.

It is the responsibility of the applicator to thoroughly understand all equipment technical information and safe operating procedures that pertain to spray polyurethane foam application.

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