VPC-200 CC High Lift

Closed-Cell | Finished Foam | Code Compliance Research Report: CCRR-0411

Technical Data Sheet | Type I, II, III, IV, V-B Construction

Physical Properties

ASTM D 1622	Core Density	2 lb/ft³
ASTM C 518	Aged Thermal Resistance	6.9 per inch
ASTM E 283	Air Leakage @ 75 Pa @ 1"	< 0.02 L/sm²
ASTM E 2178	Air Permeance @ 75 Pa @ 1"	< 0.02 L/sm²
ASTM E 96	Water Vapor Permeance 1.5" Class II vapor barrier	< 1 perm
ASTM D 2842	Water Absorption (volume)	<5%
ASTM D 1621	Compressive Strength	>26 PSI
ASTM D 1623	Tensile Strength	>30 PSI
ASTM D 2126	Dimensional Stability @158°F 97%R.H.	<10%
VOC Emissions	UL Environment (Greenguard Gold)	Meets criteria
ASTM C 1338	Fungi Resistance	No fungal growth
ASTM D 6226	Closed Cell Content	>93%
ASTM C 1029	Standard Specification	Meets Type II

Fire Test Results

NFPA 286	Thermal Barrier Compliant IBC / IRC	PASS
NFPA 259	Potential Heat	1953 Btu/ft2 per inch
NFPA 285	Exterior Wall Systems	PASS
ASTM E 84	Surface Burning Characteristics, 4" thick Flame Spread Index <25 Smoke Development <450	Class I ≤25 ≤450
AC 377 Appendix X	Appendix X, for use in attics and crawlspaces without a prescriptive ignition barrier or intumescent coating.	PASS
ASTM D 1929	Ignition Properties (spontaneous ignition temperature)	>850°F (454°C)

Product Use and Design

VPC-200 CC High Lift is a two-component, closed-cell, spray-applied, rigid polyurethane foam system. This product uses recycled plastic materials and rapidly renewable soy oils. VPC-200 CC High Lift 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.

Recommended Product Applications: Walls, Metal Walls and Ceilings, Floors, Unvented Crawl Spaces, Concrete Slabs, Cold Storage, Unvented Attics, Vented Attics, Vented Crawl Spaces, Ducts, Freezers, Ceilings, Piping, Foundations, Tanks and Coolers.

Florida Building Code 2020

2020 Florida Building Code Residential FL 39880
2020 Florida Building Code Building FL 39880

Approved Thermal Barrier Intumescent Coatings

DC 315	14 Wet Film 9 Dry Film	115 SQFT/GAL

Recycled and Renewable Content of VPC-200 CC High Lift Resin

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

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-200 CC High Lift 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 4" (102mm) per pass (after expansion) to avoid fire hazards (including spontaneous combustion) resulting from excessive heat generation. 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-200 CC High Lift 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-200 CC High Lift 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).

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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