

KARNAK

K-NRG™

Air Barrier Systems

VAPOR PERMEABLE

KARNAK
THE SEAL OF QUALITY

Liquid-Applied, Fire-Rated Vapor-Permeable Air Barrier

Reducing energy consumption.
Increasing building functionality.

K-NRG Seal VP™ is the premier high-performance vapor-permeable air barrier for above-grade wall application.

K-NRG Seal VP's seamless elastomeric membrane seals the building envelope, preventing air penetration while providing vapor permeability. K-NRG Seal VP performance provides superior energy efficiency and mold resistance. When choosing K-NRG Seal VP, architects are relying on the KARNAK seal of quality and 84 years of experience in moisture and water intrusion prevention. K-NRG Seal VP liquid-applied vapor-permeable air barrier ensures reliable building envelope protection and provides



the following benefits:

- ABAA evaluated and listed
- Exceeds ASTM E2357 and ASTM E2178
- Passed NFPA 285 Fire Test at Underwriters Laboratories and complies with IBC 2012
- Stringent fire rating allows architects flexibility in their choice of material configuration and insulation options
- Prevents above-grade water intrusion
- Easy spray application using standard spray equipment – may also be rolled
- Strong adhesion to most wall construction materials, including exterior gypsum boards, CMUs, stone, wood, metal – and even damp (or dry) concrete
- Forms a complete vapor-permeable wall air-barrier system when combined with KARNAK NFPA 285 fire-rated K-NRG Gap Seal™ and accessories



Start by applying K-NRG Gap Seal where needed, then spray or roll K-NRG Seal VP for a complete vapor-permeable wall air-barrier system.

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Want to reduce energy and cooling costs while protecting your building for a sustainable future? K-NRG Seal VP delivers.



EXTERIOR WALL SYSTEM COMPONENT IN ACCORDANCE WITH ANSI/NFPA 285 SYSTEM



- Improves building occupant comfort
- Helps reduce greenhouse gas formation, lessening environmental impact
- Helps reduce heating and cooling costs
- May reduce building enclosure moisture problems
- Helps improve indoor air quality
- Improves acoustical isolation
- Results in sustainable, durable buildings
- Contributes to LEED certification

321 K-NRG Seal VP - Physical Properties	
Color	Gray
Solids by Weight (Solids by Volume)	60% (50%)
Weight per Gallon	10.4 lbs
Drying Time @ 50% RH +60° F (+15° C), Dry Substrate	2 hrs. to Touch 24 hrs. to Firm Dry
Service Temperature	-40° F to +158° F (-40° C to +70° C)
Application Temperature	+40° F to +122° F (+4° C to +50° C)
VOC Content	49 grams/liter, max.

TEST	TEST Standard	Results	Requirement	Notes
NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components	NFPA 285	Pass	Pass/Fail	Underwriters Laboratories FWWFX.R38207 System No. EVS0028
TEST	TEST Standard	Results	Requirement	Std. Dev.
Water Vapor Transmission (ng/Pa-s-m ²) 0.40mm (16 mil) dft;	ASTM E 96 (Procedure A)	134	Permeance (ng/Pa-s-m ²)	3
Water Vapor Transmission (ng/Pa-s-m ²) 0.40mm (16 mil) dft;	ASTM E 96 (Procedure A)	2.34	Permeance (Perms)*	0.05
Water Vapor Transmission (ng/Pa-s-m ²) 0.40mm (16 mil) dft;	ASTM E 96 (Procedure B)	1588	Permeance (ng/Pa-s-m ²)	140
Water Vapor Transmission (ng/Pa-s-m ²) 0.40mm (16 mil) dft;	ASTM E 96 (Procedure B)	27.77	Permeance (Perms)*	2.44

Test	TEST Standard	Avg. Results	Requirement
Air Leakage of Air Barrier Assembly Opaque Wall - ABAA Specification and 2012 IECC Code	ASTM E 2357	0.010	≤ 0.200
Penetrations Check; @ Reference Air Leakage ABAA Specification and 2012 IECC Code	ASTM E 2357	Pass	< 0.011
Air Permeance - SI Units (L/(s-m ²) 0.40 mm (16 mil) dft	ASTM E 2178	0.001	≤ 0.02
Air Permeance - U.S. Customary Units CFM/ft ²) 0.40 mm (16 mil) dft	ASTM E 2178	0.000	≤ 0.004
Water Resistance Visual Inspection for Water Infiltration	AATCC 127	Pass	Pass
Self-Sealability - Bottom Can 0.40 mm (16 mil) dft	ASTM D 1970	Pass	No Water
Self-Sealability - Nail Shank 0.40 mm (16 mil) dft	ASTM D 1970	Pass	No Water
Self-Sealability - Underside of Plywood 0.40 mm (16 mil) dft	ASTM D 1970	Pass	No Water
Self-Sealability - Between Plywood & Membrane 0.40 mm (16 mil) dft	ASTM D 1970	Pass	No Water
Crack Bridging	ASTM C 1305	Pass	No Cracking, Splitting, Pinholes or Any Other Condition in the Area of the Joint
Pull Off Strength (kPa) - To Concrete	ASTM D 4541	678	≥ 110
Pull Off Strength (kPa) - To USG Securerock Glass-Mat Sheathing	ASTM D 4541	266	≥ 110
Pull Off Strength (kPa) - To OSB	ASTM D 4541	907	≥ 110
Pull Off Strength (kPa) - To Plywood	ASTM D 4541	922	≥ 110
Pull Off Strength (kPa) - To CMU Block	ASTM D 4541	832	≥ 110
Tensile Strength	ASTM D 412	125 psi	List Results
Elongation %	ASTM D 412	160	List Results
Peel Strength - To Concrete	ASTM C 836	100 kPa	List Results
Low Temperature Flexibility and Crack Bridging @ -20° C	ASTM C 836	Pass	Pass/Fail
Aging - Long-Term Flexibility	CGSB 71-GP-24M	Pass No Fracturing	Pass/Fail
Resistance to Mold, Mildew & Fungal Growth	ASTM D 5590	-0- No Growth	List Results

Compliant with Air Barrier Association of America (ABAA) Specification, and 2012 International Energy Conservation Code (IECC)

Chemical Resistance	Not Resistant	Mild Resistance	High Resistance
Solvents	•		
Water			•
Acids: Mild Acid Solutions		•	
Bases: Mild Base Solutions		•	
Salt			•
Substrate and Accessory Compatibility	Not Compatible	Mildly Compatible	Highly Compatible
Concrete, Wallboard, Stucco, Wood, Metal, OSB, Cementitious Boards, Sheetrock, Brick, Gypsum Board, All Standard Roofing Materials Except Bitumen			•
Polystyrene Insulation		•	
Silicone, Tyvec®, Polyethylene	•		
Bitumen		•	
Cured Water-Based Sealants, Caulks & Coatings			•
Cured Moisture Cure Sealants, Caulks & Coatings			•
Cured Solvent-Based Primers, Coatings & Sealants			•