GOLIATH
ROOFING SYSTEMS

GOLIATH PVC 50

Thermoplastic PVC single-ply membrane

Technical Data Sheet

Product Description:

GOLIATH PVC 50 is a polyester-reinforced, thermoplastic PVC waterproofing membrane for single-ply roofing systems. GOLIATH PVC is compounded high quality polyvinyl chloride resin, resilient plasticizers, stabilizers, pigments and other proprietary materials and manufactured in a nominal 50 mil thickness.

Features and Benefits:

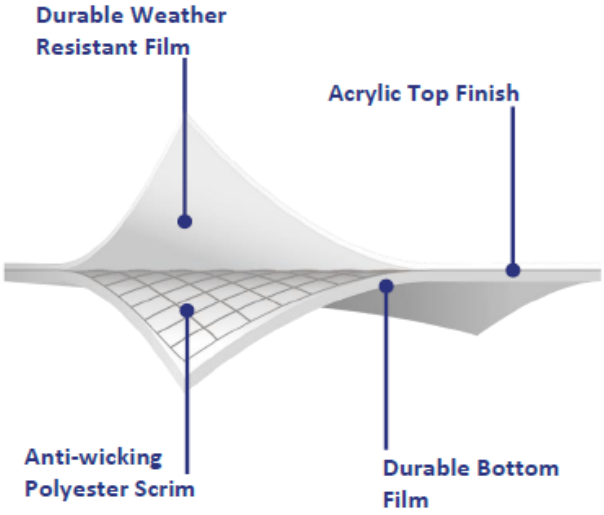
- Meets or exceeds ASTM D4434, Type III Thermoplastic Membrane
- Excellent flexibility in all climates.
- Engineered PVC formulation providing good resistance to environmental elements such as UV radiation, Ozone, microorganisms.
- GOLIATH PVC 50 is highly reflective and can help reduce heat transfer through the roof into the building's interior. It meets California Title 24 requirements for Solar Reflectance and Emissivity (White).
- Thick, weather-resistant, heavy duty top ply exceeding minimum requirements in over the scrim thickness with acrylic-based top finish allowing for exceptional abrasion resistance and great clean-ability.
- GOLIATH PVC 50 can be easily welded with superior seam strength.
- An anti-wicking polyester reinforcement (9x9 1000 Denier) provides strength, tear resistance and enhanced moisture resistance. No edge sealant is required for cut edges.

Use:

GOLIATH PVC 50 can be installed in new, recover, and re-roof constructions as the primary field membrane and base flashing at all roof to wall transitions. It can be mechanically attached or fully adhered to a properly prepared substrate with approved fasteners and membrane plates or approved membrane adhesive (Please refer to listed approved roofing materials and constructions).

Warranties:

GOLIATH PVC 50 has a 15-Year limited material warranty and is available for additional warranty when installed with an approved applicator.



Available Colors/Embossed:

- TOP SURFACE: White/Tan/Grey/Brown/Green/Red (Std.)
- BOTTOM SURFACE: Black/Grey/Olive/Blue (Std.)
- Custom colors available upon request

Approvals:

GOLIATH membranes are listed with various component assemblies at UL and Factory Mutual (F.M. Global) for fire, wind uplift and impact resistance. Further information is available with the following code directories:

- FM Global
- Underwriters Laboratories
- Underwriters Laboratories of Canada

Installation:

GOLIATH PVC can be used for mechanically fastened or fully adhered systems using thermal weld for seaming. Refer to GOLIATH application guides and detail drawings for instructions.

Energy and Environment:

Solar Reflectance / Thermal Emittance / Calculated SRI Values				
Color	Solar Reflectance	Thermal Emittance	SRI Value Initial	SRI Value 3-Year Aged
White	0.87	0.88	110	91
Tan	0.37	0.87	39	NA
Grey	0.16	0.88	13	NA
Brown	0.08	0.87	2	NA
Recycled Content				
Post-consumer			0%	
Pre-consumer			0% - 40%	

Packaging and Dimensions:

Size		Coverage per roll	Rolls per pallet	Approx. pallet weight
W	L			
72 in.	90 ft.	540 sq. ft.	15	2750 lb.
36 in.	90 ft.	270 sq. ft.	30	2750 lb.

Custom packaging and roll sizes available upon request.

Typical Physical Properties:

Meets the requirements of ASTM D 4434, Type III

Physical Properties		Test Method	Requirements	GOLIATH TOWER PVC 50
Strength	Breaking strength	ASTM D751, Method A Grab	≥ 200 lbf. MD/XMD	330 lbf. MD/260 lbf.XMD
	Elongation at break	ASTM D751, Method A Grab	≥ 15% MD/XMD	34 % MD/29 % XMD
	Tearing strength	ASTM D751, Method B	≥ 45 lbf. MD/XMD	58 lbf. MD/68 lbf.XMD
	Seam strength	ASTM D751, Method A Grab	75% of original strength	Pass
	Static puncture resistance	ASTM D5602, 33 lbf. @ 73 °F	Pass	Pass
	Dynamic puncture resistance	ASTM D5635, 20J @ 73 °F	Pass	Pass
Durability	Overall thickness	ASTM D751	≥ 0.045 in. ±10 %	0.050 in. ±10 %
	Thickness over scrim	ASTM D7635, Optical	≥ 0.016 in.	0.018 in.
	Water absorption	ASTM D570, Modified	± 3%	1.1%
	Low temperature bend	ASTM D2136 @ -40 °F (-40 °C)	Pass	Pass
Heat Aged Performance	Retention of properties after heat aging	ASTM D3045, 56 days @ 176 °F	≥ 90% of original	Pass
	Breaking strength	ASTM D751, Method A Grab	≥ 90% of original	Pass
	Elongation at break	ASTM D751, Method A Grab	≥ 90% of original	Pass
	Tearing strength	ASTM D751, Method B	≥ 90% of original	Pass
	Linear dimensional change	ASTM D1204, 6 hours	≥ 0.5 % MD/XMD	-0.3 % MD/0.02 % XMD
Weather Performance	Accelerated weathering	ASTM G154, 5000 hours	Pass	Pass
	Cracking	Optical @ 7x magnification	No cracks	Pass
	Discoloration	Visual	Negligible	Negligible
	Crazing	Optical @ 7x magnification	No crazing	Pass
	Moisture vapour transmission	ASTM E96, Proc. B, Method A		0.017 g/(h.m^2)
Fire Performance	Fire resistance – UL	UL-790 CAN/ULC-S107	NC: Incline3-Class A NC: Incline Unlim.-Class B C-15/32:Incline Unlim.-Class B	
	Fire resistance – FM Class 4470	ASTM E108	External: Class A	
	Further information on fire classification is available upon request or through Underwriters Laboratories and FM Global disctories.			

This table contains typical physical properties and characteristics based on actual test specimen data.