



Pennchem™ 97 Membrane

SELECTION & SPECIFICATION DATA

Type	Urethane polymer membrane
Description	Pennchem 97 Membrane is a 2-component trowelable liquid applied elastomeric urethane membrane.
Uses	<p>Chemical resistant membrane for protecting concrete and steel in the following applications:</p> <ul style="list-style-type: none">• Under chemical resistant masonry• Under polymer concrete• Under brick linings in bleach towers• Under brick linings in ClO₂ towers• Waterproofing• Crack-bridging base coat• Use as an adhesive to bed brick and tile• Secondary containment lining
Features	<ul style="list-style-type: none">• Good resistance to acids and alkalis• Flexible from -40°F (-40°C) to 160°F (71°C)• Crack-bridging• Easy to mix and trowel apply• High bond strength• May be spark tested on steel substrates
Limitations	Intolerant of moisture. Must not be used over damp surfaces. Protect from moisture after application until fully cured. Do not expose to steam after cure. Not for use beyond its chemical resistance or thermal capabilities. Consult Armor with specific questions.

INSTALLATION GUIDANCE

Reference Specification	CES-335 Pennchem 97 Membrane Installation Specification.
Installation Conditions	<p>Pennchem 97 Membrane is formulated for ideal handling at 70°F (21°C). Materials and substrate should be acclimated to the air temperature prior to installation. The air temperature should be between 50°F (10°C) and 90°F (32°C) and 5°F (3°C) above the moisture dew point during installation and cure.</p> <p>Prepare concrete in accordance with SSPC-SP 13/NACE No. 6. Concrete should be clean and dry and have a profile similar to an 80-120 grit sandpaper. Primer on concrete is not required for adhesion but the use of Penntrowel™ Epoxy Primer or Novocoat™ SC1100 Primer/Sealer is suggested to minimize outgassing from concrete substrates.</p> <p>On steel substrates prepare in accordance with NACE No. 3/SSPC-SP 6/SA 2.0.</p>
Mix Ratio	19 parts A base: 1.0 parts B hardener by weight
Mixing	Mix full units only. Mix Part A Base for 1 minute to loosen. Continue mixing while slowly emptying the can of hardener into the center vortex and mix thoroughly for 3 minutes at 70°F (21°C), 5 minutes at 50°F (10°C), moving the mix blade up, down and around the pail to catch all the edges. Mixed material is heavy-bodied.
Application	Apply mixed Membrane onto prepared substrate with a flat trowel to achieve desired thickness. Apply in two passes, wet on wet, to minimize pinholes. If first coat has dried, abrade the surface to roughen it prior to applying the second coat.
Work Life	<p>45-60 minutes at 70°F (21°C)</p> <p>Work life is shorter at higher temperatures and longer at cooler temperatures.</p>
Cleanup	Mineral spirits

CURE TIME

Substrate	Initial Set	Full Cure
70°F (21°C)	5-6 hours	36 hours



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PACKAGING, ESTIMATING & HANDLING

Product	Code	Packaging
Pennchem 97 Membrane Kit - Tan	19687	2-gallon (7.5 L) kit
Pennchem 97 Membrane Kit - Off White	19700	2-gallon (7.5 L) kit
Pennchem 97 Membrane Part A - Tan	19688	1.9-gallon (7.2 L) pail
Pennchem 97 Membrane Part A - Off White	19701	1.9-gallon (7.2 L) pail
Pennchem 97 Membrane Part B	19689	0.13-gallon (0.5 L) bottle

A 2-gallon unit consists of a 1.9-gallon pail of part A resin and a 0.13-gallon (13.7 fl oz) bottle of part B. Order part A and part B separately if required for shipping and compliance purposes.

Theoretical Coverage	25.7 square feet per unit at 1/8-inch (3.2 mm) WFT 32 square feet per unit at 100 mils (2.5 mm) WFT
Storage & Shelf Life	Maintain products in original packaging and sealed until ready for use. Estimated shelf life is 24 months when stored in a dry area at 70°F (21°C). Actual shelf life may vary with storage conditions. If there is any question with respect to the quality of the components, check reactivity prior to use. For assistance consult with Armor.

SAFETY

Safety	Mixes and applications of this product present a number of hazards. Read and follow the hazard information, precautions and first aid directions on the individual product labels and safety data sheets before using.
Ventilation	Provide thorough air circulation during and after application until the material has cured when used in enclosed areas.

TYPICAL PHYSICAL PROPERTIES

Property	Typical Value
Color	Tan or Off White
Density, ASTM C138	11.9 lb/gallon (1,426 kg/m ³)
Hardness, ASTM D 2240 type A 73°F (23°C)	48
Solids, mixed material	100%
Flexibility, ASTM D522 method B, 73°F (23°C) 1/16" (750 µm) mandrel	Pass
Tensile strength, ASTM D412	>200 psi (1.37 MPa)
Elongation, ASTM D412	>100%
Water absorption, ASTM D570 7-day 73°F (23°C)	0.21%
Film shrinkage, ASTM D 2240 7-day 73°F (23°C)	0%
Service temperature, stand-alone	185°F (85°C)
Service temperature, behind brick	240°F (115°C)

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