

# HYDROSEAL® 1K PU FLASHING APPLICATION



A SIKA COMPANY

## Tech Data

### 1. Product Name

HydroSeal® 1K PU Membrane

### 2. Product Description

#### Basic Use

HydroSeal 1K PU Membrane resin, combined with polyester fleece or fiberglass mat reinforcement to form a reinforced flashing membrane in conjunction with Hydrotech's MM6125 membrane for a variety of conditions that do not allow for typically required membrane flashing termination requirements.

#### Accessories

HydroSeal 1K Epoxy Primer is used as a primer for HydroSeal 1K PU Membrane applied over MM6125, concrete, masonry, wood, metal, and all other substrates as recommended.

HydroSeal 1K Fleece is non-woven, needle-punched polyester fleece used to reinforce HydroSeal 1K PU Membrane. Wet on wet application of the resin is followed when using HydroSeal 1K Fleece.

HydroSeal 1K Fiber Reinforcement is chopped strand fiberglass mat used to reinforce HydroSeal 1K PU Membrane. First coat of the resin with this reinforcement must cure prior to the application of the second coat.

#### Tools

Paint brush or phenolic resin core roller  
Mixing paddle and handheld power tool (for primer)

Tape measure  
Masking tape  
Scissors  
Eye protection  
Rubber gloves

#### Limitations

- HydroSeal 1K is not to be used as the sole flashing material for Hydrotech's MM6125 and MM6125-FR membrane applications. Reference Hydrotech guideline details for further information.

- Do not store materials outdoors directly exposed to sunlight and moisture.
- Do not use for indoor applications unless sufficient air flow and ventilation are provided to prevent odors and/or vapors from leaving the immediate work area.
- Precautions should be taken to prevent odors and/or vapors from entering the building/structure, including but not limited to turning off and sealing air intake vents or other means of ingress for odors and/or vapors into the building/structure during product application and cure.
- Do not subject to continuous immersion, i.e. fountains, ponds, pools, or interior of tanks.
- Not recommended for use over ceramic tile.
- Do not thin with solvents.

#### Package size and Coverages

HydroSeal 1K PU Membrane is supplied in 4 gal (15.14 L) pails. On normal surfaces each 4-gal pail will cover approximately 84 sqft (7.8 sqm). Yield will vary depending upon system selected and the smoothness and absorbency of the substrate.

HydroSeal 1K Epoxy Primer is supplied in two boxes, Part A and Part B. Part A box contains two 0.75 gal. pails and Part B contains two 0.25 gal. pails. Total 2 gal. will cover approximately 300-400 square feet. Yield will vary depending on the smoothness and absorbency of the substrate.

HydroSeal 1K Fiber Reinforcement is available in 12- or 49-inch-wide X 295-foot rolls. The installer should allow for 3-inch overlap at side laps, and an additional 5% for waste.

HydroSeal 1K Fleece is available in 16- or 48-inch-wide X 300-foot rolls. The installer should allow for 3-inch overlap at side laps, 6-inch overlap at end laps, and an additional 5% for waste.

### 3. Installation

#### Surface Preparation

General: Acceptable substrates include concrete, masonry, gypsum or cement boards, metal, and wood/plywood. All substrates must be free from gross irregularities, loose, unsound or foreign material such as dirt, ice, snow, water, grease, oil, release agents, lacquers, or any other condition that would be detrimental to adhesion of the primer and/or resin to the substrate. Any repairs required to achieve a level surface must be performed prior to application. Surface irregularities may reflect through the cured system. Substrate must be dry prior to application. Do not apply to a frosted, wet or damp surface. Allow sufficient time for the substrate to dry after rain or inclement weather, as there is the potential for bonding problems. Do not apply to substrate surfaces where moisture vapor transmission will occur during application and cure. This condition may be checked using ASTM D4263 (Polyethylene sheet method). Substrates other than previously applied Hydrotech membrane and flashings materials, shall be abrasively cleaned or ground as required to provide a sound open abraded surface to provide adhesion of the membrane to substrate. Determinations of bond strength and moisture content shall be performed periodically by the Contractor throughout the course of work. On substrates likely to exhibit outgassing apply during falling ambient and substrate temperature. If applied during rising temperature pinholing or blistering may occur

Concrete: All concrete substrates and concrete repair materials must be cured a minimum of 28 days in accordance with ACI-308, or as recommended by the concrete/mortar manufacturer, in order to achieve a minimum hardness of 3,500 psi (25 N/mm<sup>2</sup>) and exhibit a minimum tensile bond strength of 200 psi (1.4 MPa) with a maximum moisture

content of four (4) percent. Concrete substrates shall be abrasively cleaned in accordance with ASTM D4259 to provide a sound substrate free from laitance with an open concrete surface. Areas of minor surface deterioration of 0.50 inch (13 mm) or greater in depth, and/or spalls, voids, bug holes and other deterioration on vertical surfaces or horizontal surfaces shall be repaired.

**Masonry Construction Walls:** shall be built with hard kiln dried brick, reinforced concrete block, or waterproof concrete block construction. Flashings must not be applied over soft or scaling brick or concrete, faulty mortar joints, or walls with broken, damaged or leaking coping. Walls of ordinary hollow tile, or other materials which in themselves are not waterproofed, should not be accepted as suitable to receive flashings unless they are properly waterproofed, to prevent moisture infiltration from above or behind the flashing system.

**Metal:** shall be in sound condition. Ferrous metals should be thoroughly cleaned by grinding or blast cleaning prior to priming (SSPC-SP3 to SP11 near-white metal). Non-ferrous metals are prepared by removing any deposits of dust and oxidation and abrading to bright metal. Wire brushing can be used for soft metal such as lead. The surface must be clean and free from grease which, if present, must be removed with a solvent wipe or wash with detergent, rinse and dry. Stainless Steel must be mechanically abraded or ground to create an appropriate anchor profile.

**Plywood:** shall be 1/2" minimum, CDX exterior grade board identified with American Plywood Association (APA) grade trademarks and shall meet the requirements of product standard PS1. Plywood panels should be installed with no gaps at panel joints. Tongue and groove plywood should be used whenever possible.

**MM6125 and related Flashing:** MM6125 with the appropriate corner reinforcement shall be completely installed before the HydroSeal 1K cold liquid-applied flashing is applied. The reinforced MM6125 shall be extended vertically up onto the

HydroSeal 1K			
Property	Test Method	HydroSeal 1K PU Membrane with Fleece	HydroSeal 1K PU Membrane with Fiber Reinforcement
Color		White or Standard Gray	
Dry film thickness		60 mils	
Resistance to Static Puncture	ASTM D-5602	> 55 lbs	
Tensile Strength	ASTM D-751 Proc. B	1030 psi	900 psi
Tear Strength	ASTM D-24	300 lbs/in.	200 lbs/in.
Elongation at Break	ASTM D-751	21%	82%
Service Temperature		-22 - 176°F (-30 - 80 °C) intermittent	

penetration, curb or parapet a minimum of 4 inches or as directed by American Hydrotech, Inc. All dust and dirt shall be removed from the surface of the membrane or flashing by appropriate means based on the flashing installed and without damage to the installed flashing.

**Primer**

HydroSeal 1K Epoxy Primer is required to be used on all approved substrates prior to the application HydroSeal 1K PU Membrane.

- Premix Part A before mixing Part A and B together.
- Add Part B into Part A and mix with a mechanical mixer at low speed for 3 minutes.
- Do not break down kits into smaller quantities.
- Avoid adding air into the primer during mixing.
- When fully mixed, the primer should be free from streaks and of a uniform color.
- Apply using brush or phenolic resin core roller, evenly and without puddling.
- Pot life of mixed product is around 45 minutes.

**Coverage:**

- 200 - 250 ft<sup>2</sup>/gal. on non-absorbent smooth substrates
- 150 - 200 ft<sup>2</sup>/gal. on prepared, dry concrete
- 75 - 100 ft<sup>2</sup>/gal. on mineral surfaced modified bitumen

Note: Rough, porous, or absorbent surfaces will require additional primer and will reduce yield

Curing Time			
Ambient Temp.	Minimum Waiting Time	Maximum Waiting Time	Touch Dry
50°F	12 hours	72 Hours	8 Hours
68°F	9 Hours	72 Hours	4 Hours
88°F	6 Hours	72 Hours	3 Hours

Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity. Ideally, membrane resin will be applied within 24 hours of primer application. Maximum primer exposure is 72 hours. Primer exposed longer than 72 hours, and primer exposed to water during curing and exhibiting a chalky appearance, must be reprimed. Deteriorated primer must be mechanically removed before primer reapplication.

**Application of HydroSeal 1K PU Membrane**

- **DO NOT MIX/PREMIX** HydroSeal 1K PU Membrane
  - Ambient Air Temperature should be between 41 °F (5 °C) and 95 °F (35 °C)
  - Substrate Temperature should be between 41 °F (5 °C) and 140°F (60°C)
  - Relative Air Humidity should be 80 % R.H. or less
  - Beware of condensation. The substrate and uncured coating must be ≥ 5 °F (3 °C) above dew point.
- HydroSeal 1K PU Membrane with

## HydroSeal 1K Fleece

- Apply HydroSeal 1K PU Membrane at the below coverage rates using a nap phenolic resin core roller. Material can also be squeegee or spray applied, in which case it should be backrolled prior to embedding HydroSeal 1K Fleece.
- Place HydroSeal 1K Fleece in wet base resin layer overlapping seams a minimum of 3" along the edge and 6" end-to-end.
- Apply wet roller to topside with light pressure to saturate fleece from bottom and ensure air pockets are completely removed.
- Immediately apply the top layer of resin (wet-on-wet application). Ensure even and complete fleece saturation from topside.

Coverage – Base layer 32 ft<sup>2</sup>/gal. for 50 mils wet film thickness and top layer is 64 ft<sup>2</sup>/gal. for 25 mils wet film thickness.

Curing Time			
Ambient Condition	Rain Resistant	Touch Dry	Full Cure
+40°F / 50% r.h	1 hours	12 Hours	24 Hours
+50°F / 50% r.h	1 Hours	6 Hours	18-24 Hours
+70°F / 50% r.h	1 Hours	4 Hours	12-18 Hours

Note: Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

## HydroSeal 1K PU Membrane with HydroSeal 1k Fiber Reinforcement

- Apply HydroSeal 1K PU Membrane at the below coverage rates using a nap phenolic resin core roller. Material can also be squeegee or spray applied, in which case it should be backrolled prior to embedding HydroSeal 1K Fiber Reinforcement.
- Place HydroSeal 1K Fiber Reinforcement in wet base resin layer overlapping seams a minimum of 3" (place frayed edge over cut edge of roll) and apply wet roller to topside to saturate completely.

- After approximately 5 minutes the binder will begin to dissolve allowing the fiber strands to conform to irregular surfaces. Do not over work once the fibers have conformed to the substrate.
- Allow to cure 12 hours at 70 °F and 50 % R.H. or until tack free before applying top resin layer.
- Keep clean and dry and apply top resin layer within 7 days.

*Note: When HydroSeal 1K Fiber Reinforcement is used, HydroSeal 1K PU membrane Standard Gray can be used as the base coat and HydroSeal 1K PU Membrane White for the topcoat.*

Coverage – Base layer 35 ft<sup>2</sup>/gal. for 45 mils wet film thickness and top layer is 53 ft<sup>2</sup>/gal. for 30 mils wet film thickness.

Recoat Time	
Ambient Condition	Minimum Waiting Time Overcoating
+40°F / 50% r.h	18 hours
+50°F / 50% r.h	8 Hours
+70°F / 50% r.h	6 Hours

*Note: Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.*

Curing Time			
Ambient Condition	Rain Resistant	Touch Dry	Full Cure
+40°F / 50% r.h	1 hours	12 Hours	24 Hours
+50°F / 50% r.h	1 Hours	6 Hours	18-24 Hours
+70°F / 50% r.h	1 Hours	4 Hours	12-18 Hours

*Note: Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.*

## 4. Precautions

Keep away from open fire, flame or any ignition source. Vapors may form explosive mixture with air. Avoid skin and eye contact with this material. Avoid breathing fumes. Do not eat, drink or smoke in area of application.

Refer to product Material Safety Data Sheet (MSDS) for additional information pertaining to this product and prior to use or handling. Workers should wear appropriate clothing to protect from accidental skin contact. When mixing or applying this product workers must use butyl rubber or nitrile gloves. Safety glasses with side shields are required for eye protection. In enclosed spaces, use local exhaust ventilation to maintain worker exposure below TLV. If the airborne concentration poses a health hazard, become irritating or exceeds recommended limits, use a NIOSH approved respirator in accordance with OSHA Respirator Protection requirements under 29 CFR 1910.134. The specific type of respirator will depend on the airborne concentrations. A filtering face piece or dusk mask is not acceptable for use with this product if TLV filtering levels have been exceeded.

## 5. Availability and Costs

### Availability

Through American Hydrotech, Inc. Sales Representatives worldwide.

### Costs

HydroSeal is competitively priced. Contact your local representative or Hydrotech directly.

## 6. Guarantees

Contact American Hydrotech, Inc. for specific warranty information.

## 7. Maintenance

Typical roof-top maintenance should be conducted. Damaged HydroSeal 1K flashing application should be reported to the installing contractor or Hydrotech for proper repair.

## 8. Technical Service

Technical support is provided by a trained network of sales representatives and Hydrotech's Technical Service Department.



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