

HYDROSEAL® FLASHING & ACCESSORIES



1. Product Name

HydroSeal® Flashing

2. Product Description

Basic Use

HydroSeal Flashing Resin is combined with HydroSeal Catalyst and HydroSeal Fleece reinforcement to form a monolithic, self-flashing and self-adhering reinforced flashing membrane in conjunction with Hydrotech's MM6125 membrane and flashing accessories for a variety of conditions that do not allow for typically required membrane flashing termination requirements. HydroSeal Flashing is also used in conjunction with HydroSeal Deck Membrane for a complete cold-applied liquid waterproofing for balconies and terraces.

Note for Installers: Reference Hydrotech's HydroSeal "Back-Pocket" Installation Guideline for additional hints and tips.

Accessories

HydroSeal Catalyst is used as a reactive agent to initiate curing of HydroSeal methyl-methacrylate liquid resins and primers.

HydroSeal Primer - Flashing is used as a primer for HydroSeal Flashing Resin and/or Matrix applied over concrete, masonry, wood, asphalt, and other substrates as recommended.

HydroSeal Primer-Metal is used as a coupling agent and primer for HydroSeal Flashing Resin applied over various metal substrates; i.e., counterflashings, metal pool liners, curtain wall sections, tube steel, metal pipe penetrations, and H-column penetrations.

HydroSeal Fleece is used to reinforce HydroSeal Flashing Resin cold, fluid-applied, flashing membrane to improve tear strength, puncture resistance, and crack bridging capabilities while maintaining membrane uniformity.

HydroSeal Matrix is a pre-reinforced resin that may be used when installing the HydroSeal Flashing Resin and Fleece would be difficult or impossible (i.e., over bolt heads, back-to-back angles, etc.). HydroSeal Matrix is combined with HydroSeal Catalyst but is not used with HydroSeal Fleece.

HydroSeal Finish-Color is used as an aesthetic and smooth pigmented topcoat and sealer for HydroSeal Flashing Resin.

HydroSeal Activator can be used to clean existing cured in-place HydroSeal resin membrane and primers that has become dirty at laps, tie-ins, repairs and between staged coats of resin. HydroSeal Activator may also be used as solvent for cleaning metal and plastic surfaces prior to resin application, or for cleaning spills, tools and equipment.

HydroSeal Paste is used for horizontal and vertical leveling, patching, and repairs to substrates in conjunction with HydroSeal Flashing Resin.

Tools

Since HydroSeal is prepared in small batches on site, it is important to have the following list of tools on hand.

- 1-gallon size plastic paint pails with quart/liter markings
- disposable paint brushes and/or small foam paint rollers
- mixing sticks
- nitrile rubber gloves
- eye protection
- scissors
- permanent markers (i.e., Sharpies)
- tape measure
- masking tape or painters tape

Limitations

HydroSeal liquid applied flashings are 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. HydroSeal materials should be stored out of direct sunlight on the job site and maintained at or near room temperature prior to use.

HydroSeal liquid applied flashings are to be installed when ambient and substrate temperatures are between 37°F and 95°F (3°C - 35°C). The temperature of the substrate must be at least 5 degrees higher than the dew point temperature at the time of application.

In service, HydroSeal liquid applied flashings are not to be subjected to temperatures greater than 150°F (65.5°C).

Composition/Container/Coverages

HydroSeal Flashing Resin is a high performance two-component, fast-curing, poly methyl-methacrylate (PMMA) resin. It is supplied in 5 kg or 10 kg re-sealable pails. On normal surfaces, each 5 kg unit will cover approximately 16 sqft (1.5 sqm) and each 10 kg unit will cover approximately 32.5 sqft (3 sqm). Yields will vary depending upon system selected and the smoothness and absorbency of substrate.

Approximate coverage rates:

- Smooth substrates:
0.23 kg/sqft (2.5 kg/sqm)
- Normal substrates:
0.31 kg/sqft (3.3 kg/sqm)
- Fine grained substrates:
0.36 kg/sqft (3.8 kg/sqm)
- Rough substrates:
0.40 kg/sqft (4.3 kg/sqm)

Tip: While coverage rates will vary depending on the substrate as noted above, on average:

- 0.31 kg of HydroSeal Flashing resin will cover 1 sqft of normal substrate
- 1 kg of HydroSeal Flashing resin will cover 3.2 sqft of normal substrate
- One 5 kg pail of HydroSeal Flashing resin will cover roughly 16 sqft of normal substrate
- One 5 kg pail of HydroSeal Flashing resin will daily approximately 10-15 2" diameter pipes with an 8" tall flashing

HydroSeal Catalyst is a reactive agent in powder form. It is supplied in pre-measured 2, 5, and 10 kg pails and 25 kg boxes.

HydroSeal Primer - Flashing is a high performance, poly methyl-methacrylate (PMMA), two-component, rapid curing, resin primer. It is supplied in 5 kg or 10 kg re-sealable pails with locking rings. On smooth surfaces, each 10 kg unit will cover approximately 269 sqft (25 sqm). Yields will vary depending upon system selected and the smoothness and absorbency of substrate.

Approximate coverage rates:

- Smooth substrates: 0.037 kg/sf (0.40 kg/m²)
- Fine grained substrates: 0.046 kg/sf (0.50 kg/m²)
- Rough substrates: 0.074 kg/sf (0.80 kg/m²)

HydroSeal Primer-Metal is a high performance solvent-borne polymer-based 1-component primer. It is supplied in 1 kg cans. Each 1 kg unit will cover approximately 54 – 63 sqft (5 – 5.9 sqm) depending on substrate conditions.

HydroSeal Fleece is non-woven, chopped strand, polyester fabric reinforcement. It is supplied in 8, 14, 20, and 41 inch wide X 164 foot (50 m) rolls. The installer should allow for 2 1/2 - 3 inch (6.4 - 7.6 cm) overlap at side laps, 4 inch (10 cm) overlap at end laps, 4 inch overlap at all flashings, and an additional 5% for waste.

HydroSeal Matrix is a high performance two-component, rapid-curing, flexible poly methyl-methacrylate (PMMA) resin with integral chopped polymer fiber reinforcement. It is supplied in 5 kg or 10 kg re-sealable pails. On normal surfaces, each 5 kg unit will cover approximately 21 sqft (2.0 sqm) and each 10 kg unit will cover approximately 43 sqft (4.0 sqm). Yields will vary depending upon system selected and the smoothness and absorbency of substrate.

Approximate coverage rates:

- 80 mils: 0.23 kg/sqft (2.5 kg/sqm)
- 125 mils: 0.36 kg/sqft (3.8 kg/sqm)

HydroSeal Finish-Color is a UV stabilized, pigmented, high performance, two-component, rapid curing, resilient poly methyl-methacrylate based acrylic finish. Finish-Color is available in a variety of standard colors. Please reference Hydrotech's HydroSeal Resin Color Finish information sheet. It is supplied in 10 kg re-sealable drums. On normal resin surfaces, each 10 kg unit will cover approximately 179 sqft (16.6 sqm).

Approximate coverage rates:

- Smooth HydroSeal surfaces: 0.05 kg/sqft (0.6 kg/sqm)

HydroSeal Activator is a clear aromatic blended solvent. It is supplied in a 1-gallon and 5-gallon re-sealable metal cans.

Physical Properties/Applicable Standards

While no uniform ASTM standard exists for cold reinforced liquid applied membranes of this class, HydroSeal is manufactured to meet or exceed the performance requirements of ASTM C836/C836M-18 Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course. Side by side quantitative comparison of physical properties between various MMA and other liquid applied membranes can only be made by comparing values derived from the same ASTM test protocols.

Installation

Surface Preparation

General: Acceptable substrates include concrete, masonry, metal, wood/plywood, and cement board. Faced and un-faced gypsum board materials, as well as pressure treated and marine

grade plywood are not acceptable.

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 with a maximum moisture content of six (6) percent or 75% relative humidity. 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 with a minimum bond strength of 116 psi (0.8 N/mm²). Determinations of bond strength and moisture content shall be performed periodically by the Contractor throughout the course of work.

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/mm²) with a maximum moisture content of six (6) percent or 75% relative humidity. Concrete substrates shall be abrasively cleaned in accordance with ASTM D4259 to provide a sound substrate

HydroSeal Flashing Membrane		
Property	Test Method	Value
Color		Gray
Thickness (avg) @ 0.31 kg/ft ² coverage rate w/Fleece	ASTM D751 or D5147	≥ 90 mils
Weight (min per 100 ft ² of coverage)		68 lb.
Peak Load (avg) @ 73°F	ASTM D5147	70 lb. f/in
Elongation at Peak Load (avg) @ 73°F	ASTM D5147 or D412	≥ 35%
Shore A Hardness (avg)	ASTM D2240	≥ 70
Water absorption, Method I (24h @ 73°F)	ASTM D570	0.8%
Water absorption, Method II (48h @ 122°F)	ASTM D570	1.2%
Low temperature flexibility @ 0°F	ASTM D5147	PASS
Dimensional Stability (max)	ASTM D5147	0.15%
Min thickness	ASTM D751 or D5147	90 mils
Tensile Strength @ break	ASTM D5147 or D4073	> 60 lb./in.
Elongation	ASTM D751	> 49%
Tear Resistance	ASTM D751	> 7 lbs.
Water Vapor Transmission	ASTM E96	0.45 Perms
Water Absorption	ASTM D471	<1.5%
Static Puncture	ASTM D5602	≥ 30

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. *Note: HydroSeal Paste may be used for repairs.*

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.

Steel/Metal: Clean and prepare metal surfaces to near white metal in accordance with SSPC - SP3 (power tool clean). Extend preparation a maximum of 1/8 inch (3 mm) beyond the termination of the membrane flashing materials.

Note: Galvanized and zinc rich metals are typically passivated or coated with oil requiring special preparation. The passivator must be completely removed by mechanical abrasion for HydroSeal Primer Metal to obtain sufficient long-term bond. This can be confirmed by applying a coat of copper sulfate solution to the prepared galvanized metal surface. A properly prepared surface will turn black indicating the passivator has been removed. If the surface does not turn black, additional abrasive cleaning will be required. In certain applications with zinc rich or stainless steel metals, an acceptable pre-primer may be required prior to application of HydroSeal Primer Metal.

Plywood: Plywood shall be 1/2" minimum, CDX exterior grade board identified with American Plywood Association (APA) grade trade marks 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. After coating the exposed top face of the plywood with HydroSeal Primer, fill all voids, board joints, knot holes, cracks and fastener points with a quality urethane sealant or HydroSeal Paste and strip joints with 2-inch (5cm) wide bond breaker tape followed by 6-inch (15cm) minimum wide strips of HydroSeal Resin membrane centered over joint.

MM6125 and related Flashings: MM6125 with the appropriate corner reinforcement or appropriate Flex-Flash UN or MB flashings shall be completely installed before the HydroSeal cold liquid-applied flashing is applied. The MM6125 or related flashing shall be extended vertically up onto the penetration, curb or parapet a minimum of 4 inches or as directed by American Hydrotech, Inc. All loose granules, 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.

Priming

Primer is required on all rubberized asphalt, concrete, wood and metal surfaces.

Note: Consumption and yield of primer will vary depending upon smoothness and absorbency of the substrate.

Asphalt/Concrete/Wood/MM6125 with Hydroflex/Flex-Flash MB:

- Thoroughly mix the entire container of HydroSeal Primer resin for 2-3 minutes before each use, before adding catalyst, and prior to pouring off primer resin into a second container (i.e., plastic paint bucket/pail) for batch mixing.
- Catalyze only the amount of material that can be used within 10-15 minutes.
- Add pre-measured catalyst to the primer resin component (see Table 1), stir for 2-minutes using a slow-speed mechanical agitator or stirring stick and apply to substrate.
- The amount of catalyst added is based on the weight of the resin used and the anticipated ambient conditions.

Table 1 - HydroSeal Primer - Flashing

Catalyst required per 1-kg of resin used					
37°F to 50°F (3°C to 10°C)		50°F to 68°F (10°C to 20°C)		68°F to 95°F (20°C to 35°C)	
6% Catalyst		4% Catalyst		2% Catalyst	
g	kg	g	kg	g	kg
60	.06	40	.04	20	.02

Tip: Each scoop provided with the HydroSeal Catalyst is equal to roughly 0.01 kg. i.e., 2% catalyst for each 1 kg of resin = 2 scoops of catalyst powder; 4% catalyst for each 1 kg resin = 4 scoops of catalyst powder, etc.

- Pot life and working times noted below are approximate, provided as a guideline, and may vary. Actual set and cure times should be established in the field based on actual field conditions.
- Pot Life: approx. 10 - 15 minutes
- Rainproof: approx. 30 minutes
- Next Coat: approx. 30 minutes
- Fully Cured: approx. 3 hours

- After mixing, apply the catalyzed resin to the clean and prepared substrate at the required consumption using approved rollers or brushes. The resin should be spread evenly onto the surface.
- The clean and fully cured primer can be coated after a minimum of approximately 30-45 minutes up to a maximum of 6-months. If the surface of the primer becomes dirty or contaminated thoroughly clean the in-place and cured primer with HydroSeal Activator. The Activator should be allowed a minimum of 20-minutes evaporation time after application, and over-coated within 60-minutes of application.

Metal:

- HydroSeal Primer-Metal must be stirred before each use. HydroSeal Primer-Metal is not catalyzed.
- After stirring, apply the primer to clean and prepared substrate at the required consumption using approved brushes. The primer should be applied in a thin-coat evenly onto the surface. Avoid and remove areas of heavy application, pooling, and runs especially at corners and angle-changes.
- Cure times noted below are approximate, provided as a guideline, and may vary. Actual set and cure times should be established in the field based on actual field conditions.
- 86°F (30°C): at least 1 hour
- 68°F (20°C): at least 2 hours
- 50°F (10°C): at least 3 hours
- 37°F (3°C): at least 4 hours
- Application over HydroSeal Primer-Metal should be done following the recommended minimum cure times indicated up to a maximum of 24-hours. If the surface of the primer becomes dirty or contaminated or left exposed to the elements for more than 24-hours, the primer must be ground off and re-applied.

Application

HydroSeal Flashing:

- Thoroughly mix the entire pail of resin for 2-3 minutes before each use, before adding catalyst, and prior to pouring off resin into a second container (i.e., plastic paint bucket/pail) for batch mixing.
- Catalyze only the amount of material that can be used within 15-20 minutes.
- Add pre-measured catalyst to the resin component (see Table 2), stir for 2-minutes using a slow-speed mechanical agitator or stirring stick.
- The amount of catalyst added is based on the weight of the resin used and the anticipated ambient conditions.

Table 2 - HydroSeal Flashing

Catalyst required per 1-kg of resin used					
37°F to 50°F (3°C to 10°C)		50°F to 68°F (10°C to 20°C)		68°F to 95°F (20°C to 35°C)	
4% Catalyst		3% Catalyst		2% Catalyst	
g	kg	g	kg	g	kg
40	.04	30	.03	20	.02

Tip: Each scoop provided with the HydroSeal Catalyst is equal to roughly 0.01 kg. i.e., 2% catalyst for each 1 kg of resin = 2 scoops of catalyst powder; 4% catalyst for each 1 kg of resin = 4 scoops of catalyst powder, etc.

- Pot life and working times noted below are approximate, provided as a guideline, and may vary. Actual set and cure times should be established in the field based on actual field conditions.
 - Pot Life: approx. 20 – 30 minutes
 - Rainproof: approx. 30 minutes
 - Next Coat: approx. 1 hour
 - Fully Cured: approx. 3 hours
- After mixing, apply resin to the properly primed substrate and lap over previously installed MM6125 membrane and/or flashing application at a rate of 0.14 - 0.31 kg/sqft (1.5 to 3.3 kg/sqm) using approved rollers or brushes. The resin should be spread evenly onto the surface.
- Roll HydroSeal Fleece reinforcement directly into the resin, avoiding any folds and wrinkles. Use a roller to lightly work the resin into the fleece, saturating from the bottom up. Note the fleece should darken in appearance, with no white spots showing. White spots are indications of unsaturated fleece or lack of adhesion. It is important to correct these faults before the resin cures.
- Apply an even coat of resin over top of the in-place fleece at a rate of 0.09 kg/sqft (1.0 kg/sqm) using approved rollers. Use caution not to spread resin too thin.
- If work is interrupted for more than 12-hours, use HydroSeal Activator to reactivate the transition area. HydroSeal Activator should be allowed a minimum of 20-minutes evaporation time after application, and over-coated within 60-minutes of application. Re-apply HydroSeal Activator as required to assure proper reactivation of transition areas.

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.

Catalyzed and cured resin may be disposed of in standard landfills. Uncured resin is considered a hazardous material and must be handled as such, in accordance with local, state and federal regulations.

Availability and Cost

Availability

Through American Hydrotech, Inc. Sales Representatives worldwide.

Costs

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

Guarantees

Contact American Hydrotech, Inc. for specific warranty information.

Maintenance

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

Technical Service

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



American Hydrotech, Inc.
 303 East Ohio Street, Chicago, Illinois 60611
 800.877.6125; 312.337.4998
 312.661.0731 (fax)
 www.hydrotechusa.com