



HYDROGEL
SELF-HEALING & SELF-SEALING POLYMER RUBBER GEL

HYDROGEL GEL-FLEX COMPOSITE WATERPROOFING SYSTEMS
99% Solids, Zero-VOC, Hot Applied Horizontal & Vertical Waterproofing

KEY FEATURES	APPLICATIONS
<ul style="list-style-type: none"> • Highly adhesive & elastomeric monolithic membrane • Conforms to substrate surface irregularities • Can be applied to Green Concrete • Versatile spray or Melt-and-Pour application • Self-heals & self-seals minor cracks and penetrations • Repairable membrane through PRG Injection Solutions 	<p>Positive: Foundation Slab & Walls, Waterproofing Restoration, Podium Decks & Terraces, Encapsulates & Restores most Coal Tar Pitch membranes, Elevator Pits, Planters</p> <p>Blindside: Cut & Cover, Tunnels, Underslab & Split-Slab, Zero Lot Line Foundations</p>

Hydrogel is a single component, 99% solids, highly elastomeric modified polymer rubber gel with exceptional adhesive properties over concrete, metal, and most plastics. Hydrogel is a component of the composite GEL-FLEX SYSTEM for both pre-applied and post-applied waterproofing systems for above and below grade construction. Utilizing an encapsulating HDPE capsheet, Hydrogel Gel-Flex Systems allow for, and protect from, immediate follow-on trades and is highly resistant to hydrocarbons and contaminated soils. Its superior flexibility, adhesiveness, and self-healing characteristics make Hydrogel the ideal choice for effective, permanent waterproofing. Hydrogel can be applied to green concrete, reducing overall project time and costs.

Hydrogel is a modified polymer rubber gel that never fully cures, contains 99% solids content, is a single component material that exhibits no material loss in heating, and can be remelted with no adverse reactions to its performance. Hydrogel eliminates lateral water migration through traditional methods of melt-pour-squeegee application, but it is most productive when sprayed. Spray application is highly productive, self-levels, and fills in irregular and pitted surfaces, while ensures timely project completion. Once applied, Hydrogel remains flexible and durable. It dynamically responds to substrate movement and has excellent crack bridging capability.

HYDROGEL PHYSICAL PERFORMANCE DATA	RESULTS	TESTING METHOD
Solids Content	99%	ASTM D1353
Resistance to Decay	0% moisture permeation and weight change	ASTM E-154-88
Hardness	80	ASTM C836-89
Extensibility After Heat Aging	1/4" No Cracking, Pass	ASTM C-836; C-1522
Peel Adhesion to Concrete	5.8 lbf/in, Pass	ASTM C-836; C-794
Tensile Strength MD, HDPE	3891 PSI	ASTM D-412
Elongation MD, HDPE	4.861	ASTM D-412
Tensile Strength CMD, HDPE	3405 PSI	ASTM D-412
Elongation CMD, HDPE	3.995	ASTM D-412
Puncture Resistance, HDPE	125 lbf	ASTM E-154
Deflection, HDPE	3.2"	ASTM E-154
Permeance to Water Vapor Transmission	0.016 perms (0.xxx ng/(Pa x s x m2))	ASTM E96, method B
Cold Temperature Crack Bridging	Unaffected, Pass	ASTM C-1305
Hydrostatic Pressure Resistance	45 PSI (11 days duration) - Test max = 45 PSI	ASTM C-1306
Solids Content	99%	ASTM D1353

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KINGFIELD CONSTRUCTION PRODUCTS – 20 NORTH 4TH STREET, SUITE 300, MINNEAPOLIS, MINNESOTA 55401

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SUBSTRATE PREPARATION AND OVERVIEW OF GENERAL INSTALLATION GUIDELINES	
For the most up to date installation guidelines and details, please access the technical resources section of the Kingfield website (kingfieldcp.com).	
<i>*Additional technical information can be requested from a technical representative by calling +1 (612) 225-5167</i>	
EQUIPMENT	Hydrogel should be applied with an air or oil-jacketed, pressurized spray pump. Melt-and-Pour methods are also acceptable when used with a squeegee – No mopping.
CONCRETE SURFACES	Ensure that the substrate is relatively smooth and flat with no protrusions, discontinuity, or irregularities that would inhibit the application of the membrane. All surface debris that would impede proper application must be removed, such as frost, loose aggregate, dirt, oil, grease, concrete fragments, sticks, roots, unknown waterproofing materials, etc. Remove debris with a wire brush, stiff broom, or pressure washer. <i>Any inclusion such as tie-holes or bug holes greater than 0.5 inch in diameter or depth must be filled. Poor quality surfaces with excessive laitance may require shotblasting or pressure washing to provide a dense smooth surface free from contaminants.</i> <i>*See ASTM D5295, Preparation of Concrete Surfaces for Adhered Membrane Waterproofing Systems, for further details on substrate preparation.</i>
DAMP SURFACES	Hydrogel may be applied to green (minimum 5 days cure time) concrete. Remove any visible water prior to application.
APPLICATION MIN TEMP (°F)	Hydrogel may be applied at temperatures below 32°F (min. 0°F) provided there is no frost or condensation on the substrate.
APPLICATION	<i>DIRECT APPLICATION TO CONCRETE SUBSTRATES</i> Detail corners and transitions with Hydrogel-Versadex FB sandwich coating. Apply Hydrogel to substrate at an even 90mil thickness, embed approved GFG Series HDPE capsheet into Hydrogel, lapping seams by 3-6". It is recommended to solvent wipe GFG Series seams to ensure an intimate bond when taping the seams with Durotape. After seams are taped, the system is complete. <i>PRE-APPLIED/BLINDSIDE WATERPROOFING APPLICATION</i> Attach GFG20X sheet to substrate, lapping seams by 3-6". Solvent wipe GFG20X sheet seams to ensure bond when taping the seams with Durotape. Apply Hydrogel to GFG20X sheet at an even 90mil thickness. Embed GFG4 into Hydrogel membrane immediately after application of Hydrogel. Lap GFG4 sheet seams a minimum of 1". Secure seams to prevent wind lift or tearing from environmental conditions prior to concrete pour. Ensure any damage to the waterproofing composite membrane is repaired prior to concrete pour.
LIMITATIONS	All components must be installed in immediate succession at time of application. After application, the installed GEL-FLEX SYSTEM must be protected from extended environmental exposure.
CLEAN UP	Allow Hydrogel to cool before handling. Cleaning can be done with any solvent or citrus based cleaner. Use a soft bristle brush to remove Hydrogel "spider webs", do not remove with bare hands to prevent rewarming webs and melting into surface.
HEALTH AND SAFETY OVERVIEW	Avoid contact with skin and eyes. Follow all recommended safety guidelines regarding working with hot materials. Wear proper PPE: gloves, masks, coveralls, and safety glasses.
PACKAGING & YIELD	Hydrogel is packaged in 44lb (20kg) bricks covered in a sacrificial plastic melt wrap. CSP 1-4: @ 90mil = 100ft ² – @ 120mil = 77ft ² CSP 5-8: @ 90mil = 75ft ² – @ 120mil = 63.75ft ² CSP >8: requires smoothing prior to Hydrogel application <i>*Actual coverage and thickness used depends on the substrate and applicator method.</i>
TRANSPORTATION	Hydrogel is classified as a DOT non-hazardous material.
STORAGE	Store away from sunlight in unopened containers in clean, dry conditions at 50 to 80°F.
SHELF LIFE	Indefinite, when stored according to recommended storage guidelines.

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