

KINGFIELD CONSTRUCTION PRODUCTS



HYDROGEL™ Single Component Polymer Rubber Gel

KEY FEATURES

Hydrogel is a single component, 99% solids, highly elastomeric modified polymer rubber gel with exceptional adhesive properties.

Hydrogel emits no VOCs and is compliant with strict environmental regulations.

Hydrogel is the main component of the composite **Hydrogel GEL-FLEX SYSTEM**, a composite waterproofing system comprised of flexible polymer rubber gel and durable HDPE sheet.

Hydrogel is the ecologically advanced replacement for Hot Rubberized Asphalt.

Hydrogel is a high performance waterproofing monolithic membrane for vertical and horizontal applications in below grade structures, plaza decks, planters, inverted roof systems and zero lot line construction.

Hydrogel has superior flexibility, adhesiveness, and self-healing characteristics making it the ideal choice for effective, permanent waterproofing.

Hydrogel can be applied to green concrete with a minimum 7-day cure time, reducing overall project time and costs. Earlier application may be possible in certain environmental conditions with manufacturer approval.

Hydrogel is applied by an oil jacketed, pressurized spray pump.

APPLICATIONS

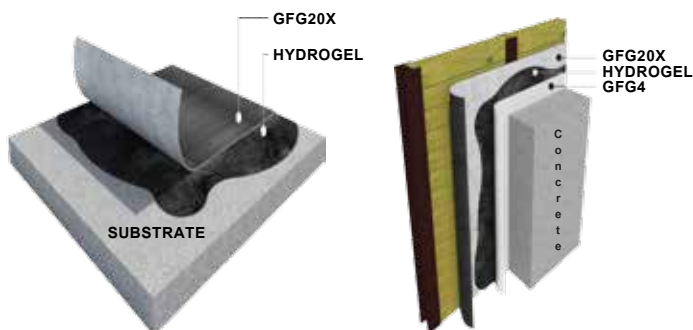
Hydrogel is applied in both Above and Below Grade and is suitable for use in new construction and repair applications.

DIRECT SUBSTRATE APPLICATION (POSITIVE SIDE)

- Elevator Pits
- Foundation Slab & Walls
- Green Roofs
- Leak Repair
- Planters
- Plaza Decks
- Podiums
- Restoration
- Terraces
- Wet Rooms

PRE-APPLIED WATERPROOFING (BLINDSIDE)

- Cut & Cover
- Tunnels
- Underslab & Split-Slab
- Zero-Lot Line Foundations



Hydrogel Gel-Flex Composite Waterproofing System

Quick Cooling No-VOC Hot Polymer Rubber Spray
Horizontal/Vertical & Blindside/Positive Application

ADVANTAGES

99% solids content, Spray applied single component material.	No material loss in heating. No VOC's. No mixing components.
Green Concrete Application with no surface primer required.	Fast, productive application ensures timely project completion with minimal substrate preparation.
Spray applied application, fully adhered. Immediate cure time.	Quick and efficient pressurized spray application with instantaneous adhesion eliminates lateral water migration.
Remains flexible and durable.	Dynamically responds to substrate movement. Excellent crack bridging capability.
Double protection of HDPE sheet and monolithic polymer rubber gel membrane.	Impact resistance with HDPE sheet membrane mechanically adhered to a self-healing monolithic gel membrane.
Resistant to chemical attack. Resistant to hydrocarbons.	Environmentally durable to soil contaminates & adverse conditions.

HYDROGEL GEL-FLEX COMPOSITE WATERPROOFING SYSTEM COMPONENTS

GF-450 DIRECT APPLIED (POSITIVE SIDE) WATERPROOFING SYSTEM

HYDROGEL

— SPRAY APPLIED POLYMER RUBBER GEL.

GFG20X HDPE SHEET

— DURABLE, CHEMICAL RESISTANT 16MIL HDPE SHEET.
— BACKED WITH A 15MIL NON-WOVEN GEO-TEXTILE.

DUROTAPE

— HIGHLY ADHESIVE ELASTOMERIC SEAMING AND DETAILING TAPE.

GF-PRE PRE-APPLIED (BLINDSIDE) WATERPROOFING SYSTEM

HYDROGEL

— SPRAY APPLIED POLYMER RUBBER GEL.

GFG20X HDPE SHEET

— DURABLE, CHEMICAL RESISTANT 16MIL HDPE SHEET.
— BACKED WITH A 15MIL NON-WOVEN GEO-TEXTILE.

GFG4 PE SHEET

— LIGHTWEIGHT 28MIL POLYPROPYLENE NON-WOVEN SHEET.
— BACKED WITH A 4MIL UV-RESISTANT POLYETHYLENE COATING.

DUROTAPE

— HIGHLY ADHESIVE ELASTOMERIC SEAMING AND DETAILING TAPE.

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
Puncture Resistance*	160 lbf	ASTM D-4833
Flash Point	> 228° F	ASTM D56
Tensile Strength*	190 ± 0.11 lbf	ASTM D-412-98
Elongation %	> 390%	ASTM D-882
Hydrostatic Pressure Resistance*	169 ± 3 lbs/in2	ASTM D-751
Adhesion to Concrete	Rating of 1 (Excellent)	ASTM D-412-98
Crack Bridging Flexibility	No cracks	ASTM C-836-89
Moisture Permeability*	0.000 perms	ASTM E-96-80
Peel Resistance	1.01 lbf/in	ASTM D1876-08

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).

**Additional technical information can be requested from a technical representative by calling +1 (612) 225-5167*

EQUIPMENT	<p>Hydrogel should be applied with an oil-jacketed, pressurized spray pump. <i>*Contact Kingfield Construction Products for information on recommended spray equipment.</i></p>
CONCRETE SURFACES	<p>Ensure that the substrate is relatively smooth and flat with no protrusions, discontinuity, or irregularities that would inhibit the application of the membrane.</p> <p>All surface debris that would impede proper application must be removed, such as frost, loose aggregate, dirt, oil, grease, concrete fragments, sticks, roots, etc. Remove debris with a wire brush, stiff broom or pressure washer.</p> <p><i>Any inclusion such as tie-holes or bugholes greater than ¼ 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></p> <p><i>*See ASTM D5295, Preparation of Concrete Surfaces for Adhered Membrane Waterproofing Systems, for further details on substrate preparation.</i></p>
DAMP SURFACES	Hydrogel may be applied to green (minimum 3 days cure time) concrete. Remove any visible water prior to application.
MINIMUM APPLICATION TEMPERATURE	Hydrogel spray may be applied at temperatures below 32°F provided there is no frost or condensation on the substrate.
APPLICATION	<p>DIRECT APPLICATION TO CONCRETE SUBSTRATES</p> <p>Apply Hydrogel to substrate at an even 80-90mil thickness, embed GFG20X sheet into Hydrogel, lapping seams by 3-6". Solvent wipe GFG20X seams to ensure an intimate bond when taping the seams with Durotape. After seams are taped, the system is complete.</p> <p>PRE-APPLIED/BLIND SIDE WATERPROOFING APPLICATION</p> <p>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 80-90mil 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 in place waterproofing membrane is repaired prior to concrete pour.</p>
LIMITATIONS	<ul style="list-style-type: none"> All GEL-FLEX SYSTEM components must be installed in immediate succession at time of application. After application, the installed GEL-FLEX SYSTEM must be protected from environmental exposure.
CLEAN UP	Allow Hydrogel to cool before handling. Cleaning can be done with any solvent or citrus based cleaner.
HEALTH AND SAFETY OVERVIEW	Avoid contact with skin and eyes. Follow all recommended safety guidelines regarding working with hot materials. Wear suitable gloves, masks, protective clothing and safety glasses. See MSDS.
PACKAGING & YIELD	<p>Hydrogel is packaged in 44lb (20kg) bricks.</p> <ul style="list-style-type: none"> @ 90mil thick = 0.56 lbs/ft2 Average 78.5 ft2/package <p><i>*Actual coverage and thickness used depends on the substrate and applicator method.</i></p>
TRANSPORTATION	Hydrogel is classified as a DOT non-hazardous material.
STORAGE	Store in unopened containers in clean, dry conditions at 50 to 80 Fahrenheit.
SHELF LIFE	Indefinite, when stored according to recommended storage guidelines.

KINGFIELD CONSTRUCTION PRODUCTS

Minneapolis, Minnesota

www.kingfieldcp.com

TECHNICAL SUPPORT

Phone: +1 (612) 225-5167

Email: info@kingfieldcp.com

©2014 Kingfield

Printed in U.S.A.

HYDROGEL PRODUCT DATA SHEET – v4.09.15.14

LIMITED WARRANTY NOTICE Every reasonable effort is made to apply KINGFIELD CONSTRUCTION PRODUCTS (KCP) exacting standards both in the manufacture of our products and in the information which we issue concerning these products and their use. We warrant our products to be of good quality and will replace or, at our election, refund the purchase price of any products proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. Therefore, except for such replacement or refund, KCP MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, RESPECTING ITS PRODUCTS, and KCP shall have no other liability with respect thereto. Any claim regarding product defect must be received in writing within one (1) year from the date of shipment. No claim will be considered without such written notice or after the specified time interval. User shall determine the suitability of the products for the intended use and assume all risks and liability in connection there with. Any authorized change in the printed recommendations concerning the use of our products must bear the signature of the KCP Technical Manager.

This information and all further technical advice are based on KCP's present knowledge and experience. However, KCP assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights. In particular, KCP disclaims all CONDITIONS AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY. KCP SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) OF ANY KIND. KCP reserves the right to make any changes according to technological progress or further developments. It is the customer's responsibility and obligation to carefully inspect and test any incoming goods. Performance of the product(s) described herein should be verified by testing and carried out only by qualified experts. It is the sole responsibility of the customer to carry out and arrange for any such testing. Reference to trade names used by other companies is neither a recommendation, nor an endorsement of any product and does not imply that similar products could not be used.