

## WATERPROOFING

Master Format #: 07 16 16

# HEY'DI K-11

## CEMENT-BASED, CRYSTALLINE WATERPROOFING TREATMENT



**EUCLID CHEMICAL**

### PACKAGING

50 lb (22.7 kg) bag  
Code: TR2120650521 (Gray)  
Code: TR2120650001 (White)  
Hey'Di SB Bonding Agent  
Code: TL1941505 (5 gal pail)  
Code: TL1941501 (case of six 1 gal jugs)  
Kit (25 lb powder & 1 gal pre-diluted liquid)  
Code: TR2120838

### CLEAN UP

Clean tools and equipment with water before the material hardens.

### SHELF LIFE

1 year in original, unopened package

### SPECIFICATIONS AND COMPLIANCES

- HEY'DI K-11 is certified by NSF/ANSI Standard 61 for use in water/wastewater treatment facilities
- HEY'DI SB BONDING AGENT is approved for use by the Canadian MTQ

### DESCRIPTION

HEY'DI K-11 is a breathable, two-part, polymer-modified, cement-based system for waterproofing concrete and masonry. HEY'DI K-11 has a texture and consistency similar to concrete and may be brush or spray applied. HEY'DI K-11 becomes an integral part of the wall and waterproofs the negative or positive side through a crystallization process. HEY'DI SB is the bonding agent used with HEY'DI K-11. It improves adhesion and flexibility, and reduces the permeability of the system. HEY'DI K-11 must be allowed to cure before applying a finishing floor system.

### PRODUCT CHARACTERISTICS

#### FEATURES/BENEFITS

- Waterproofs a wide variety of surfaces including concrete, medium/heavy weight block, brick and shotcrete.

#### PRIMARY APPLICATIONS

- Below or above grade surfaces
- Horizontal structural slabs
- Foundations & basements
- Tunnels
- Dams & water reservoirs
- Manholes
- Sewage & water treatment plants
- Interior/exterior
- Spillways

#### COVERAGE

Under normal waterproofing conditions, one 50 lb (22.7 kg) bag of HEY'DI K-11 will cover approximately 100 ft<sup>2</sup> (9.26 m<sup>2</sup>) when applying at a coverage rate of 4.50 lb/yd<sup>2</sup> (2.45 kg/m<sup>2</sup>). See the "Application" section below for detailed coverage rates based on the type of application intended. Note: Coverage rates are approximate and will depend on the texture and porosity of the substrate.

### TECHNICAL INFORMATION

The following are typical values obtained under laboratory conditions. Expect reasonable variation under field conditions.

Test Method	Test Property	Results
ASTM C952	Adhesion	75 °F . . . . . 175 psi (1.2 MPa)
ASTM C190	Tensile Strength	100% RH . . . . . 332 psi (2.3 MPa) 50% RH. . . . . 118 psi (0.8 MPa)
ASTM C580	Flexural Strength	75 °F . . . . . 472 psi (3.3 MPa)
CRD-C 48	Water Permeability	Two coats tested with water pressure @ 200 psi (1.4 MPa) resulted in permeability of 9.0 x 10 <sup>-12</sup> (ft <sup>3</sup> /sec.)/(ft <sup>2</sup> /ft head/ft)

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## DIRECTIONS FOR USE

**Surface Preparation:** New concrete and masonry must be cured a minimum of 7 days. The surface must be structurally sound, clean and free of dirt, oil and other contaminants including curing compounds, form release agents, old coatings, paint and efflorescence. All concrete laitance must also be removed. Provide an absorptive surface (CSP 1-3 in accordance with ICRI Guideline 310.2) on all substrates including precast and formed concrete. The surface must have an open capillary system for adhesion and for optimum crystalline growth. Remove form marks and other protrusions. Concrete honeycombs, cavities, joints, cracks, voids, tie holes and other defects must be opened and routed to sound material. Follow the recommended methods for repairing defects as suggested below. No active water leaks should be present at the time of application of HEY'DI K-11. Use the HEY'DI POWDER X SYSTEM to seal active leaks.

**Mixing (25 lb. Contractor Kit):** The included gallon of HEY'DI SB BONDING AGENT is ready to use, and does not require dilution with water. Pour approximately 0.50 gal (1.9 L) of the included mixing liquid into a clean container and begin slow speed power mixing. Slowly add HEY'DI K-11. Gradually add more mixing liquid to bring the mixture to the consistency of a completely blended slurry. Mixing 25 lb (11.4 kg) of HEY'DI K-11 will require 0.75 to 1 gal (2.84 to 3.80 L) of mixing liquid. When mixing is completed, do not add additional mixing liquid and do not retemper the mix by adding water.

**Mixing (50 lb Bags):** Positive Side Waterproofing: Blend a 1:5 ratio of HEY'DI SB BONDING AGENT with potable water to make the "mixing liquid". Negative Side Waterproofing, blend a 1:3 ratio of HEY'DI SB BONDING AGENT with potable water to make the "mixing liquid". To mix a 50 lb (22.7 kg) bag of HEY'DI K-11, pour approximately one gal (3.8 L) of mixing liquid into a clean container and begin slow speed power mixing. Slowly add HEY'DI K-11. Gradually add more mixing liquid to bring the mixture to the consistency of a completely blended slurry. Mixing 50 lb (22.7 kg) of HEY'DI K-11 will require a 1½ to 2 gal (5.68 to 7.57 L) of mixing liquid. When mixing is completed, do not retemper the mix by adding additional mixing liquid

**Application:** Dampen the surface with potable water prior to application. There should be no running or standing water present. A minimum of two coats of HEY'DI K-11 is applied to a surface for effective waterproofing. Each coat is applied at 2.25 lbs/yd<sup>2</sup> (1.22 kg/m<sup>2</sup>) which yields approximately 30 mils thickness per coat. **Brush:** Surface must be damp at the time of application. Load bristles of a masonry brush with HEY'DI K-11. Work the slurry into the surface to fill pores and voids. The final brush strokes should be in one direction to produce an even texture and finish. Apply at a rate of 2.25 lbs/yd<sup>2</sup> (1.22 kg/m<sup>2</sup>). Allow HEY'DI K-11 to cure for 24 hours before applying a second coat. After 24 hours, dampen the first coat and apply a second coat of HEY'DI K-11. HEY'DI K-11 in white may be used as a finish coat to enhance the aesthetic appearance. Apply the second coat in the same manner as the first coat except that the finish brush strokes should be at right angles to those of the first coat. Apply the second coat at a rate of 2.25 lb/yd<sup>2</sup> (1.22 kg/m<sup>2</sup>). **Spray:** Use air operated spray equipment capable of spraying cementitious materials. Use a 1/8" (0.32 cm) nozzle. On concrete surfaces, spray HEY'DI K-11 in two coats. The first coat should be light and followed immediately by a second heavier coat. Total coverage of the two coats should be 4.5 lb/yd<sup>2</sup> (2.45 kg/m<sup>2</sup>). On concrete masonry surfaces, apply a first coat at 2.25 lb/yd<sup>2</sup> (1.22 kg/m<sup>2</sup>). Before initial set, back brush the surface with a masonry brush or broom to fill voids and ensure uniform coverage. Allow the first coat to cure for 24 hours. Dampen the surface and spray on a second coat at 2.25 lbs/yd<sup>2</sup> (1.22 kg/m<sup>2</sup>) in the same manner as the first coat. Back brushing the second coat is not required. **Broadcast & Trowel for Horizontal Applications:** When the concrete starts to reach initial set (no bleed water visible), dry sprinkle HEY'DI K-11 at the rate of 4 to 5 lb/yd<sup>2</sup> (2.2 to 2.7 kg/m<sup>2</sup>) on the concrete surface. Power trowel the surface until HEY'DI K-11 coverage is uniform.

**Special Applications: Repairs:** After proper surface preparation of the areas to be repaired, apply HEY'DI K-11 in two coats of 2.25 lbs/yd<sup>2</sup> (1.22 kg/m<sup>2</sup>) each over areas which require repairs. After the second coat has cured for 24 hours, apply TAMMSPATCH II to the defective area per instructions in their respective technical data sheet. Allow patches to cure for 24 hours. Apply HEY'DI K-11 per the above application instructions over the entire area to be waterproofed including the repairs. For optimum waterproofing, repair areas will have a total of 4.5 lbs/yd<sup>2</sup> (2.45 kg/m<sup>2</sup>) of HEY'DI K-11 under the repair and a second coat of 4.5 lbs/yd<sup>2</sup> (2.45 kg/m<sup>2</sup>) of HEY'DI K-11 over the entire surface including the repaired areas. **Coved or Canted Applications:** Apply 2 coats of HEY'DI K-11 to the area to be coved. After the second coat has cured for 24 hours, use DURALTOP GEL or TAMMSPATCH II to form the required cove. Waterproof over coves or canting with two coats of HEY'DI K-11 (1.22 kg/m<sup>2</sup>/coat). **Cracks or Expansion Joints:** Cut out cracks to a minimum of 1" x 1" (2.54 cm x 2.54 cm) depth and width. Apply 2 coats of HEY'DI K-11 into sides and bottom of crack or joint. Cure the second coat for a minimum of 4 days and then install a flexible, waterproof joint sealant. The joint sealant may be filled approximately 1/4" to 1/2" (.64 cm to 1.27 cm) from the top of the surface. Apply a bond breaker tape over the sealant and fill the remaining joint area flush to the surface with TAMMSPATCH II. Apply 2 coats of HEY'DI K-11 over the entire area to be waterproofed including the patched cracks and joints. **New Construction Joints:** Brush apply 2 coats of HEY'DI K-11 onto the concrete surface to be joined. After second coat has cured 24 hours, pour the new concrete against the HEY'DI K-11 surface to form the bond and continuous membrane. **Through Wall Penetrations:** Cut around the pipe, electrical conduit or other embedded material a minimum of 1" deep and 1" wide (2.54 cm by 2.54 cm) at the surface. Clean the pipe or conduit thoroughly. Mix HEY'DI SB BONDING AGENT with potable water at a 1:1 ratio. Dry blend cement and sand at a 1:1 ratio. Combine mixtures and apply the slurry to the pipe or conduit. Allow 24 hours for curing. Dampen area and apply 2 coats of HEY'DI K-11 allowing a 24 hour cure time between coats. Fill the remaining cavity with TAMMSPATCH II. After allowing the TAMMSPATCH II to cure for 24 hours, apply 2 more coats of HEY'DI K-11 over the entire area to be waterproofed.

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## PRECAUTIONS/LIMITATIONS

- Do not re-temper HEY'DI K-11.
- Do not apply to frozen or frost filled surfaces or when temperature is below or expected to fall below 40 °F (4 °C) within 48 hours.
- Do not apply HEY'DI K-11 at temperatures above 90 °F (32 °C), unless the surface has been fully saturated with water at the time the application begins.
- HEY'DI K-11 is not designed as a wearing surface. Apply a protective topcoat before subjecting it to traffic.
- When applied to the inside of open cisterns, tanks, etc., do not fill with water for at least 7 days after application.
- Ensure that adequate ventilation is available during the application and the full curing period when using HEY'DI K-11 containing HEY'DI SB BONDING AGENT in enclosed tanks or reservoirs. Allow minimum 7 days drying time before backfilling unless protection board is used.
- Allow 7 days cure at 75 °F (24 °C) before covering or before the application of waterbased decorative coatings.
- Do not apply coatings containing lime over HEY'DI K-11.
- Allow minimum 7 days cure before placing HEY'DI K-11 in service.
- When HEY'DI K-11 is used in areas exposed to chemicals or high-sulfate containing soils, consult technical service for specific recommendations.
- Apply a test patch to evaluate performance and appearance on concrete or block substrates which have been subjected to contamination, efflorescence or chemical attack.
- In all cases, consult the Safety Data Sheet before use.

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