

CrownWeld Low-Mod Gel

Product Description Sheet No. 111



Low-Modulus, Gel Consistency, Durable and Tough Epoxy Adhesive Used for Crack Repair, Vertical and Overhead Spall Repair, Patching, and Pick- Proof Sealant Around Windows and Doors in Correctional Facilities

DESCRIPTION

CrownWeld Low-Mod Gel, Prod. No. 111 is a 100% solid, moisture-insensitive, low-modulus, non-shrink, 2 component adhesive-sealant or a 3 component Epoxy Polymer Concrete (EPC).

WHERE TO USE

- Non-sag neat consistency used as a sealant for narrow or wide voids such as cracks or openings next to windows and doors.
- ◆ Binder mixed with aggregate to develop Epoxy Polymer Concrete used for patching, kurf filling and grouting applications.
- ◆ Useable on moist or dry concrete and other dry structural building materials.

ADVANTAGES

- ◆ Packaged in a Cartridge Set containing 160 cu. in. (0.69 gal.) of mixed product.
- ◆ Package in 2, 4 or 10 gallon units to be used as neat or aggregate extended formulas.
- ◆ EPC is a self-priming formula
- ◆ Non-Shrink and Fast Cure Rate
- ◆ No Depth Limitations
- ◆ Packable or Troweled
- ◆ Low Heat Development
- ◆ Excellent Strength Properties
 - High Compressive Strength
 - High Vibration Resistance
 - Fast Strength Gain
 - Easy to Place

TYPICAL DATA FOR CrownWeld Low-Mod Gel (Material and Curing Conditions at 73°F unless noted, 50% R.H.)			
COLOR	Straw or Concrete Gray		
CONSISTENCY	Non-sag Gel		
WORKING TIME MIXED WITH AGGREGATE AS EPC			
½ ft ³ (0.014 m ³) - 1 in. (25mm) Thick		20 to 25 minutes	
3.25 in. (82 mm) Thick		12 to 15 minutes	
WORKING TIME IN CARTRIDGES USED AS NEAT MATERIAL There is NO POTLIFE Because the Epoxy Components are Blended Together by a Static Tube as the Epoxy is Being Applied.			
TACK-FREE TIME (Traffic Useable)			
Thickness of EPC	40°F	73°F	90°F
¼ to 1 in. (6 to 25mm)	8 - 9 hrs.	5 - 5.5 hrs.	2 - 2.5 hrs.
3 ¼ x 3 ¾ in. (80 x 95mm)	6.5 hrs.	2.5 hrs.	1.5 hrs.
TENSILE PROPERTIES (ASTM D 638) 7 Days			
Tensile Strength (Neat)	3,000 psi (20.7 MPa)		
Elongation at Break	30 to 60 %		
COMPRESSIVE STRENGTH (ASTM C 579)			
3 hrs. min. (EPC)	1,000 psi (6.9 MPa)		
24 hrs. min.	5,000 psi (34.4 MPa)		
7 days, min.	8,000 psi (55.2 MPa)		
BOND STRENGTH TO CONCRETE, (ACI 503 R)			
24 hrs. (Neat or EPC)	250 psi (1.7 MPa)		
BOND STRENGTH, HARDENED CONCRETE TO HARDENED CONCRETE, (ASTM C882)			
2 days, dry cure	2,500 psi		
7 days, moist cure	2,100 psi		
ABSORPTION (ASTM D570)			
24 hrs. (Neat)	max. 0.5%		
Mix Ratio by Volume	Easy 1 to 1		
SHELF LIFE	2 Years in original unopened containers 1 Year in Cartridge Sets		

CrownWeld Low-Mod Gel, Product No. 111 A Non-sag Adhesive or E P C

SURFACE PREPARATION

Concrete and other substrates must be clean, sound, and free of standing water. Remove dust, grease, waxes, and coatings, curing compounds and all contaminants by mechanical means such as bush hammering, sand or shot blasting. Abrasive blast all metal surfaces to gray metal for best adhesion. Apply before flash rusting begins or the cleaned concrete becomes contaminated.

TEST SUBSTRATE FOR ADHESION

Before placement of the Epoxy Polymer Concrete, check the concrete and steel substrates for soundness and cleanliness with a Tensile Pull Test (ACI 503 R) or Crown Polymers Adhesion Shear Test. 100% concrete must fail to pass either test.

PRECONDITIONING EPOXY

When temperatures drop, it becomes harder to mix and place the EPC because the epoxy thickens. To improve the mix ability and placement at temperatures below 60°F (15°C) preheat each epoxy component to 90°F before mixing. Caution the potlife will be reduced by about 50%.

MIXING AS AN EPC

Mix the entire contents of Component "A", then pour Component "B" into "A" and mix for 90 seconds with a slow speed paddle attached to a drill (400-600 rpm). Pour the mixed epoxy into a larger container and slowly add the Crown Polymers dry, clean silica sand, SP603, at the approx. 1 part mixed epoxy to 3 to 5 parts silica sand by weigh and mix until uniformly blended, about 2 minutes. Place EPC immediately. The deeper the void the more sand will need to be added.

APPLICATION

1. Prime Surface: The EPC is selfpriming when the material

temperature is maintained above 70°F (21°C) before mixing. Place The mixed EPC onto the clean surface and compact. Pull away the EPC and check the substrate for full wetting. The purpose of priming is to wet out the entire substrate 100% without having dry areas. If dry areas are present, check the temperature of the materials.

2. Filling Forms or Voids: Pour the mixed EPC into the form or void area in maximum lifts of 3 in. (75 mm), compact and immediately place the next lift on the wet EPC, compact and continue the lifts upward until the void is filled. Compaction eliminates air pockets and entrapment. Screenshot or trowel the exposed surface to the desired profile (texture).

3. Troweled Applications: Place EPC to desired thickness, compact and trowel.

4. Usable: Allow to become tack-free before using.

Mixing in Cartridges and Placement Used as a Neat Material:

The two-component epoxy is pre-measured and packaged in a cartridge set that is pumped and mixed through a static mixing tube attached to the hose and gun of the Jake Cartridge Pump Machine. There is no potlife when mixed in this manner and minimum loss of material because the mixed epoxy is being placed into the cavity as it is being mixed, also saves on placement labor.

LIMITATIONS

- ◆ Minimum substrate and ambient temperature for placement is 40°F (5°C).
- ◆ DO NOT THIN - solvents will prevent proper cure.
- ◆ Maximum EPC depth is three (3) inches (75 mm) per lift before placement of the next lift.
- ◆ Cold applications of EPC may require mechanical vibrating compactors for deeper placements.

CAUTION

Before Using Read Material Safety Data Sheets.

Component "A" - Irritant Contains epoxy resins. Prolonged contact with skin may cause irritation. Avoid contact with eyes.

Component "B" Corrosive

Contains amines. Contact with skin may cause severe burns. Avoid eye contact. Product is a strong sensitizer.

Component "C" - EPC Only

Contains silica sand. Avoid breathing product.

Important Information

Use of safety goggles, chemical-resistant gloves, adequate ventilation and NIOSH/MSHA approved respirator is recommended.

FIRST AID

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes. For respiratory problems, remove person to fresh air. Contact Physician Immediately. Wash clothing before reuse.

CLEAN-UP

Components "A" & "B" - Ventilate area. Control spills. Collect with absorbent material.

Component "C" - Ventilate area. Sweep or vacuum into appropriate containers.

Disposal

Dispose in accordance with current, applicable local, state, and federal regulations.

KEEP OUT OF REACH OF CHILDREN

LIMITED WARRANTY - "Crown Polymers, LLC warrants its products to be free of manufacturing defects, to be of good quality, and that they will meet Crown Polymers current published physical properties when applied in accordance with Crown Polymers written directions and tested in accordance with ACI, ASTM and Crown Polymers Standards. Product proved to be defective will be replaced. **There are no other warranties by Crown Polymers, LLC of any nature whatsoever, expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product.** Crown Polymers, LLC shall not be liable for damages of any sort, including remote or consequential damages, resulting from any claimed breach of any warranty, whether expressed or implied, from any other cause whatsoever. Crown Polymers will not be responsible for use of this product in a manner to infringe on any patent held by others."

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