

CrownWeld[™] GF

Product Description Sheet No. 108

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A Penetrating Ultra Low Viscosity Modified Epoxy Used for Gravity Filling of Concrete Cracks

Description

CROWNWELD GF, Product No. 108 is a 100% solids, 100% reactive, ultra low viscosity, moisture-tolerant, non-shrink, modified two-component, epoxy penetrating gravity filling crack sealer. The polymer has excellent adhesion to the substrate and cures under dry and damp conditions. It creates a high strength adhesive that conforms to ASTM C 881 and AASHTO M-235 specifications.

Advantages

- Penetrates Cracks By Gravity Down to 0.004 Inches in Width
- Excellent Working Time
- Cures and Adheres on Dry or Damp Concrete Surfaces
- Applicable and Curable Down to 33°F(1°C)
- Creates a Dense, Non-porous Adhesive within the Concrete Mass
- 100% Solids, No VOC's
- Ultra Low Viscosity Aids Fast Penetration
- Very Safe to Use
- Low Odor During Application
- Cures Without Other Chemical or Heat Aids
- USDA and FDA Compliance
- Applied with Squeegee and Roller
- Improves Strength Properties of Concrete
- Reduces Water Absorption and Chloride Ion Intrusion
- Extends Service Life of Concrete
- Open to Traffic in Approximately 6 Hours

Where to Use

Use on clean concrete surfaces that have partial or full depth cracks.

- Structurally Repairs Cracked Concrete
- Slabs-On-Grade Concrete Surfaces
- Elevated Slabs and Building Fascia and Exposed Other Surfaces
- Interior or Exterior
- Heavy Traveled Vehicular Traffic Areas
- Pretreatment before Patching and Overlaying Floor Polymer Concrete Systems, Tile and Carpets

Typical Data for CrownWeld GF

(Material and Curing Conditions at 73°F unless noted, 50% R.H.)

COLOR Light Amber **VISCOSITY** 30 - 50 cps (MPa.s)

POT LIFE 12 - 18 minutes **FULL CURE** 7 Days

TENSILE PROPERTIES (ASTM D 638)

Strength 5,100 psi (35.2 MPa)
Elongation >6%

FLEXURAL PROPERTIES (ASTM D 790)

Strength 8,300 psi (57.3 MPa)
Modulus of Elasticity 4.7 x 10⁵ psi

COMPRESSIVE STRENGTH (ASTM D 695), psi (MPa)

	40°F	60°F	73°F
1 Day	510 (3.5)	3,350 (23.1)	6,350 (43.8)
7 Days	12,750 (88.0)	13,900 (95.9)	15,600 (107.7)

BOND STRENGTH (ASTM C 882), psi (MPa)

	Hardened Concrete to Hardened Concrete	Hardened Concrete to Steel
1 Day (Moist Cure)	1,650 (11.4)	1,700 (11.7)
7 Days (Moist Cure)	3,150 (21.7)	2,235 (15.4)

DEFLECTION TEMPERATURE (ASTM D 648)

7 Days 153° F (67°C)

WATER ABSORPTION (ASTM D 570) 0.34%

TACK-FREE 73°F - 6 hrs. 33°F - 12 hrs

SHELF LIFE 1.5 Years

Typical Coverage

It is difficult to determine exact coverage's of a penetrating product. The denser the concrete the less penetration, and the higher the porosity, width and depth of the crack the product will penetrate deeper. Application rates vary from 70 to 140 ft² / gallon (1.2 to 2.3 l/m²).

Surface Preparation

- Concrete substrate must be sound, clean, free of adhesives, coatings, foreign materials, oils, dust, contaminants, laitance and surface moisture.
- Abrasive blast concrete surface for best results.
- All of the above work must be completed, if required, just prior to product application.

How to Use CrownWeld GF, Product No. 108

Preconditioning Polymer

When temperatures drop polymers typically thicken and it becomes harder to flow or to spread the product. When the temperatures are warmer, they typically become thinner. To improve the product flow-ability maintain temperature at about 20°C (73°F) before mixing. When the substrate temperature is 10°C (50°F) or lower preheat each epoxy component to 90°F before mixing. Caution the pot life will be reduced by about 50%.

Mixing

Pour Component "B", into Component "A" and mix for 60 seconds (until one even color develops) with a low speed paddle attached to a drill (400-600 rpm). Keep containers tightly closed. The mixed product is ready for immediate placement.

Limitations

- DO NOT APPLY ON WET OR WATER SATURATED CONCRETE SURFACES
- Do Not Apply When Substrate Temperature is Below 33°F (1°C).
- Do Not Thin with Solvents or Other Materials, They Will Prevent Proper Cure.

Warning

Mixed CrownWeld GF will become very hot if allowed to remain in the container longer than the potlife. The heat from the container or spillage on the skin could cause burns. Most applications require that the mixed epoxy be poured directly on the surface after mixing and this eliminates this potential problem. When it is necessary to haul the mixed epoxy from one location to another location mix smaller batches.

Application Methods

1. Pour the mixed polymer onto the concrete surface and spread evenly over the surface leaving a thick layer of epoxy with a squeegee.
2. Back roll the wet polymer into the cracks with a 3/8 in. nap roller. Help work the material into the concrete by pressing down onto the roller with extra pressure.
3. Leave a wet film of epoxy on the surface of the concrete after rolling.
4. Inspect all areas repeatedly to see if the concrete has absorbed the epoxy into the concrete mass. If it has immediately apply more material as explained above. Repeat as many times as necessary.
5. The surface may be used immediately if dry, clean sand is broadcasted evenly over the treated areas until a dry layer is present.

CURING

1. Allow the epoxy to develop the tack-free cure stage before applying another system over the top of CrownWeld GF.
2. Carefully inspect the entire area to make sure that the epoxy has not penetrated deeper into the concrete and left a crack only partially filled. If a crack is only partially filled allow the epoxy to develop its gel stage of cure and then add fresh epoxy into the void until the void will accept no more product.

Caution

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

Component "B" - Corrosive

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

Important Information

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

Clean Up

In case of spills wear suitable protective equipment, contain spill, and collect with absorbent material, place in suitable container. Ventilate area. Avoid contact. Dispose according to applicable local, state, and federal regulations.

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 re-use.

Consult Material Safety Data Sheet for More Information

**FOR INDUSTRIAL USE ONLY
KEEP OUT OF REACH OF CHILDREN
KEEP CONTAINERS TIGHTLY CLOSED**

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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