

### STRUCTURAL ADHESIVE FOR CRACK REPAIR, ANCHORING, CONCRETE STRENGTHENING SYSTEMS, AND NARROW VOID GROUTING

#### DESCRIPTION

**CrownWeld, Product No. 104** is 100% solids, 100% reactive, moisture-insensitive, non-shrink, low viscosity, 2 component modified epoxy adhesive formulated to adhere and cure on dry or damp surfaces.

#### WHERE TO USE

Use an Adhesive for Structural Bonding and Grout for:

- Concrete Crack Repair
- Narrow Void Grouting
- Anchoring
- Delamination Repairs
- Structural Strengthening Systems
- Wood Crack Repairs

#### ADVANTAGES

- Excellent Working Time
- Cures and Adheres on Dry or Damp Surfaces
- Excellent Chemical Resistance & Fast Cure
- Applicable / Curable to 5<sup>o</sup> C (40<sup>o</sup>F)
- Excellent Strength Properties
- Penetrates Down to 5 Mills
- Requires only 14 psi -VERY SAFE - Pumping Pressure
- High Vibration Resistance
- Convenient 2 to 1 Mix Ratio / Volume
- Excellent Chemical Resistance for Floors and Containment Areas.

#### TYPICAL DATA FOR CrownWeld, Product No. 104

(Material and Curing Conditions at 73<sup>o</sup>F unless noted, 50% R.H.)

**COLOR** Straw                      **VISCOSITY** 500-600 cps.  
**POTLIFE** 15 minutes            **CONSISTENCY** Flow able

#### TACK-FREE TIME

Substrate Temperature	40 <sup>o</sup> F *	73 <sup>o</sup> F	90 <sup>o</sup> F
	1 - 4 hrs.	1 - 4 hrs.	1 - 2 hrs.

#### TENSILE PROPERTIES (ASTM D 638) 7 Days

Tensile Strength	7,600 psi
Elongation at Break	2.0 %
Modulus of Elasticity	4.0 X 10 <sup>5</sup>

#### FLEXURAL PROPERTIES (ASTM D 790) 7 Days

Flexural Strength	9,500 psi
Tangent Modulus of Elasticity	8.9 X 10 <sup>5</sup>

#### SLANT SHEAR STRENGTH (ASTM C 882) 7 Days

Test Temperature	Value	Mode of Failure
90 <sup>o</sup> F	4,850 psi	100% Concrete Failure
40 <sup>o</sup> F	4,600 psi	100% Concrete Failure

#### COMPRESSIVE STRENGTH (ASTM D 695)

	40 <sup>o</sup> F *	73 <sup>o</sup> F	90 <sup>o</sup> F
8 hour	3,000 psi	5,100 psi	6,700 psi
1 day	6,100 psi	8,800 psi	10,700 psi
7 days	14,500 psi	14,700 psi	15,000 psi

\* Pre-conditioned epoxy to 90<sup>o</sup>F before mixing

#### WATER ABSORPTION (ASTM D 570)

24 hours	0.29%
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#### DEFLECTION TEMPERATURE (ASTM D 648) 5 DAYS

Fiber Stress Loading = 264 psi	166 <sup>o</sup> F
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#### SHELF LIFE

2 years in original unopened containers.  
Cartridges 1 year.

#### PACKAGING

Two Component Cartridges  
30 in<sup>3</sup> / Cartridge – 10 / Case  
60 in<sup>3</sup> / Cartridge – 5 / Case  
4 - 1 Gallon Units / Case  
5 Gallon Pails & Drums on Request

**CrownWeld, Product No.104 COMPLIANCE**  
**AASHTO M - 235 AND ASTM C 881-90 SPECIFICATION Type 1 & 4 - Grade 1- Class A & B**

**APPLICATION**

**CRACK INJECTION** - Low or high pressure may be used. Low pressure is the safest and typically penetrates deeper into fissures and voids providing a better overall application and repair. Set injection ports over the crack at the appropriate spacing and seal the ports and the exposed surface area of the crack with Crown Crack Sealer, No.120; CrownBond, No.121; or CrownPro Bond LTC, No.122. When the surface sealer has become tack-free, inject the crack with CrownWeld, No. 104 with a steady stream of epoxy and pressure. Consult with Crown Polymers Technical Staff for additional information on Crack, Narrow Void Grouting and Delamination Repairs.

**LIMITATIONS**

- Minimum substrate and ambient temperature is 5<sup>o</sup>C (40<sup>o</sup>F).
- DO NOT THIN - solvents will prevent proper cure.
- Do Not Inject Cracks Greater than 1/4 in.
- Do not inject Delaminations Greater than 1 in.
- Do Not Pump Cracks that are contaminated with oils, fatty Acids or Materials that will prevent adhesion of the Adhesive to the concrete.

**FOR INDUSTRIAL USE ONLY**

**SURFACE PREPARATION**

Concrete, stone, wood, steel and other substrates must be clean and sound. Remove dust, grease, waxes, oils, curing compounds, coatings, and all contaminants by mechanical means such as bush hammering and/or abrasive blasting. Abrasive blast all metal surfaces to white metal for best adhesion. Apply epoxy before flash rusting develops or the cleaned surface becomes contaminated.

**PRECONDITIONING EPOXY**

When temperatures drop it becomes harder to flow the epoxy as when the temperatures are warmer. To improve the flow ability at lower temperatures preheat each epoxy component to 90<sup>o</sup>F before mixing. Caution the potlife will be reduced by about 50% when mixing by mechanical means. There is no potlife when a static mixing tube is used for mixing.

**MECHANICAL MIXING**

Mix Component "A" then pour Component "B" into "A" and mix for 90 seconds with a low speed paddle attached to a drill (400-600 rpm).

**STATIC TUBE MIXING**

When the epoxy is being mixed with a static mixing tube on a pre-filled Crown Polymer Cartridge or on an Injection Machine no pre-mixing is required.

**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** aliphatic and other 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/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 re-use.

**CLEAN-UP**

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

**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."

For the Location of Your Nearest Crown Polymers Representative



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