



Concrete & Plaster Bonding Agents

Concrete & Plaster Bonding Systems Worldwide since 1952



Weld-Crete®

The original chemical concrete bonding agent incorporates polyvinyl acetate homopolymer in a patented formulation. For exterior and interior use. Weld-Crete® will bond new concrete, portland cement plaster, and cementitious mixes to structurally sound concrete floors, walls, columns, beams, steps and ramps.

It can be "painted on" in a single application 1 to 10 days prior to concrete placement.

Use Weld-Crete's open time to your advantage in bonding to concrete shear walls, where you need a time lapse between application of bonding agent, placement of reinforcing steel, placement of formwork and placement of concrete. Weld-Crete® is also used for bonding setting beds for ceramic tile and for bonding portland cement plaster and stucco mixes; and to bond to such surfaces as brick, block, tile, marble, metal, glass block, soundly adhered paint (non-soluble in water), and silicone.

Performance Properties (Weld-Crete® & Plaster-Weld®)

Property	Test Method & Results
Tensile Bond Strength	ASTM C-932 for Weld-Crete®, average 485 psi. after 28 days. ASTM C-631 for Plaster-Weld®, average 304 psi. after 28 days.
Flexural Bond Strength	ASTM C-78 (concrete beams laminated with bonding agent). 603 psi.
Shear Bond Strength	ASTM C-1042 (slant shear cylinder test). 740 psi. Avg. 14 days.
Temperature Range	ASTM C-932 (Weld-Crete®); ASTM C-631 (Plaster-Weld®) specimens brought to 145° F, no bond failure.
Freeze-thaw Stability	5 cycles freeze (-10° F & thaw). Freeze-thaw stable.
Toxicity	Enclosed mice exposed to 30cc volatilized bonding agent for 1 hr. Non-toxic, no illeffects after 7 days.
Fire Resistance	ASTM E-119 (bonded assembly). Passed 2 hr. Fire Test 1800° F and 1 hr. Hose Stream Test.
Flammability	Lab. tests for fire resistance. Non-flammable; meets MIL-B-19235C.
Acid Resistance	1" concrete slabs bonded to 1/2" gypsum plaster subjected to seepage of strong detergents & synthetic urine for 10 hrs. a day. No bond failure after 25 consecutive days. Also unaffected by alkalinity of cement.
Life Expectancy	Lab. tested & field proven. Non-deteriorating bond; retains strength & flexibility.

Weld-Crete® Guide Specifications

Bonds new concrete, stucco, tile setting beds, and terrazzo to any structurally sound surface, interior and exterior.

Division 3 & 9

1. General

1.1 Product Handling

- a. Deliver Weld-Crete® to job in original container with seals unbroken and use without reducing.
 - b. Materials Storage: Protect Weld-Crete® from freezing.
- #### 1.2 Environmental Conditions
- a. Air and surface temperatures must be above freezing during application of Weld-Crete®.

2. Products

2.1 Materials

- a. Bonding Agent: Weld-Crete®, Larsen Products Corp., Jessup, Maryland.

3. Execution

3.1 Surface Preparation

- a. Surfaces to receive Weld-Crete® MUST BE CLEAN, free from loose material, dust, dirt, oil, grease, wax, loose paint, mildew, rust, laitance or efflorescence. If preparing an old concrete floor surface (steel trowel finish), mechanically scarify the surface and follow with an acid wash and thoroughly rinse with clean water. An economical method for cleaning concrete floor surfaces is to use a 10% muriatic acid solution followed by a thorough washing. Degreasing solvents such as Varsol are also effective.
- b. Surfaces to receive Weld-Crete® MUST BE STRUCTURALLY SOUND. On newly placed concrete floors to receive a bonded topping, give the surface a rake or broom finish. Surfaces with form-releasing agents, curing compounds, hardeners and sealers must be compatible with Weld-Crete®. Glossy painted surfaces should be dulled with an abrasive. New paint should cure 7 days before applying Weld-Crete®. Paints must be firmly adhered to the substrate. Do not apply over paints or materials that are soluble in water. Do not apply over frozen concrete or plastic surfaces. Weld-Crete® may be placed over dry or damp surfaces (eliminate all water puddles). Do not apply where hydrostatic pressure is present in the substrate. Surfaces should be inspected for excessive cracking and properly prepared prior to application of the bonding agent.

3.2 Installation

- a. Application of bonding agent: Apply Weld-Crete® uniformly, using brush, roller or spray, to form a continuous blue film over the entire surface. Allow one hour to dry. EXCEPTION: FAST SET PATCHING CEMENTS AND GROUTS MUST BE APPLIED WHILE THE WELDCRETE® FILM IS STILL TACKY.
- b. Inspection of bonding agent: Prior to placement of cementitious topping, inspect bonding agent application for continuity of blue film over the entire bonding surface. Do not apply new concrete to frozen Weld-Crete®. Reapply Weld-Crete® over areas not satisfactorily covered. Protect the applied film from dirt and debris until the fresh concrete overlay is in place.

3.2.1 Application of Concrete Overlays

- a. Delayed toppings shall be over Weld-Crete® in a minimum 1/2 inch thickness on surfaces shown and specified. Provide for a butt joint at adjacent edges. All joints must duplicate the joints in the substrate and all joints must be sealed against water penetration. Form isolation joints or cut with a dry vacuum saw. Cut control joints not more than one half the

depth of the concrete overlay. Remove standing water from newly bonded concrete surfaces. Concrete toppings can be applied as soon as the film is dry, or delayed a week to 10 days, with no effect on the bond. Follow same application for overlays on precast hollow core floor systems. Follow Portland Cement Association Standards.

- b. Follow accepted industry standards for protection of newly bonded concrete. Do not use a "wet" type saw to cut isolation joints on newly bonded concrete overlays. Seal all joints against water penetration.

3.2.2 Bonded Concrete Shear Wall

- a. Prior to application of Weld-Crete®, set all anchors on existing wall as shown and specified. Apply Weld-Crete® as directed, then proceed with placement of reinforcing steel, erection of forms and placement of concrete. Seal all joints against water penetration.

3.2.3 Application of Portland Cement Terrazzo

- a. Apply Portland Cement Terrazzo over Weld-Crete® to surfaces as shown and specified.
- b. One-half inch Portland Cement Terrazzo Flooring: Install terrazzo dividing strips prior to application of Weld-Crete®. Follow NTMA specification for monolithic terrazzo. Do not allow standing water or wet materials to remain on newly bonded terrazzo surfaces. Seal all joints against water penetration.

3.2.4 Application of Portland Cement Plaster

- a. Apply Portland Cement Plaster over Weld-Crete® on surfaces as shown and specified. NOTE: Portland Cement Plaster can be applied as soon as film is dry, or delayed a week to 10 days, with no effect on the bond. Seal all joints against water penetration.
- b. Two and Three Coat Applied: Apply scratch coat a minimum of 3/8 inch over Weld-Crete® on surfaces as shown and specified. NOTE: Do not scratch through to the Weld-Crete® film. Allow to dry 24 hours. Follow with second and third coat applications. Seal all joints against water penetration.
- c. Two Coat Spray Applied: Apply a thin dash coat by hand or spray over Weld-Crete® and allow dash to firm up and become hard. Apply finish coat 3/8 inch thick. Seal all joints against water penetration. NOTE: Weld-Crete® helps equalize suction on vertical applications, which produces a more uniform finish coat. For less than 3/8 inch thickness, refer to Acrylic Admix 101®.

3.2.5 Application of Mortar Setting Beds

- a. To receive ceramic tile, precast terrazzo, etc., application of mortar Setting beds shall be a minimum of 3/8 inch thickness over Weld-Crete® on surfaces as shown and specified. Seal all joints against water penetration.

3.2.6 Application of Non-Shrink Fast-Set Mortars and Grouts

- a. Applications of non-shrink fast-set mortars and grouts shall be over Weld-Crete® while Weld-Crete® is still tacky. Seal all joints against water penetration.

3.2.7 Application of Bedcoat

- a. Applications of bedcoat for Simulated Stone Finish (Marblecrete) shall be a minimum of 3/8" thickness over Weld-Crete® on surfaces as shown and specified. Seal all joints against water penetration.

Availability & Cost

Weld-Crete® is available from building supply dealers throughout the United States and Canada. Obtain local quotations to determine cost factors.

Coverage: 200 to 300 sq. ft./gallon, approximately, depending upon method of application, temperatures, porosity and texture of the substrate.

Packaging: 5 gal. pail, gal.

Color: Blue (non-bleeding)



Before



After



Before



After



Before



After



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Warranty: Plaster-Weld®, Weld-Crete®, and Acrylic Admix 101™ are suited for the purposes described when used according to directions. Buyer agrees in purchasing this product that Seller's liability for breach of warranty shall in no case exceed the price of the product. Because of the broad range of conditions beyond our control which may be encountered in the use of the product, Larsen Products Corp. makes no other warranty, express or implied, and no agent or other person is authorized to do so. Nevertheless, we will be glad to provide information about any type of installation you may request.