



Concrete & Plaster Bonding Systems - Worldwide Since 1952

8264 Preston Court, Jessup, MD 20794
(800) 633-6668



LARSEN CONCRETE & PLASTER BONDING SYSTEMS

Larsen Weld-Crete and Plaster-Weld bonding agents have been specified by major architects, engineers and construction companies throughout the world since 1952. Use larsen bonding agents wherever you require a high performance bonding of cementitious material direct to structural surfaces.



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Plaster-Weld®

Plaster-Weld® the original chemical bonding agent for plaster, is a safe, easy to use surface applied bonding agent that bonds new plaster to any clean, structurally sound surface.

Plaster-Weld® Guide Specifications

Divisions 3 & 9

1. General

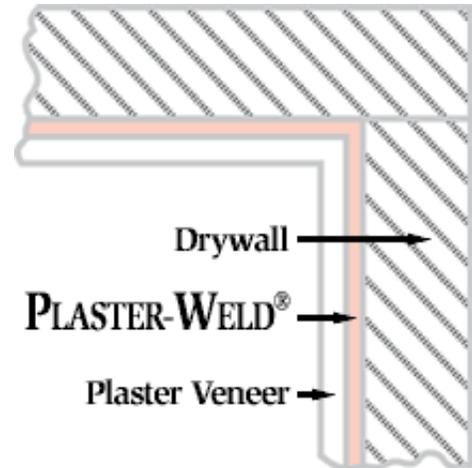
- 1.1 Product Handling
 - a. Deliver Plaster-Weld® to job in original container with seals unbroken and use without reducing.
 - b. Materials Storage: Protect Plaster-Weld® from freezing.
- 1.2 Environmental Conditions
 - a. Air and surface temperatures must be above freezing during application of Plaster-Weld®.
- 1.3 Protection
 - a. Protect adjacent finish surfaces with masking tape, soap powder emulsion, or a commercial product, specially formulated for protective use in plastering.

2. Products

- 2.1 Materials
 - a. Bonding Agent: Plaster-Weld®, Larsen Products Corp., Jessup, Maryland

3. Execution

- 3.1 Surface Preparation
 - a. Surfaces to receive Plaster-Weld® MUST BE STRUCTURALLY SOUND AND CLEAN, free from loose material, dust, dirt, oil, grease, wax, loose paint, mildew, rust, laitance, or efflorescence. Form release agents, curing compounds, hardeners, and sealers must be compatible with Plaster-Weld®.
- 3.2 Installation
 - a. Application of bonding agent: Apply Plaster-Weld® uniformly using brush roller, or spray to form a continuous pink film over the entire surface. Allow to dry one hour. (NOTE: Painted surfaces must be sound, washable and firmly adhered to the substrate. Glossy painted surfaces should be dulled with an abrasive. Wait 60 days before applying bonding agent over newly painted surfaces. Application of wallpaper to newly bonded plastered surfaces should be delayed 90 days.)
 - b. Inspection of bonding agent: Prior to applying plaster, inspect bonding agent application to assure a continuous pink film over the entire bonding surface. Reapply Plaster-Weld® over areas not satisfactorily covered.
 - 3.2.1 Application One-Coat Plaster
 - a. Apply a white skim coat of plaster 1/16 to 3/16 inch thick over Plaster-Weld® direct to concrete ceilings and other structural surfaces as shown and specified (the mixing, application and finishing of white coat shall be as specified for regular white finish coat). At contractor's option, Plaster-Weld® and a white skim coat of plaster may be applied on interior ceilings, walls, beams and columns in place of smooth or rubbed concrete surfaces as shown or specified. (NOTE: Plastering can begin immediately as soon as bonding agent is dry to the touch [allow 1 hour] or delayed a week to 10 days with no effect on bond.)
 - 3.2.2 Application of Two and Three Coat Plaster
 - a. Apply scratch coat a minimum of 3/8 inch thick over Plaster-Weld® to surfaces as shown and specified. Allow to dry 24 hours (follow with two and three coat applications). (NOTE: Minimum drying time of 24 hours between coats is important to prevent moisture in second coat from penetrating the scratch coat and flooding the bond film.)
 - 3.2.3 Application of Plaster over Electric Heating Cable:
 - Contact Larsen Products for Guide Specifications.
 - 3.2.4 Patch Plaster Over Plaster-Weld® following work of other trades





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Weld-Crete®

Weld-Crete®, the original chemical bonding agent for concrete, is a safe, easy to use surface applied bonding agent that bonds new concrete to any clean, structurally sound surface.

Weld-Crete® Guide Specifications

Division 3 & 9

1. General

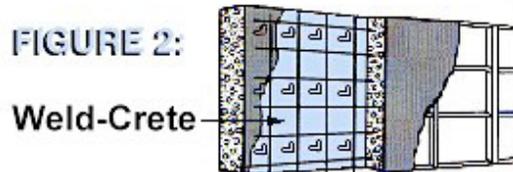
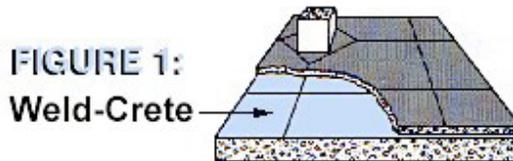
- 1.1 Product Handling
 - a. Deliver Weld-Crete® to job in original container with seals unbroken and use without reducing.
 - b. Materials Storage: Protect Weld-Crete® from freezing.
- 1.2 Environmental Conditions
 - a. Air and surface temperatures must be above freezing during application of Weld-Crete®.

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 WELD-CRETE® 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 hollowcore 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 Ad-Mix 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.



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The Caribbean Bonds with Weld-Crete®

Uses and studies of Weld-Crete in the United States have been known and documented for years, and Weld-Crete's reputation for superior performance has been the basis for our domestic success. Now, Larsen Products has opened a new chapter in company history with the broad acceptance of Weld-Crete worldwide as illustrated by our success in the Caribbean.



Island climates are especially challenging to builders who need to consider the effects of heat and humidity on the structure. Most Caribbean luxury builders choose stucco over concrete or block for its beauty and durability.



Weld-Crete has revolutionized building practices in the Caribbean, allowing contractors to use precast, traditional concrete construction methods or block, apply a single coat of Weld-Crete, then come back and finish with new concrete, traditional stucco or tile setting beds and terrazzo. Because Weld-Crete is a surface applied bonding agent, it saves time and labor, representing significant cost

reductions.



Because Weld-Crete is applied in a single application and has a 1 hour to 10 day timeframe to finish, it offers a huge advantage to builders who need to add reinforcement steel or formwork before applying the surface material.

A Remodel in the Spanish Tradition

Plaster detailing seamlessly blends new and old as an architect resolves a poorly organized floor plan. —by Jerri Holan Reprinted with permission of Fine Homebuilding, September 1996.



The great Oakland, California, fire of 1991 started a mini building boom in the Bay Area. But not everybody who lost a home built a new one. Some folks chose to take the insurance money and buy older places in nearby neighborhoods. My clients, Lauren Leimbach and Leon Sompolinsky, decided that this approach was right for them. They liked the charm of older homes, and they wanted to be in a part of town that still had its landscaping in tact.

Their search turned up the almost perfect house. Built in the 20s, their new home is a well-preserved example of the eclectic Spanish style that flourished in California during the 20s and 30s. Its original flavor was intact, with wrought-iron work, leaded windows, a painted wood beam ceiling and a third floor veranda. Unfortunately, the house had a befuddled floor plan. First, the 20s floor plan reflected 20s activities, when meals were prepared in virtual seclusion behind closed doors. The kitchen and dining room were separate, connected only by a doorway, and they were a half-floor level below the living room. With the ascent of cooking as a social activity, contemporary couples almost always want the kitchen, the dining area, and the living room closely connected.

As if to punctuate the irony of the misplaced kitchen, a long narrow study occupied the space adjacent to the to the

living room. The two rooms were isolated from one another by a wall of bookcases in the study. Dimly lit and awkwardly proportioned, the study was a kitchen/dining room just waiting to happen. The space even had a pair of French doors leading to the backyard patio.

Freeing the space occupied by the original kitchen would make a perfect place for a guest bedroom. And we could add a shower to the little half-bath off the old kitchen, creating a guest suite without altering the footprint of the original house.

Plaster detailing ties the new work to the old house. The layout of the new kitchen/dining room divides the former study almost exactly in half lengthwise. To emphasize this division, we placed a beam across the ceiling at the imaginary boundary between the kitchen and the dining room. The beam serves no structural purpose. It's there to stake out the border between the rooms and to provide a prominent stage for the curved plaster corbels that tie the beam to the walls. Architectural features such as the rounded corbels in hand-tooled plaster occur throughout the house. They provided us with a rich heritage of detail to duplicate in the remodeled rooms.

For example, the wall between the dining room and the living room includes an arched passage that echoes the original archway in the entry hall. The new wall is 2 ft. thick, providing us with ample room for plastered niches within the new arch. A wall this thick gives the impression of adobe masonry, which was the intent of the original builders of the house. Like the original builders, we made the new wall out of studs, sheathing and plaster. What's not apparent in this remodel is that our contractor, Bashland Builders, used a variety of plaster techniques to achieve the wall finish. To patch the original plaster in the living room and to create the arched passageway, they used traditional three coat plaster. This process requires a solid substrate followed by a layer of expanded metal lath and then three applications of plaster. This traditional way of applying plaster is labor intensive, but it's the best method for matching original work and for creating curved surfaces.

The crew used a modern, timesaving bonding agent to speed the plastering of

the dining room walls. Before applying a skim coat of plaster to the old walls, they primed the walls with Plaster-Weld®, a bonding agent made by Larsen Products Corp. (800-633-6668). This product ensured that the new plaster bonded thoroughly to the painted surface of the old plaster.

The ceilings of the kitchen and dining room were made with blue board and skim-coated plaster. Blue board is essentially drywall with a porous paper surface designed to grip plaster. The blue board gives the plaster its strength, and a single 1/4in. thick troweled-on layer of plaster provides the hand-worked texture.

A recycled window overlooks the backyard in a bay window bump-out. It was Leon's idea to reuse the old window. It had to come out of the old kitchen when we put in a pair of French doors to the backyard, and because it came from the shaded side of the house, the window was still in pretty good shape. The downside? The window was warped, and it was too tall to fit in a conventionally framed wall. The window was to go over the sink, which meant that its sill had to be at least 8 in. above the finished counter height.

Contractor Jeff Rexford and his crew placed the new header beside the old rim joist instead of under it. That move saved us the depth of the header, giving us the 4 in. or so of wiggle room that made space for the window. Fortunately the joists were running in the same direction as the header, so Jeff's crew didn't have to lop off a bunch of joists while temporarily supporting them. Accommodating the warped window meant that Rexford and crew had to plane the window and set the stops accordingly.

The window fits into a 2x12 box supported by four plywood brackets equally spaced below the windowsill. A row of terra-cotta barrel tiles, which match those atop the house, cap the bump-out, and the sides and bottom are stuccoed to match the rest of the house.