

Vinyl Concrete Patcher

BONSAL® Vinyl Concrete Patcher is a polymer modified, cement repair product requiring only the addition of clean water.

FEATURES AND BENEFITS:

- Bonds to Existing Concrete and Masonry
- Featheredges (See * Mixing)
- Can be Used in Any Thickness
- Does not Shrink
- Sets in 30 Minutes
- Ready for Light Use in 12 -24 Hours, Heavy Use in 48 Hours
- Can be Used for Horizontal, Vertical, or Overhead Repairs
- Can be Used as an Overlayment or Underlayment
- Exceeds ASTM C 387 for High Strength Mortar
- Brush or Broom Apply
 - Enhance Uniformity of Color
 - Rub to Hide or Fill Honeycombs and Cavities
 - Broom to Renovate Old, Weathered Concrete

USES:

Repair of Concrete

- Poured in place, precast, tilt-up and prestressed
- Concrete Beams and Columns
- Walkways • Driveways • Curbs
- Tunnels • Ramps • Loading Docks
- Bridges • Decks • Concrete Pipes
- Runways • Cavities • Median Barriers
- Honeycombs • Core Holes

Repair of Concrete Masonry

- Resetting or Pointing of Brick, Block or Stone
- Stucco • Cement Roofs

PREPARATION:

Evaluation of the substrate by a qualified engineer, architect or contractor using means that determine the cause of deterioration is strongly recommended. Particular attention is to be given but not limited to chloride penetration, corrosion of steel, galvanic activity, materials selection and compatibility, waterproofing, constructibility, quality assurance and methods of application and maintenance by the owner. Clean area and remove all unsound concrete, grease, oil, paint, and any other foreign materials that will inhibit performance. Slick or sealed surfaces must be thoroughly roughened. Refer to:

- ASTM D 4258 Surface Cleaning Concrete for Coating
- ASTM D 4259 Abrading Concrete

PREPARATION (Cont.):

- ASTM D 4261 Surface Cleaning Concrete Unit Masonry for Coating
- ICRI Guideline 03730 Surface Preparation Guidelines for Repair of Deteriorated Concrete Resulting from Reinforcing Steel Oxidation
- ICRI Guideline 03733 Guide for Selection and Specifying materials for Repair of Concrete Surface
- ICRI Guideline No. 03732 Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays
- ASTM D 4580 Measuring Delaminations in Concrete Bridge Decks by Sounding
- ACI 201.1R Guide for Making a Conditions Survey of Concrete in Service
- ACI 201.3R Guide for Making a Condition Survey of Concrete Pavements

Use of BONSAL Acrylic Additive

When using BONSAL Acrylic Additive in BONSAL Vinyl Concrete Patcher, saturate the substrate with water. Remove excess water prior to application and consult BONSAL Acrylic Additive product literature.

Note: BONSAL Acrylic Additive cannot be used as a roll, brush or spray applied substrate primer.

Use of BONSAL 118 Primer/Admixture

When using BONSAL 118 Primer/Admixture as a primer over sound substrates, dilute 1:1 with water. Consult BONSAL 118 Primer/Admixture product literature for coverage rates.

Under conditions of excessive temperatures or high absorption, dampen substrate with water prior to applying BONSAL 118 Primer/Admixture.

MIXING:

General Repairs

Combine Admixture per table below before adding to Vinyl Concrete Patcher.

	Acrylic Additive or 118 Primer/Admixture	Water
9 lb. Pail (4.0 kg)	8 oz. (.24 l)	+ 24 oz. (.71 l)
40 lb. Bag (18.1 kg)	1 quart (0.94 l)	+ 3 quarts (2.82 l)

MIXING (Cont.):

	Water
9 lb. Pail (4.0 kg)	+32 oz. (.75 l)
40 lb. Bag (18.1 kg)	+4 quarts (3.76 l)

Let the mix sit (slake) for 5 minutes and stir before using. Discard any material that sets up.

Aggregate Addition

For repairing horizontal areas more than 2" (9.0 cm) deep, preblend 16 lbs. (7.26 kg) of 3/8" (0.95 cm) coarse aggregate (AASHTO M43 size #7) per 40 lb. (18.1 kg) bag and 3 1/2 lbs. (1.58 kg) per pail, then add mixing liquid.

Brush or Broom Coat Resurfacing

For a brush or broom application, a slurry coat using BONSALAcrylic Additive or BONSAL 118 Primer/Admixture is required.

*Featheredging is permitted for light traffic areas when the Vinyl Concrete Patcher is modified with BONSAL 118 Primer/Admixture or BONSAL Acrylic Additive.

	Acrylic Additive or 118 Primer/Admixture	Water
9 lb. Pail (4.0 kg)	24 oz. (709.6 cm ³)	+ 24 oz. (709.6 cm ³)
40 lb. Bag (18.1 kg)	3 quarts (2.82 l)	+ 3 quarts (2.82 l)

Vinyl Concrete Patcher to get a "thick paint" consistency.

Let the mix sit (slake) for 5 minutes and stir before using. Discard any material that sets up.

PLACEMENT:

Placement Temperature

	Minimum	Maximum
Substrate	50°F (10°C)	90°F (32.2°C)
Mix	60°F (15.5°C)	70°F (21.1°C)
Air	50°F (10°C)	90°F (32.2°C)

During cold weather store the Vinyl Concrete Patcher at 60°F (15.5°C) to 70°F (21.1°C) for a 24 hour period prior to use. On hot days, protect containers from direct sun.

General Repairs

Place the Vinyl Concrete Patcher on the substrate to be repaired. Force the mix into the original concrete. Lightly trowel to the desired finish.

Brush or Broom Coat Resurfacing

Wet the brush or broom and spread the material to an even thickness with a wide, soft bristle push broom. Finish by brushing or brooming the surface.

PLACEMENT (Cont.):

Finishing

A nonskid surface can be obtained by using a damp sponge, rubber float or a damp broom.

When vinyl, wood, or other types of floor coverings are to be installed over Vinyl Concrete Patcher, the requirements of the floor covering manufacturer are to be followed with respect to but not limited to levels of moisture.

Refer to:

•RFCI (Resilient Floor Covering Institute publication MRP - Nov 95): Addressing Moisture Related Problems Relevant to Resilient Floor Coverings Installed Over Concrete

•NOFMA(National Oak Flooring Institute) publication: Installing Hardwood Flooring, Rev. March 98/10

CURING:

Protect from heat and direct sun for 24 hours. Do not wet the surface after material has set.

Maintain at least 50°F (10°C) for 24 hours after application.

Materials modified with BONSAL Acrylic Additive or BONSAL 118 Primer/Admixture should be air cured, unless hot and/or drying winds or low humidity are present. Under such conditions, cure per Portland Cement Association - Design and Control of Concrete Mixes (EB110.12T) and/or American Concrete Institute 308 - Standard Practice for Curing Concrete.

If other materials are to be installed over the substrate, consult that manufacturer for recommendations.

Vinyl Concrete Patcher	Water	3:1 Water/ 118 Primer/ Admixture	3:1 Water/ Acrylic Additive
Compressive Strength ASTM C 109	PSI	PSI	PSI
24 hours	2000 (13.8 Mpa)	1750 (12 Mpa)	1900 (13.1 Mpa)
7 days	4300 (29.6 Mpa)	3775 (26 Mpa)	3750 (25.8 Mpa)
28 days	6850 (47.2 MPa)	5900 (40.6 MPa)	5875 (40.5 MPa)
Flexural Strength ASTM C 580	PSI	PSI	PSI
28 days	1170 (8.27 Mpa)	1350 (9.3 Mpa)	1230 (8.5 Mpa)
Tensile Strength ASTM C 190	PSI	PSI	PSI
7 days	300 (2.06 Mpa)	440 (3.0 Mpa)	435 (3 Mpa)
28 days	385 (2.65 Mpa)	450 (3.1 Mpa)	495 (3.4 Mpa)
Shear Bond Strength ASTM C 882	PSI	PSI	PSI
28 days	1200 (8.27 Mpa)	1300 (8.9 Mpa)	1300 (8.9 Mpa)

TECHNICAL DATA:

Shrinkage

ANSI 118.4, F-5

28 days air cured None

Length Change Percent

ASTM C 157

Air Cured -.03

Moist Cured +.01

Alkalinity

12.8 pH

	Vinyl Concrete Patcher		
	Water	1:3 Acrylic Additive	1:3 - 118 Primer/Admixture
Set Time (Minutes)	30	45	35
1. Compressive Strength ASTM C 109			
1 Day	13.7	10.6	13.7
28 Days	37.9	35.3	34.5
2. Tensile Strength ASTM C 180			
28 Days	2.0	3.1	4.1
3. Flexural Strength ASTM C 580			
28 Days	7.6	8.5	12.4
4. Bond Strength ASTM C 882			
28 Days	8.2	9.9	12.8

LIMITATIONS:

- **DO NOT** apply when air or substrate temperature is below 50°F (10°C) or above 90°F (32.2°C) within 24 hours of application.
- **DO NOT** coat with materials that will trap water in the substrate.
- **DO NOT** use dirty water or tools.
- **DO NOT** apply until material has set (slaked) for 5 minutes.
- **DO NOT** retemper after 15 minutes of mixing.
- **DO NOT** over trowel.
- **DO NOT** apply over substrates that are frozen or contain frost.
- **DO NOT** add or mix any materials with this product, unless approved by the *W.R. Bonsal Company*.

LIMITED WARRANTY: W.R. Bonsal Company ("Bonsal") warrants that this product and the materials used therein meet or exceed the applicable standards listed and enforced at the time of manufacture. Bonsal will replace any product or part which proves defective due to quality of ingredients used or due to the manufacturing process itself. This Warranty shall apply only if the product is used in strict accordance to applicable specifications and instructions provided by Bonsal for its use, and Bonsal shall not be liable otherwise. Replacement of any defective product, or, at Bonsal's option, refund of the purchase of any defective product shall be the buyer's sole remedy under this Warranty, and Bonsal shall in no event be liable for any damages in excess of the purchase price of the defective product. **BONSAL SHALL IN NO EVENT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES.**

This Warranty constitutes the sole warranty given by Bonsal in connection with this product, and Bonsal has authorized no person to make or give any other warranties or representation, oral or written on its behalf. **IN PARTICULAR, THERE ARE NOT IMPLIED WARRANTIES, INCLUDING WITHOUT EXCEPTION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** No modification of this Warranty in favor of any buyer shall be valid unless given in writing and signed by an officer of Bonsal.

LIMITATIONS (Cont.):

- **DO NOT** add excessive amounts of water.
- **DO NOT** apply over light weight concrete.
- **DO NOT** apply over concrete cured less than 7 days.
- **DO NOT** reuse empty container. Recycle or dispose of properly.

WARNING: Cracks in the material may reappear due to structural faults in the construction itself. The effectiveness of any repair depends on sound structures, proper evaluation, preparation, application and maintenance.

COLORS:

Grey and White

COVERAGE:

General Repairs (Trowel)

1 lb. covers approximately 1 sq. ft. (0.0929 m²)
@ 1/8" (3.17 mm)

Resurfacing (Brush or Broom)

1 lb. (454 grams) (0.45 kg) covers approximately
3 sq. ft. (0.278 m²)

PACKAGING:

9 lb./4.1 kg pail
40 lb./18.1 kg multiply bag

SHELF LIFE:

One year from date of manufacture.

CAUTION: Contains Silicon Dioxide, Portland Cement and Calcium Hydroxide. Your skin may be sensitive to cement. Wearing rubber gloves is recommended. Avoid contact with eyes or prolonged contact with skin. In case of contact, flush thoroughly with water. For eyes, flush with clean water for at least 15 minutes and get prompt medical attention. Empty container may be hazardous to children.

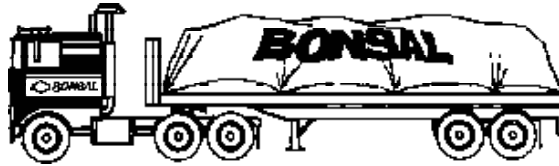
KEEP OUT OF REACH OF CHILDREN

Technical Assistance

**Charlotte, NC
(800) 334-0784**

Home Office

**Charlotte, NC
Telephone#: (704) 525-1621
Toll Free #: (800) 738-1621
Fax#: (704) 529-5261**



“Bonsal Delivers Solid SolutionS”

RES Architectural Sales, Inc.

143 S. Franklin St., Chagrin Falls, OH 44022 • Phone: 440-247-4070 • Fax 440-247-4069
Website: www.resarch.com • Email: sales@resarch.com