

**Product Information** 

# Fast-Dry Epoxy Chipping Primer

# BDC 1704

Description The BDC 1704 is a two component, 100% solids, low viscosity, moisture tolerant, fast drying, high strength, and multi-purpose epoxy primer. It has excellent rapid cure properties, even at low temperatures, offers good chemical resistance, and provides excellent adhesion on both damp surfaces and green concrete.

#### Uses

The BDC 1704 series epoxy primer is used to prime concrete, metal, and many other existing coatings. It is an excellent all-around concrete primer/sealer.

Its primary purpose is for use as a primer in paint chip, color quartz, or other broadcast epoxy floor coating systems.

Heavy duty industrial, marine service, protective, and floor coatings can benefit from this product's outstanding water resistance and corrosion protection.

### Advantages

- Cures at 45°F (35°F w/ accelerator)
- Meets USDA criteria
- 100% Solids with Zero-VOC
- Excellent Moisture Tolerance
- Very Good Corrosion and Chemical Resistance
- Convenient 2:1 Mix; A:B=2:1
- Non-Toxic and Non-Corrosive
- Made from renewable materials
- Superior Adhesion

#### Coverage

BDC 1704 should cover between 200-300 sq ft per gallon under normal conditions, which will achieve 5.2-8.0 dry mils. BDC 1704 may be applied at a heavier rate to achieve a higher build system or to accommodate the broadcasting of aggregates.

#### Colors

Available Clear, Cape Cod Gray, Stone Gray, Deep Tan, Travatan

### Packaging

**1 1/2-gallon kits** (1 gallon bucket part A to 1/2-gallon jug part B) **3-gallon kits** (2-gallon bucket part A to 1-gallon jug part B) **15-gallon kits**  (2 - 5-gallon pails part A to 1 - 5-gallon pail part B)

## Inspection

Concrete must be clean, dry, and free of grease, paint, oil, dust, curing agents, or any foreign material that will prevent proper adhesion. The concrete should be at least 2500 psi and feel like 30-grit sandpaper. The concrete should be porous and be able to absorb water. A minimum of 10 days cured is required on all concrete, but adhesion is best when allowed to cure for 28 days minimum. Relative humidity in the concrete floor slab should be below 90% (per ASTM F-2170).

Before starting flooring work, test existing concrete slab to make sure there is no efflorescence or high levels of alkalinity. Alkalinity refers to a high pH reading which means the floor is not neutral. A high alkaline environment can cause salts to creep up through the cement called efflorescence. These salts tend to prevent or destroy the bonding of coatings to the concrete. The most common form of testing is the use of a wide-range pH paper or tape. Make sure the floors pH reading ranges between 5-9 to ensure adhesion. The testing of concrete for alkalinity can show the amount of alkalinity only at the time the test is ran and cannot be used to predict long-term conditions.

Calcium chloride tests should be conducted to determine if the concrete is sufficiently dry for an epoxy flooring installation. The calcium chloride tests should be conducted in accordance with the latest edition of ASTM F 1869, Standard Test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride. When running a calcium chloride test, it is important to remove any grease, oil, curing agents, etc. so accurate readings can be obtained. If the reading ranges from 6lbs to 15lbs, an additional moisture barrier system such as our BDC Vapor Seal can be installed to reduce the emissions.

Failing to adhere to these strict guidelines can result in product delamination, discoloration, blistering, or all together failure of the coating system. Testing is the responsibility of the applicator. BDC Epoxy Systems bears no responsibility for failures due to any of the above conditions.

#### Surface Preparation



Over Concrete Surfaces: Shotblasting or diamond grinding is the preferred method for preparing the concrete. Proper preparation should achieve a clean, porous, and uniform surface that feels like 50 grit sandpaper that will allow the product will soak in and properly bond.

Over existing BDC Epoxy: Sand the surface with a floor buffer and 100 grit sandpaper. Remove debris and wipe with acetone just before new application. Always test a small area to ensure adhesion prior to application.

## Mixing

As a primer: Mix 2 parts A with 1 part B (by volume) together for 3 to 4 minutes. For best penetration into concrete, thin by adding up to 16oz of acetone to each 1.5-gallon kit. Thinned material must be applied at less than 6 mils (and not puddle) to cure properly.

# Accelerator

BDC 17X Accelerator can be added to speed up the curing process even more. 1 - 4oz bottle of accelerator can be added per 1.5-gallon kit of 1704 epoxy to reduce the dry to touch time from 4 hrs to 2 hrs and the scraping time of paint chips from 6 hrs to 3.5 hrs (77°F). Note, working time and pot life will also be significantly reduced, so use with care.

# **Working Time**

Temperature dependent. BDC 1704 = 20-25 minutes BDC 1704 + 17X Accelerator = 12-15 minutes DO NOT LEAVE MIXED MATERIAL IN BUCKET! Product must be poured onto surface to be coated *immediately* after mixing or material will quickly heat up and begin curing in bucket.

# Application

As a primer: Immediately after mixing, spread a strip of the batch onto the surface along the edges where it will be cut in using a brush. Pour the remaining material near the cut in area and spread evenly using a trowel or squeegee and back roll using a 3/8" nap non-shedding roller. Thinned material must be applied at less than 5 mils (and not puddled) to cure properly.

As a mortar: Prime the surface using the methods described above. Mix 2 parts A & 1 part B of epoxy then combine 2 to 5 parts of oven-dried aggregate. *Spread, gage rake and trowel into place* the prepared epoxy mortar using a trowel. To smooth and level the mortar, clean the trowel with a solvent as you go.

As an intermediate coat: Mix and apply without solvent at the desired thickness using a notched trowel or squeegee and back roll. The addition of silica flour or silica sand will add body and help to build up more cost effectively.

# Drying Time 1704

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Temp.	To Touch	То	Recoat				
		Scrape	Maximum				
		Chips					
77°F	4 hrs	6 hrs	12 hrs				
50°F	12 hrs	24 hrs	24 hrs				
35°F	20 hrs	36 hrs	48 hrs				

Dryin	g Time	1704 +	17X /	Accelerator
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Temp.	To Touch	То	Recoat		
_		Scrape	Maximum		
		Chips			
77°F	2.5 hrs	3.5 hrs	8 hrs		
50°F	7 hrs	18 hrs	24 hrs		
35°F	12 hrs	24 hrs	24 hrs		

BDC 1704 Primer can be re-coated as soon as the surface is dry to touch. Recoat before product has reached the "Recoat Maximum" in the above table. If additional coats need to be put down after the acceptable window, sand the surface and wipe it with a suitable solvent (i.e. acetone) prior to recoating.

## Limitations

- Do not apply at temperatures below 45°F or above 85°F. Working very difficult at higher temperatures.
- Do not let mixed product sit in bucket for prolonged period or it will become very hot and unusable.
- Do not apply over concrete with Moisture Vapor Emissions above 6 lbs/1000 ft²/24hr.
- For interior use only unless protected by a pigmented UV resistant coating.
- Concrete must be cured for a minimum of 28 days to ensure adhesion.
- Solvents added to thin such as acetone will make product combustible or flammable in which case be aware of sparks or open flame.
- If solvent is added, the product must be applied thin (~300 ft²/gal to allow the solvent to escape and proper curing to occur.)
- Shelf Life of this material is 1 year from the date of manufacture. (See batch number for manufactured date)
- BDC recommends the use of angular slip resistant aggregate in all coatings or flooring systems that may be exposed to wet, oily or greasy conditions. It is the contractor and end users' responsibility to provide a flooring system that meets current safety standards.

### Clean Up

Uncured material can be removed with a solvent. Cured material can only be removed mechanically. All empty containers must be disposed of according to local, state, and federal regulations.

### Warranty

BDC Epoxy Systems guarantees that this product is free from manufacturing defects and complies with our published specifications. In the event that the buyer proves that the goods received do not conform to these specifications or were defectively manufactured, the buyer's remedies shall be limited to either the return of the goods and repayment of the purchase price or replacement of the defective material at the option of the seller. BDC makes no other warranty, expressed or implied, and all warranties of merchantability and fitness for a particular purpose are hereby disclaimed. Manufacturer or seller shall not be liable for prospective profits or consequential damages resulting from the use of this product. Manufacturer shall not be liable for material used outside of its shelf life. For product dating, please refer to the batch number on the product or contact BDC Epoxy Systems.

