



## Product Information

### *BDC Troweled Mortar System*

### *Trowelable Mortar System*

#### *Description:*

B.D. Classic's Troweled Mortar System is a high build protective resurfacing system consisting of a (optional) vapor barrier 100% solids epoxy primer and a troweled down epoxy with graded silica sand aggregate. This system is then filled with 1-2 coats of a cycloaliphatic epoxy and a high-gloss, protective Chemical Resistant Polyurea Topcoat. BDC's Troweled Mortar System provides the strength and durability of an industrial epoxy mortar system with a variety of finishes available.

#### *Advantages*

- Extra strong and resilient flooring system
- Heavy build allows for creative sloping on irregular substrates
- Seamless floor system
- Available with an antimicrobial agent

#### *Uses*

- Commercial kitchens, locker rooms, showers
- Healthcare and Pharmaceutical facilities
- Laboratories, clean rooms
- Food and beverage facilities
- Animal Research

#### *System Specification*

Troweled Mortar System consists of (optional) BDC Vapor Seal Epoxy Primer, BDC 3300 Clear as the Tack coat, BDC Warm Cure Mortar Epoxy as the binder resin, graded silica or "monterey" sand as the aggregate, BDC 3300 Clear for fill coat(s), and BDC 9700 Polyurea as the final sealing topcoat.

#### *Installation*

The following information is to be used as a guideline for the installation of the Troweled Mortar System. Contact the Technical Service Department for assistance prior to application.

#### *Surface Preparation - Concrete*

##### *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 28 days cured is required on all

concrete. Relative humidity in the concrete floor slab should be below 80% (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 have a tendency 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. A rate of 4.5lbs/1000 ft<sup>2</sup>/24hr period or less is an acceptable amount of vapor pressure to skip the optional Vapor Seal Primer Coat. If the reading ranges from 4.5lbs to 12lbs, a moisture barrier system such as our BDC Vapor Seal can be installed to reduce the emissions. (See Primer)

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. B.D. Classic bears no responsibility for failures due to any of the above conditions.

Concrete surfaces shall be bead blasted or diamond grinded to remove all surface contaminants and laitance. After initial preparation has occurred, inspect the concrete for imperfections and treat as necessary. Any voids need to be filled using BDC 7200G Crack Patch Gel. Any high spots need to be ground smooth. For surface preparation



recommendations, consult the Technical Service Department.

#### **Temperature**

Do not apply at temperatures below 50°F or above 95°F. Substrate temperature must be at least 5°F above the dew point. Applications on concrete substrates should occur during the cooler season to decrease the chances of outgassing. The material should not be applied in direct sunlight, if possible.

#### **Primer (Optional – See Inspection)**

**Use:** BDC Vapor Seal Primer

#### **Mixing and Application**

Premix each component separately. Mix 2 parts A Resin with 1 part B Hardener, by volume, into a clean container. Mix thoroughly with a low speed (400-600 rpm) drill motor/jiffy mixer for 3-4 minutes. Make sure to scrape the sides and bottom of the container during mixing.

BDC Vapor Seal should be applied using a 3/8" non-shedding nap roller, brush, or squeegee. Apply at approximately 200 sq. ft. per gallon (8) mils, evenly, with no puddles. Coverage will vary depending upon porosity of the substrate and surface texture. Let BDC Vapor Seal dry to touch before applying next step of system.

#### **Tack Coat**

**Use:** 3300 Clear

#### **Mixing and Application**

Premix each component separately. Mix 2 parts A Resin with 1 part B Hardener, by volume, into a clean container. Mix thoroughly with a low speed (400-600 rpm) drill motor/jiffy mixer for 3-4 minutes. Make sure to scrape the sides and bottom of the container during mixing.

BDC 3300 Clear should be applied using a 1/4"-3/8" non-shedding nap roller, brush, or squeegee. Apply at approximately 250 sq. ft. per gallon (6-7 mils), evenly, with no puddles. Wait until primer is tacky (minimum 3 hours), before applying the Troweled Mortar. If Troweled Mortar is not going to be applied while 3300 Clear is tacky, broadcast silica sand into coating lightly but uniformly and allow curing overnight.

#### **Troweled Mortar**

**Use:** Warm Cure Mortar Epoxy w/ Graded Silica or "Monterey Sand"

#### **Mixing and Application**

Premix each component separately. Mix 2 parts A Resin (1 gallon) with 1 part B Hardener (1/2 gallon), by volume, into a clean container. Mix thoroughly with a low speed (400-600 rpm) drill motor/jiffy mixer for 3-4 minutes. Make sure to scrape the sides and bottom of the container during mixing.

Place mixed Warm Cure Mortar Epoxy into a KOL Mixal or Kenrich EAM4-60T5 bucket mixer. Slowly add 72 lbs of Graded Silica or "Monterey" Sand. Mix until aggregate is uniformly wet. Immediately dump mortar onto substrate and squeegee or skreet at 3/16". Coverage should be approximately 50sq ft per kit at

3/16". Coverage will vary depending on depth of system.

Compact and smooth the mixed material using a hand or power trowel. When power troweling, take precaution not to burnish the color. Allow to cure overnight.

#### **Fill Coat**

**Use:** 3300 Clear or Pigmented

#### **Mixing and Application**

Premix each component separately. Mix 2 parts A Resin with 1 part B Hardener, by volume, into a clean container. Mix thoroughly with a low speed (400-600 rpm) drill motor/jiffy mixer for 3-4 minutes. Make sure to scrape the sides and bottom of the container during mixing.

Apply 3300 using a steel trowel or red rubber squeegee and back roll using a 1/4" nap roller at a spread rate of 100 sq. ft. per gallon (16 mils).

Allow to cure overnight.

Apply additional fill coats if needed at a rate of 200-250 sq. ft. per gallon (6-8 mils).

#### **Sealing TopCoat**

**Use:** 9700 Polyurea Clear or Pigmented

#### **Mixing and Application**

Premix each component separately. Add 1/2 gallon part 9700 A (isocyanate) to 1/2 gallon part B (resin) by volume. Mix with low speed drill and Jiffy mixer for three minutes and until uniform. Make sure to scrape the sides and bottom of the container during mixing.

Apply 9700 using a solvent proof 3/8" non-shedding nap roller at 200-250 square foot per gallon evenly with no puddles making sure of uniform coverage. Take care not to puddle materials and ensure even coverage. An even application is essential for gloss consistency. Use wet mil gauge to insure application is 6-8 mils WFT. Excess millage can result in product whitening and/or bubbling. (see individual product information sheet for more details on how to apply BDC 9700 Polyurea). Allow to cure 48 hours minimum before opening to traffic.

#### **Application Equipment**

##### **Brush / Roller**

Use 3/8" phenolic core rollers and professional quality, medium stiff natural bristle brushes.

##### **Trowel**

Use steel finishing trowel or epoxy mortar power trowel.

#### **Limitations**

- Do not apply at temperatures below 50°F or above 95°F.
- Do not let mixed product sit in bucket for prolonged period of time or it will become very hot and unusable.
- Do not apply over concrete with Moisture Vapor Emissions above 4.5lbs/1000 ft<sup>2</sup>/24hr.
- For interior use only unless protected by a pigmented UV resistant coating.
- Concrete must be cured for a minimum of 28 days.



- Shelf Life of this material is 1 year from the date of manufacture. (See batch number for manufactured date)
- B.D. Classic 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.

**Safety**

MSDS (Material Safety Data Sheets) must be read and understood by personnel responsible for supervision and installation of the B.D. Classic Materials. All applicable federal, state, local, and particular plant safety guidelines must be followed during the handling and installation and cure of these materials. Safe and proper disposal of excess materials shall be done in accordance with applicable federal, state, and local codes.

**Material Storage**

Store materials in a temperature controlled environment (50°F to 90°F) and out of direct sunlight. Keep resins, hardeners, and solvents separated from

each other and away from sources of ignition. One year shelf life is expected for products stored between 50°F to 90°F.

**Maintenance**

Troweled Mortar System should be inspected every 2-3 years and resealed as necessary. Reseal system by lightly sanding surface and giving it a solvent bath of acetone or xylene. Reseal with BDC 9700 Polyurea thinned with 15% acetone.

**Warranty**

B.D. Classic Enterprises 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. B.D. Classic 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 B.D. Classic.

**TYPICAL PHYSICAL PROPERTIES:**

**3300 w/out aggregate**

Color	Standard Colors off B.D.C. Color Chart
Hardness (Shore D) ASTM D 2240	81
Compressive Strength, psi	11,550
Compressive Modulus, thousand psi	370
Tensile Strength, psi ASTM D 638	7,250
Tensile Modulus, thousand psi	385
% Elongation	5.5
Flexural Strength, psi ASTM D 790	12,185
Flexural Modulus, thousand psi	445

**WITH AGGREGATE**

Compressive Strength, psi after 24 hrs	11,300
% of 7 Day Compressive Strength @ 24 hr	89
Compressive Strength, psi @ 7 days ASTM C 579	12,800
Tensile Strength psi @ 7 days ASTM C 307	2,100
Tensile Modulus, thousand psi @ 7 days	122
Flexural Strength, psi @ 7 days	4,300
Flexural Modulus, thousand psi @ 7 days	2,300

