Product Information

BDC 9520 ***Chemical Resistant Urethane (CRU)***

Description

BDC 9520 CRU is a two component, solvent-based, aliphatic polyester polyurethane topcoat and sealer. It offers low odor, excellent UV, mar, abrasion, and chemical resistance, and long-term color and gloss retention. Formulated with VOC-exempt solvents (VOC < 50 g/l), it can be used as a floor coating in any region of the United States. Three versions are available:

- **BDC 9520 – Clear, gloss finish**
- **BDC 9520S – Clear, satin finish**
- **BDC 9520P – Pigmented, gloss finish**

Uses

- **Finish coat over BDC 100% solids epoxies in moderate to strong chemical environments and heavy traffic areas**
- **Sealer over concrete and masonry, decorative concrete and overlays, and faux finish systems (9520 and 9520P only; see Surface Preparation)**
- **Industrial floors, commercial and residential garages, restaurants, food processing facilities, automotive service areas, and industrial maintenance applications**

Advantages

- **SCAQMD VOC Compliant (VOC < 50 g/l)**
- **Low odor formulation**
- **UV resistant with excellent color and gloss retention**
- **Excellent chemical and abrasion resistance**
- **Convenient 1:2 mix ratio (A:B by volume)**
- **Walk on in 24 hours; drive on in 72 hours**

Coverage

300-400 ft² per gallon over smooth surfaces
250-350 ft² per gallon over rough or textured surfaces
350-400 ft² per gallon as a sealer
Coverage rates yield approximately 3-5 mils dry film thickness per coat.

Colors

9520: Clear, gloss
9520S: Clear, satin
9520P: Pigmented, gloss. Available in all standard BDC colors, white, and black (see color card).

Packaging

1½-gallon kits (½ gallon part A to 1 gallon part B)
15-gallon kits (5 gallons part A to 10 gallons part B)

Inspection

Concrete must be clean, dry, sound, 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, porous, and able to absorb water. A minimum of 28 days cured is required on all concrete. Relative humidity in the concrete slab should be below 80% (per ASTM F2170).

Keep the surface free of all moisture (sprinklers, rain, fog, dew, etc.) for a minimum of 72 hours before and 72 hours after application.

Before starting flooring work, test the 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 floor's 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 run, and cannot be used to predict long-term conditions.

Moisture testing must be conducted before installation. Calcium chloride tests should be conducted in accordance with the latest edition of ASTM F1869, Standard Test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride. When running a calcium chloride test, remove any grease, oil, curing agents, etc. so accurate readings can be obtained. The moisture vapor emission rate must not exceed 3 lbs/1000 ft²/24 hr. For higher readings, consult BDC Technical Service.

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

Surface Preparation

Over Concrete: Mechanically profile the concrete by shotblasting or diamond grinding to achieve a clean, porous surface with a texture similar to 30-grit sandpaper so the product can penetrate and properly bond.

Primer Recommendation: For interior applications, BDC recommends priming with a 100% solids epoxy primer, such as BDC Vapor Seal or BDC 1704. For exterior applications, first apply a thin sealer coat of BDC 9520 thinned with up to 25% acetone.

9520S Satin: Do not apply directly over bare concrete or overlays. Seal the surface first with one coat of a gloss sealer such as BDC 9520, or for interior use, a 100% solids epoxy primer such as BDC Vapor Seal or BDC 1704. The flattening agent in 9520S is a powder and can penetrate a porous substrate and leave a hard white residue.

Over Epoxy or CRU: Apply directly over new epoxy or CRU within 24 hours of its application. If the existing coating has cured longer than 24 hours, sand with 100-grit sandpaper, remove all dust, and wipe with acetone just before

application.

Mixing

Premix part A and part B separately in their own containers. Part B of 9520S and 9520P must be thoroughly mixed to disperse any settled flattening agent or pigment.

Mix ratio by volume: 1 part A to 2 parts B. Add part A to part B while mixing with a slow speed drill and mixing paddle at low to medium speed. Mix for approximately 3-4 minutes until uniform and streak free, scraping the sides and bottom of the container. For the best build, use full strength; if needed, thin with up to 10% acetone by volume. Mix only as much material as can be applied within the working time.

As a Sealer: When using 9520 or 9520P as a sealer, it may be thinned with up to 25% acetone by volume. Apply in a thin coat and do not allow it to puddle.

Working Time

Pot life is approximately 60 minutes at 77°F. Higher temperatures and humidity will shorten pot life and working time.

Application

Cut in all edges with a brush or trowel. Spread the material thin and evenly with a squeegee, then back roll with a solvent-resistant, non-shedding roller: ¼" nap for smooth surfaces or ⅜" nap for rough surfaces. Use light pressure and roll evenly in a "V" pattern in both directions, as thin as possible.

Avoid overrolling, which can cause bubbles or roller marks. Do not allow the material to puddle or build too thick; puddles will turn white and bubble. Brush out any puddles and material in expansion joints.

Drying Time

Dry to touch in 6-7 hours. Recoat once the surface is tack free and within 24 hours. If 24 hours has been exceeded, sand with 100-grit sandpaper and wipe clean with acetone before recoating.

Light foot traffic may be permitted after 24 hours. Vehicular traffic and heavy objects may be permitted after 72 hours.

All times are based on 77°F and 50% humidity. Cooler temperatures will increase drying time. Warmer temperatures will decrease drying time.

Maintenance

Clean with a mop and mild soap or detergent and water. For best appearance, BDC recommends recoating every 3-5 years depending on wear and exposure. Sand the existing coating to completely degloss it, clean with acetone, and apply following this data sheet.

Limitations

- **For professional use only.**
- **Do not apply at temperatures below 50°F or above 90°F.**
- **Substrate temperature must be at least 5°F above the dew point during application and cure. Moisture reacts with the urethane and can cause bubbling and whitening.**
- **Do not apply over damp or moist surfaces. Moisture will cause bubbling, foaming, or whitening and may cause delamination.**
- **Do not apply thicker than 300 ft² per gallon on smooth surfaces or 250 ft² per gallon on rough surfaces.**
- **Do not apply 9520S directly over bare or porous concrete (see Surface Preparation).**
- **Do not use on wood or painted surfaces.**
- **Do not allow material to freeze.**
- **Always apply a test area before starting the job, including over previously sealed surfaces, to confirm adhesion and appearance.**
- **Shelf Life of this material is 12 months 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.**
- **OK for use in residential garages in all districts of the United States, including the SCAQMD (VOC < 50 g/l).**

Clean Up

Uncured material can be removed with acetone or a suitable solvent. Cured material can only be removed mechanically. All empty containers must be disposed of according to local, state, and federal regulations. Read the Safety Data Sheets (SDS) for part A and part B before use.

Warranty

LIMITED MATERIAL WARRANTY. BDC Epoxy Systems, Inc. ("BDC") warrants only that this product, when shipped, is free from manufacturing defects and conforms to BDC's published specifications. This warranty is valid for one (1) year from the date of manufacture, matching the product's shelf life. BDC does not warrant any installation or the performance of the installed system, because BDC has no control over substrate quality, concrete strength, moisture conditions, surface preparation, or application. Substrate testing and determining the suitability of the product for the intended use are the sole responsibility of the buyer and applicator. If the buyer proves a manufacturing defect, BDC's sole liability and the buyer's exclusive remedy is, at BDC's option, replacement of the defective material or refund of its purchase price. BDC is not liable for labor, removal, reinstallation, lost profits, or any incidental or consequential damages. Claims must be made in writing and include the product batch number. Material used past its shelf life is not covered. For product dating, refer to the batch number on the product or contact BDC.

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Technical Data for BDC 9520

Mix Ratio by Volume	**1:2, 1 part A to 2 parts B**
Volume Solids (ASTM D2697)	**56% (clear) / 62% (pigmented)**
VOC (ASTM D2369)	**< 50 g/l**
Dry Film Thickness per Coat	**3-5 mils**
Gloss, 60° (ASTM D523)	**90**
Pot Life (77°F)	**60 minutes**
Dry to Touch (77°F)	**6-7 hrs**
Recoat Window (77°F)	**7 hrs (min) / 24 hrs (max)**
Tensile Strength (ASTM D412)	**3,980 psi**
Elongation (ASTM D412)	**6%**
Tear Resistance, Die C (ASTM D1004)	**270 pli**
Taber Abrasion (ASTM D4060, CS-17 wheel, 1000 g, 1000 cycles)	**42.7 mg loss**
Impact Resistance, inch-lbs Direct/Reverse (ASTM D2794)	**160 / 160**
Pencil Hardness (ASTM D3363)	**3H**
MEK Resistance	**No effect after 100 double rubs**
Viscosity, part A (77°F)	**1,100 cps**
Viscosity, part B (77°F)	**1,150 cps**
Weight per Gallon, part A	**9.55 lbs**
Weight per Gallon, part B	**10.1 lbs (clear) / 10.8 lbs (pigmented)**
Flash Point, part A / part B (closed cup)	**115°F / < 70°F**
Shelf Life	**12 months**
Chemical Resistance (4 hr spot test, covered)	
Skydrol B-4	**No Effect**
Hydraulic Fluid #83282	**No Effect**
25% Nitric Acid	**Blistered**
37% Hydrochloric Acid	**Lifted Film**
50% Sulfuric Acid	**Stain**
10% Acetic Acid	**No Effect**
50% Caustic	**No Effect**
50% Sodium Hydroxide	**No Effect**
Methyl Ethyl Ketone (MEK)	**Slight Swelling**
Xylene	**No Effect**
PCBTF	**No Effect**
Chemical Resistance (40 day test, covered)	
Skydrol B-4	**No Effect**
Hydraulic Fluid #83282	**No Effect**