



Diamond-Cap and the **3-D Polishing System**
Incorporating Stains, Pigments & Aggregates, expands your design possibilities to *LIMITLESS*

DESCRIPTION:

Diamond-Cap can be ground and polished for exposed aggregate applications. Its naturally smooth, hard surface also allows for polish-only treatments that skip the normal grinding phase. Due to its rapid strength gain, these applications can be completed in less than one day. The 3-D Polishing System will produce a brilliant, low maintenance, durable surface, suitable for heavy foot and moderate rubber wheel traffic.

03 53 00
Cementitious Topping

3

09 80 00
Floor Finishes

9

PRODUCT FEATURES

- ▶ **3-D Polishing System** = CMP *Diamond-Cap, Diamond-Densifier & Diamond-Shield*
- ▶ "Pour to Floor" in as little as 12 hours
- ▶ Does not require grinding, can be densified and polished
- ▶ Maintains healing and pour merging properties for up to 20 minutes
- ▶ Ideal for Pumping and Barrel mixing applications
- ▶ Addition of aggregates and pigments for limitless design possibilities
- ▶ High light reflectivity, ideal for merchandising
- ▶ Low maintenance
- ▶ Will not contribute to the growth of mold or mildew
- ▶ Available in Grey and White
- ▶ Environmentally friendly - Contributes points to LEED® Certified Projects

SUBSTRATE PREPARATION:

NOTE: Diamond-Cap is not a Vapor Barrier. Test per ASTM F-1869 for (MVER) and ASTM F-2170 for (RH). If the substrate exceeds 5 lbs. (MVER) or 85% (RH) or the readings exceed those of a Coatings, Adhesive or Flooring Manufacturer's product that will be applied, (Whichever is Stricter) use CMP V-20 Plus or V-25.

ALL: Surface must be clean, sound, dry, 50° F and free of oil, gypsum compounds, wax, grease, sealers, curing compounds, urethane, paint, asphalt, loose surface material or any contaminate that will act as a bond breaker. Never use Acid or Mastic Removers on any surface to which a CMP product will be applied.

CONCRETE: Must be fully cured structural minimum 3000 psi. Weak surfaces, must be cleaned down to solid sound concrete by mechanical means such as chipping, shot-blasting, grinding or scarifying.

NON-POROUS: Substrate must be sound and fully bonded. Shot-blast ceramic and Quarry tile substrates. Grind or shot-blast Terrazzo and epoxy coatings; remove all dust prior to priming.

PRIMING:

CONCRETE: Dilute AS-100 Primer 1:1 with clean water and apply evenly using a nylon push broom with exploded tips. Do a thin coat and work into surface; leave no bare spots or puddles. Broom out puddles that may form while primer is drying (min. 2 hrs, max. 24 hrs). On very porous concrete do an initial primer application diluted 3:1 Water to AS-100 in the same manner. Allow to dry (min. 1hr) before applying 1:1.

NON-POROUS: Apply 1 thin coat of AS-100 primer undiluted (Neat) using a 3/8" nap roller. Leave no bare spots or puddles and allow the primer to dry (2 hrs. min. - 24 hrs. max.)

NOTE: When minimization of pinholes and cracking in the applied topping is essential, use the EP-100 epoxy broadcast primer system (See EP-100 Technical Data Sheet).

Packaging:

50 lb. bag : 48 per pallet
2500 lb. "Super Sack" : 1 per pallet

Colors:

Grey & White

Shelf Life: Store in cool, dry area 70° F
6 Months

Water Requirements:

5 quarts per 50 lb. bag

Aprx. Coverage (Yield): Per 50 lb. bag

25 sq. ft. @ 1/4" — 16 sq. ft. @ 3/8"

Installation Thickness:

1/4" - 2" Neat, 5" Properly Extended

Installed Weight (per Sq. Ft.)

2.20 lbs. @ 1/4"

Application Temperature Range:

50° F - 90° F Note: Above 85° F use ACI
Hot-Weather Application Guidelines

Set: ASTM C-191 (70° F - 50% RH)

Flow Time: 20 - minutes
Final Set: 60 - minutes

Ready Time: (70° F, 50% RH)

Polish and Stain, 4 hrs.
Grinding and Polishing 16 hrs.
Moisture Sensitive Adhesive 16 hrs.
Epoxy Coatings up to 20 mils 24 hrs.
Epoxy Coatings over 20 mils 3-5 days

Note: Cooler temps, inadequate ventilation, higher humidity and use of pigments can extend Ready Time.

MIXING:

Mix 2 bag batches of Diamond-Cap. For each bag first place a maximum 5 quarts of clean, cold water into a CMP mixing drum. Add the bags of Diamond-Cap while mixing at full speed with a CMP mixing wand and a heavy duty 1/2" drill (minimum 850 rpm). Mix for aprx. 2 minutes or until lump free, adding NO additional water. Keep the mixing wand immersed in the material to avoid air entrainment which can shorten working time and cause pinholes. In warm conditions always chill water for best performance.

INSTALLATION:

BARRELING: Immediately pour the blended Diamond-Cap on the floor and disperse with a CMP gauge rake followed by finishing with a CMP smoother. Plastic athletic type cleats should be worn when using the smoother to avoid leaving marks. Diamond-Cap will maintain its workability for up to 20 minutes.

PUMPING: Please contact CMP Specialty Products for instructions, recommended pumping procedures and approved equipment.

EXTENSION:

Diamond-Cap can be installed from 1/4" - 2" neat and up to 5" with the addition of proper aggregate. Aggregates should be hard, high density and non-absorbent. Decorative options include, crushed stone (Not Limestone), glass, metal etc. Before attempting to use any aggregate do test to determine suitability. All aggregate should be clean and dry; do not use sand or exceed 1 part by volume. If adding aggregate, combine once material is lump free and mix until aggregate is completely coated. Contact CMP for job specific extension procedures.

3-D POLISHING SYSTEM:

Refer to the CMP Polishing Guide for application information of the *Diamond-Densifier & Diamond-Shield products*. The guide also provides recommendations on grinding, polishing, use of aggregates, pigments and other related topics. These are recommendations only, variations in substrate, jobsite conditions, pigments, equipment, abrasives etc. will create variables. Always do adequate mockups that include all materials, machinery, treatments and techniques that will be incorporated into the project.

CRACKS:

Non-moving cracks, and saw cuts can filled with EP-100. Thoroughly clean and chase cracks to help facilitate gravity filling; always top filled cracks immediately with EB-Sand. For larger cracks, (1/8"-1/4") mix 1 Part EP-100 with up to 1 1/2 parts EB-Sand by volume. Fill crack, top with (Neat) EP-100 and cover immediately with EB-Sand. For applications needing a quick turn around, use CMP CM-10.

Never fill Working cracks, expansion or isolation joints with EP-100 or CM-10. Working cracks require structural repair and expansion / isolation joints must be honored through all applied systems. Only fill these joints with a urethane or similar type product, specifically designed for that purpose.

PRODUCT NOTES:

During application and for first 24 hrs after, prevent excessive air movement and drafts but maintain adequate ventilation. Also paper windows and protect material from direct sunlight. These variables can cause a false set, uneven curing patterns and cracking. Diamond-Cap is self-curing no wet curing methods or cure and seals should be used.

Thin applications can telegraph subfloor variations; bad subfloors may require pre-leveling with CMP 210 or grinding to remove high spots. Pre-patching out larger substrate variations with CMP SR-P can also minimize telegraphing. When topping will be ground, always place sufficient material (3/8 min.) to help prevent "grind-through".

Diamond-Cap is a durable low maintenance wear surface designed for heavy foot and moderate wheeled traffic. All forklift tires, pallet jacks and dolly wheels or castors should be non-marring rubber type. Wheels with rocks or nails, protruding from the wheels; metal or hard plastic wheels or dragging heavy objects will cause gouging and indentations. Always use adequate protection during construction, fixturing or moving.

Clean with water immediately after use or by mechanical means once dry.

Compressive Strength: (ASTM C-109)

4 Hours	3000 psi	20 .7 MPa
1 Day	5000 psi	34.5 MPa
28 Days	6100 psi	42.0 MPa

Flexural Strength: (ASTM C348)

28 Days	>1150 psi	7.9 MPa
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Tensile Strength: (ASTM C 190)

28 days	>570 psi	4.0 MPa
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Flammability: (ASTM E84)

Flame Spread: -0-

Fuel Contribution: -0-

Smoke Development: -0-

Eligible LEED® credits : 5

Recycled Content (MR 4.1 & 4.2)
2 Points

Regional Materials (MR 5.1 & 5.2)
2 Points

Low Emitting Materials (EQ 4.1)
1 Point

Warranties:

Standard - 1 Year Product

Qualifying - CMP Extended & Gold Seal

Health & Safety:

Always refer to the Material Safety Data Sheet (MSDS) prior to using this product for full Health, Safety and Handling guidelines. MSDS sheets are available by calling 215.672.6364 or you can visit www.cmpsp.com

For Professional Use Only

KEEP OUT OF REACH OF CHILDREN

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INSTALL

Member

