

## SYSTEM DESCRIPTION

CastorCrete Bio Floor HDF/HDQ has been engineered as a hybrid flooring system consisting of CastorCrete SL cementitious polyurethane slurry mortar, and epoxy pigmented receiving coat, broadcast vinyl flakes or colored quartz aggregate, grout coat and top coated. Typical installation thicknesses between 1/4 inch (6.35 mm) and 5/16 inch (9.5 mm).

## USES

- Biotech
- Pharmaceutical
- Animal and research facilities
- Wet and dry processing areas
- Clean rooms
- Food and beverage processing and manufacturing

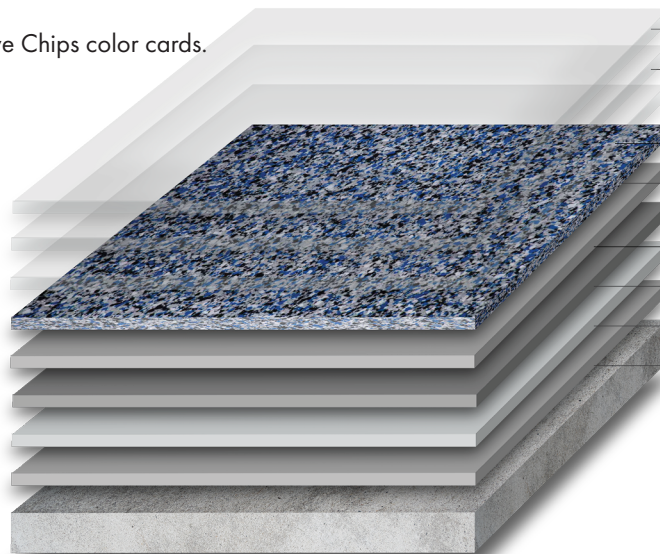
## ADVANTAGES

- Aesthetically Pleasing
- Polyurethane
- Fast Installation
- Moisture Tolerant
- Thermal Shock Resistant
- Impact and Abrasion Resistant
- Chemical Resistant to Organic and Inorganic Acids, Salts, Alkalies and Amines
- UV Resistant Top Coats
- Excellent Light Reflectivity
- Superior Life Cycle Advantages

## COLORS

Refer to Color Quartz or Decorative Chips color cards.

## TYPICAL SYSTEM BUILD



- TopCoat: Polyurethane 100/100 VOC
- Optional 2<sup>nd</sup> Grout Coat: Epoxy 400/400 UV
- Grout Coat: Epoxy 400/400 UVR
- Broadcast: Color Quartz or Decorative Chips
- Broadcast Coat: Epoxy 400/400 UVR
- Mortar Coat: CastorCrete SL
- Primer: Epoxy 100
- Patching & Filling: Epoxy 300 Flex Paste or APF VaporSolve® Joint Filler

**Note:** Diagram not to scale

## TECHNICAL DATA

Compressive Strength (ASTM C-579)	8,500 psi
Tensile Strength (ASTM C-307)	1,400 psi
Flexural Strength (ASTM C-580)	2,700 psi
Hardness, Shore D (ASTM D-2240)	85-90
Impact Resistance (ASTM D-2794)	160
Concrete Thermal Compatibility (ASTM C-884)	Passes
Coefficient of Thermal Expansion (ASTM C-531)	1.1X10 <sup>-5</sup>
Flammability (ASTM D-635)	Self Extinguishing
Abrasion Resistance (ASTM C-501) (CS-17, 1,000 gr., 1,000 cycles)	0.32gm loss
Coefficient of Friction Wet Surface (ANSI/NFSI B101.1 Static & B101.3 Dynamic)	Incline >0.45 Level >0.42
Water Absorption (ASTM C-413)	<0.10
Bond Strength (ASTM D-7234) (concrete failure)	400 psi
Relative Humidity Test (ASTM F-2170)	85%

Refer to product data sheet of individual system component for more information.

## TYPICAL SYSTEM BUILD

COAT	PRODUCT	THICKNESS/COVERAGE
<b>Patching &amp; Filling</b>	APF Epoxy 300 Flex Paste or APF VaporSolve Joint Filler	As required
<b>Primer</b>	APF Epoxy 100	200 sq. ft./gallon (8 mils WFT)
<b>Mortar Coat</b>	APF CastorCrete SL	1/4" (6.3mm), 16 sq. ft. (1.5 sq. m.)
<b>Broadcast Coat</b>	APF Epoxy 400/400 UVR	80-200 sq. ft./gallon (8-20 mils WFT)
<b>Broadcast</b>	APF Color Quartz or Decorative Chips	~ 0.12 - 0.15 lbs/sq.ft. (Decorative Chips) ~ 0.5-0.75 lbs/sq. ft. (Color Quartz)
<b>Grout Coat</b>	APF Epoxy 400/400 UVR	80-200 sq. ft./gallon (8-20 mils WFT)
<b>2nd Grout Coat (optional)</b>	APF Epoxy 400/400 UVR	80-200 sq. ft./gallon (8-20 mils WFT))
<b>Topcoat</b>	APF Polyurethane 100/100 VOC	250-300 sq. ft./gallon (5-6 mils WFT)*

\*Topcoat coverage determines final texture.

## APPLICATION INSTRUCTIONS

### 1.0 Concrete Moisture

It is the applicator's responsibility to test and record concrete moisture levels according to ASTM F2170-19. Contact APF Technical Service if the relative humidity exceeds 99%.

### 2.0 Surface Preparation

Concrete must be cured for at least 7-10 days be clean, structurally sound, and free of wax, loose coatings or curing compounds. Concrete should be properly prepared to achieve a surface Minimum Texture of ICRI/CSP 3. Refer to ICRI technical guidelines 310-330 Selecting and specifying concrete surface preparation for sealer, coatings, polymer overlays, and concrete repair. Vacuum the prepared concrete surface to remove all dust. Acid etching is not recommended and will void manufacturers' warranty.

### 3.0 Crack Repair

Use Epoxy 300 Flex Paste immediately after mixing. Spread the product with a flat trowel, margin tool, or broad putty/plaster knife. Gunning is not recommended for this material.

Apply to fill the joint completely. Add additional material if the product settles into the joint below the concrete surface. The cured product must be level with the concrete surface. Allow to cure before the final coat.

### 4.0 Application of Primer Coat

Under normal circumstances, CastorCrete SL is applied directly to the concrete without a primer. However, if the concrete is badly damaged or excessively porous, the use of APF Epoxy 100 as a primer can reduce outgassing, pinholes or blisters. A test area is recommended to determine if a primer should be used. After any patchwork/crack

repair has cured, if primer is required, apply one coat of Epoxy 100 after mixing according to the product data sheet. Apply material onto surface immediately after mixing with a squeegee, back roll using a quality solvent resistant 3/8-inch nap roller cover. Apply at a rate of 200 sqft/gallon at 8 mils WFT. A "wet edge" is recommended when applying product, do not attempt to roll over material that has begun to set. An applicator wearing spiked shoes will back roll the wet material using a quality solvent resistant 3/8-inch nap roller cover to distribute the material uniformly. **The material must be thoroughly rolled twice to achieve optimal substrate wetting (using North-South, East-West Method.)**

### 5.0 Application of Mortar Coat

Do not apply to previously coated surfaces; apply directly to concrete except for when priming is necessary. Cut Key-ways according to product data sheet. Reference CastorCrete SL data sheet for proper mixing instructions. For small areas, CastorCrete SL can be metered out and finished with a steel trowel.

Once the mortar is raked with a cam-gauge rake to the desired thickness, use a finishing trowel to compact and smooth out the rake marks. As soon as the mortar is relatively closed, immediately roll the surface with a looped roller or spike roller to remove trowel marks and bring the resin to the top. When placing the cementitious polyurethane mortar it is very important to keep a wet edge between mixes, therefore each batch must be placed within working time of the prior one. Failure to due this could result in a visible tie-in line. Excessive toweling or rolling can bring more resin to the top and reduce slip resistance.

### 6.0 Application of Basecoat and Color Quartz or

## APPLICATION INSTRUCTIONS

### Decorative Chip Broadcast

After mixing the Epoxy 400 or Epoxy 400 UVR according to the product data sheet, apply Epoxy 400 or Epoxy 400 UVR onto surface immediately after mixing with a squeegee, back roll with using a quality solvent resistant 3/8-inch nap roller cover. Apply at a rate of 80-200 sqft/gallon (8-20 mils WFT). A "wet edge" is recommended when applying product, do not attempt to roll over material that has begun to set. An applicator wearing spiked shoes will back roll the wet material using a quality solvent resistant 3/8-inch nap roller cover to distribute the material uniformly. **The material must be thoroughly rolled twice to achieve optimal substrate wetting {using North-South, East-West Method.}**

Allow the Basecoat to level for 10-15 minutes, then broadcast color quartz (0.5-0.75 lbs/ sqft) or decorative chips (0.12-0.15 lbs/ sqft) until refusal.

### 7.0 Application of Grout Coat

Once all the loose quartz has been removed and the floor is vacuumed, mix the Epoxy 400/400 UVR according to the product data sheet. Apply Epoxy 400/400 UVR onto surface immediately after mixing with a squeegee, back roll with using a quality solvent resistant 3/8-inch nap roller cover. Apply at a rate of 80-200 sqft/gallon (8-20 mils WFT). A "wet edge" is recommended when applying product, do not attempt to roll over material that has begun to set. An applicator wearing spiked shoes will back roll the wet material using a quality solvent resistant 3/8-inch nap roller cover to distribute the material uniformly. **The material must be thoroughly rolled twice to achieve optimal substrate wetting {using North-South, East-West Method.}**

Epoxy /400 UVR must be recoated within the 24-hour recoat window.

If the recoat window is exceeded, the surface must be abraded with 80-100 grit to a uniform gloss-free and dust-free texture before recoat.

### 8.0 Application of Topcoat

After an overnight cure, mix the Polyurethane 100 or 100 VOC according to the product data sheet.. Apply material onto surface immediately after mixing with a brush or roller, back roll with using a quality solvent resistant 3/8-inch nap roller cover, at a rate of 250-300 sq. ft./ gallon (5-6 mils WFT). DO NOT allow puddling or accumulation in joint areas. A "wet edge" is recommended when applying product, do not attempt to roll over material that has begun to set. An applicator wearing spiked shoes will back roll the wet material using a quality solvent resistant 3/8-inch nap roller cover to distribute the material uniformly. **The material must be thoroughly rolled twice to achieve optimal substrate wetting {using North-South, East-West Method.}**

### LIMITATIONS

- Prior to application, measure and confirm that ambient temperature and substrate temperature conditions are at least 5°F over dew point.
- High humidity/low temperature will prolong cure time.
- Use of kerosene or propane forced air heating equipment during application may cause discoloration and finish defects.

### HANDLING & SAFETY

Use only with adequate ventilation. Appropriate cartridge-type respirator must be used during application in confined areas. Avoid contact with skin; wear protective gloves. User must read and understand Safety Data Sheet before using. APF Safety Data Sheets are available at [www.apfepoxy.com](http://www.apfepoxy.com).

APF\_CastorCrete\_Bio\_Floor\_System\_Data\_11.10.25

### STANDARD WARRANTY STATEMENT

ICP Construction, Inc. ("we" "us" or "our"), manufacturer of Arizona Polymer Flooring, warrants that the product is produced within specifications and is free from defects in material only. No warranty shall be in effect until our Terms and Conditions of Sales (<https://www.icpgroup.com/wp-content/uploads/ICP-Group-Terms-and-Conditions-of-Sale.pdf>) are met, including payment and cooperative promotional considerations. We warrant that the covered product is free of defects in material only and suitable for the specified purpose for a period of one (1) year from the date of shipment, provided the product is (a) installed within its published shelf life, in strict conformance with specifications, and (b) handled, stored, mixed, and applied in accordance with our written instructions. It is your responsibility to initiate any claim against this warranty within the time frame specified below. If we determine that the product meets the requirements of this warranty, then we will, at our sole discretion, either refund the purchase price of the product or provide replacement product, in each case not to exceed the affected area as determined by our authorized technical representative. To obtain replacement or refund you must (a) provide timely written notice to us specifying in detail the non-conformity suspected (no later than five (5) working days after discovery), and (b) provide proof of purchase. We reserve the right to inspect the product prior to replacement. EXCEPT FOR THE EXPRESS WARRANTY ABOVE, THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE. IN NO EVENT SHALL WE OR OUR AFFILIATES BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES OF ANY NATURE, REGARDLESS OF THE FORM OF ACTION OR THEORY OF LAW, INCLUDING, WITHOUT LIMITATION, BREACH OF ANY OBLIGATION OR WARRANTY IMPOSED ON US HEREUNDER OR IN CONNECTION HERewith, EVEN IF WE HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES IN ADVANCE AND EVEN IF A REMEDY SET FORTH HEREIN IS FOUND TO HAVE FAILED OF ITS ESSENTIAL PURPOSE. "CONSEQUENTIAL DAMAGES" SHALL INCLUDE, WITHOUT LIMITATION, LOSS OF USE, INCOME, OR PROFIT, OR LOSSES SUSTAINED AS THE RESULT OF INJURY TO ANY PERSON, OR LOSS OF OR DAMAGE TO ANY PROPERTY (INCLUDING, WITHOUT LIMITATION, PROPERTY HANDLED OR PROCESSED THROUGH THE USE OF THE PRODUCTS), DAMAGES OR LOSSES RESULTING FROM CLAIMS OF OTHER PERSONS AGAINST YOU, OR DAMAGES OR LOSSES SUSTAINED AS THE RESULT OF WORK STOPPAGE, OR REMOVAL AND REPLACEMENT COSTS AND COSTS OF LABOR. IN NO EVENT SHALL OUR LIABILITY ARISING IN CONNECTION WITH OR UNDER THIS WARRANTY (REGARDLESS OF THE FORM OF ACTION OR THEORY OF LAW) EXCEED THE AMOUNT PAID BY YOU FOR THE DEFECTIVE PRODUCT ONLY. THIS LIMITED WARRANTY PROVIDES YOUR EXCLUSIVE REMEDY FOR ANY DEFECT IN THE PRODUCT. If you do not agree with these terms, you may return the product within thirty (30) days of purchase for a full refund, provided the product is not opened, altered, or adulterated in any manner, less any shipping and handling charges of any sort. Use of the product, or retention of the product beyond thirty (30) days, constitutes your acceptance of this limited and exclusive warranty. No customer, distributor, or representative of ours is authorized to change or modify the published data sheets or this warranty in any way. No one is authorized to make oral warranties on behalf of us.