

BIOCEM MF

HD SEAMLESS URETHANE CEMENT SYSTEM

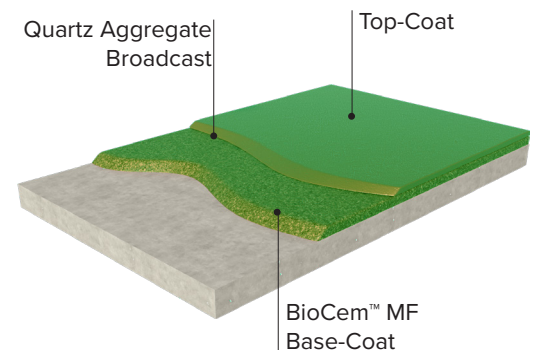
BioCem™ MF is a 1/4" polyurethane concrete application engineered for heavy-duty applications. It consists of a base-coat of BioCem™ Monofloor (MF) slurry that is broadcast to rejection with specialized quartz aggregate. Once cured, the application is top-coated with either a high-performance BioCem™ TC urethane cement topcoat, UV stable Kinetic™ HS polyaspartic or Chemical Resistant Novolac Epoxy to achieve a thickness of 1/4". MF provides a lightly textured surface ideal for heavy duty applications requiring superior resistance to thermal shock, impact and chemical attack. It is commonly used in commercial kitchens, breweries and food manufacturing applications. BioCem™ MF is compliant with the California Department of Public Health standard method V1.2 and is eligible for LEED credits as per USGBC LEED Version 4/4.1.

Applications

- Breweries
- Food Manufacturing
- Kitchens
- Bottling facilities
- Chemical processing

Features:

- Resistant to thermal shock & impact
- Performs well in wet environments
- Low odor & minimal voc
- Superior abrasion resistance & traction
- Seamless with Integrated cove base



Colors & Finishes

Available in standard Resinwerks urethane cement colors with custom colors available upon request. Please contact Resinwerks directly for a color selection chart. UC-130 will leave a matte finish once cured. Please coordinate sample requests with your Resinwerks representative.

System Components

- 1. Base-Coat:** BioCem™ Monofloor Urethane Cement is applied at 3/16". Kit components include 1-gallon of part A, 1-gallon of part B and One 56-lb. filler. Pigment may be added at a rate of 1 pigment pack per kit.
- 2. Broadcast Media:** BioCem™ MF is designed as a textured system for enhanced slip resistance. The system includes a sand/quartz aggregate broadcast into the base-coat to rejection. Resinwerks recommends industrial "F" style aggregate or solid-color 40-S size quartz is adequate depending on the desired finish.
- 3. Top Coat Options:**
 - BioCem™ TC Urethane Cement topcoat is applied at rate of 200 FT² per kit. Kit components include 1-gallon of part A, 1-gallon of part B, two 6.5-lb. bags of TC filler and two 1-lb pigment packs in desired color.
 - Kinetic HS™ Aliphatic Polyaspartic Polyurea is applied at a rate of approximately 120 FT² per gallon. Material may be pre-pigmented or pigmented onsite with Resinwerks Universal Pigments. Kinetic HS may be fortified with Silver-Ion anti-microbial pigments and is completely UV stable.
 - Novolac Epoxy is available in a grey color only and applied at a rate of 100 Sq.Ft per gallon. It is a high-performance, 2-component resinous floor and wall coating that provides superior chemical resistance. Offering excellent protection against a range of acids, solvents and other chemicals, Novolac epoxy is an excellent choice for industrial environments subject to chemical attack.

GENERAL SYSTEM PERFORMANCE - SC-100

TEST TYPE		RESULT
Compressive Strength	ASTMC 695	9,350 PSI
Water Absorption	ASTMD 570	< .1%
Adhesion Pull-Off	ASTMD-4541	+500 PSI concrete fracture
Elongation / Tensile	ASTMD 307	1200 psi
Flexural Strength	ASTMC 580	2500 psi
Flexibility 1/4" cylindrical mandrel	ASTMD 522I	Pass
Static COF	ANSI B101.1	>0.6
Dynamic COF - Wet	ANSI A326.3	>0.42
Impact Resistance	ASTMD 4060	> 160 Inch/Lb

For Professional Use Only

Please reference all product Technical Data and Material Safety Data Sheets prior to use. Mock-ups are strongly recommended to validate appearance and performance prior to use.



SURFACE PREPARATION

Ensure substrate to be coated is clean, dry, and in sound condition. All laitance, curing compounds, concrete hardeners, and other surface contaminants must be removed. Prepare concrete in accordance with ASTM D 4259-83. Mechanical Shot Blasting is recommended to achieve a surface profile of ICRI CSP 3-4. Surface to be coated must be completely porous, thoroughly vacuumed, and free of excessive dust & contaminants.

MOISTURE IN CONCRETE

Concrete slabs should be tested prior to application for elevated moisture vapor emission levels. Resinwerks recommends ASTM F2170-19 standard for determining relative humidity in concrete slabs using RH probes. Consult Resinwerks directly for slabs exhibiting elevated MVER. **DE-GREASING OF CONTAMINATED SUBSTRATES**

For concrete substrates containing oil, animal fats, or other carbon based contaminants, slabs should be de-greased appropriately using an enzymatic based concrete de-greasing agent. Multiple applications may be required depending on the level of contamination.

TREATMENT OF JOINTS & CRACKS

Prior to installation of any Resinwerks primer, all joints, cracks and other substrate irregularities must be addressed. For more information on specific joint treatment procedures, please reference Resinwerks joint-treatment guidelines.

COVE BASE

For projects requiring a perimeter vertical cove base, please reference Resinwerks cove base installation guidelines or contact your local Resinwerks representative for more information.

COATING APPLICATION

1. Base-Coat: BioCem™ MonoFloor

- **Mixing:** Review BioCem™ MF Product Data Sheet Prior to mixing. Prior to mixing, all products should be properly acclimated to the local ambient room temperature of 50°F(4.4°C)-80°F(29.4°C).
- Pour 1-gal A into a large mixing pail (7-gallon minimum) or hippo mixer. Add liquid pigment and mix for 15-seconds with a slow speed mixing drill. Add 1-gallon Part B and mix for an additional 15-seconds. Slowly add entire contents of 56 lb bag of MonoFloor™ bag filler to mix. Take special care not to introduce air or create a vortex. Mix for approximately 45-60 seconds until materials are properly wetted out.
- **Application:** Immediately following mixing, spread material with a gauge rake at 3/16" thickness. Lay abutting edges within a minimum of 10-minutes to ensure a uniform

Important:

Inhalation of vapor or mist can cause headache, nausea irritation of nose, throat, and lungs. Avoid breathing vapors, it is strongly recommended that respirators are worn. Prolonged or repeated skin contact can cause slight skin irritation. All epoxies have the potential of causing skin irritations or allergic reactions. Be careful not to get on skin, clothes or in eyes. Gloves are strongly recommended. If splashed in the eye, flush with warm water and contact a physician if blurring persists.

Solvent based products are extremely flammable, extinguish all pilot lights and sources of ignition such as electrical motors. Be sure to have adequate cross ventilation prior to installing.

Resinwerks recommends the use of slip-resistant additives in all coating systems that are subject to heavy foot traffic and especially those within wet or oily environments It is the end-user's responsibility to provide flooring that meets current safety standards and local coefficient of friction requirements. Resinwerks nor any of its distributors are responsible for injury resulting from any slip and fall incident.

transition.

- Once material has been spread, back-roll immediately with a spiked roller or loop roller over the entire floor to help release surface tension.
- **Broadcast:** Once BioCem MF has been placed, broadcast aggregate to rejection. Pay special attention to the timing of the broadcast so as to ensure a uniform finish.
- Let cure a minimum of 6-8 hours prior to top-coat.

2(a). Top Coat Option 1: BioCem™ TC

- **Mixing:** Prior to mixing, all products should be properly acclimated to the local ambient room temperature of 50°F(4.4°C)-80°F(29.4°C).
- Pour 1 part A into a large mixing pail. Add pigment and mix for 15-seconds with a slow speed mixing drill. Add 1 part B and mix for an additional 15-seconds. Slowly add entire contents of TC fillers to mix. Take special care not to introduce air or create a vortex. Mix for approximately 45-seconds until materials are properly wetted out.
- Immediately following mixing, pour onto substrate in a uniform ribbon and spread evenly with a notched squeegee. Standard recommended coverage is 200 FT² SF per full kit.
- Immediately back-roll with a non-shedding roller. Use a brush or small roller to cut-in along perimeter walls or any other obstructions.
- Application will leave a matte finish and should be allowed to cure for 24-hours prior to returning to service.

2(b). Top Coat Option 2: Kinetic™ HS Polyaspartic

- **Mixing:** Prior to mixing, all products should be properly acclimated to the local ambient room temperature of 40°F(4.4°C) - 85°F (29.4°C).
- Mix 1-part A to 1-Part B by volume for two minutes using a slow speed jiffy mixer.
- If pigmenting with Resinwerks Universal Pigments, add at a rate of 10-12 oz per mixed gallon or 1-quart per 3-gallon mix.
- ***Slow-Set*** part A offers extended working times. Cure schedule is dependent on ambient temperature and humidity.
- **Application:** Immediately following mixing, pour onto substrate in a uniform ribbon and spread evenly with a squeegee or seal-coat broom.
- Immediately back-roll in a direction perpendicular to your initial ribbon with a 3/8" nap roller. Working time and cure schedule will be dependent on ambient temperature and humidity.
- Material will be dry to the touch and ready for subsequent coats within approximately 2-3-hours following application.

2(c). Top Coat Option 3: Novolac Epoxy

- **Mixing:** Prior to mixing, all products should be properly acclimated to the local ambient room temperature of 60°F(15.6°C)-80°F(26.7°C).
- Thoroughly mix both part A and Part B separately prior to mixing. Mix by volume, 2-Parts A to 1-Part B for 2-3 minutes.
- Material will have a thicker viscosity - especially when stored in cold environments. Please take special care to store at recommended minimum 60°F(15.6°C)-80°F(26.7°C).
- APPLICATION INSTRUCTIONS
- Immediately following mixing, pour onto substrate in a uniform ribbon and spread evenly with a notched squeegee depending on desired thickness.
- Immediately back-roll smooth with a 3/8" nap roller.
- Depending on ambient environmental and slab temperatures, material will be dry to the touch and ready for subsequent coats within approximately 6-8 hours following application
- Please reference the Novolac Epoxy Technical Product Data Sheet or contact Resinwerks directly for additional application specifics.

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