

BIO-CEM™ MF

URETHANE CEMENT 1/4" SLURRY

TECHNICAL DATA SHEET



BioCem MF is a flowable polyurethane concrete mortar system engineered for medium to heavy-duty environments. Installed at a nominal thickness of 3/16" and broadcast to a final profile of 1/4", MonoFloor™ delivers robust performance in areas subject to thermal shock, heavy impact, and chemical exposure.

MF is low-odor and features minimal VOCs, making it an environmentally conscious choice. The system provides a lightly textured, antimicrobial-resistant surface, well-suited for demanding industrial and food processing environments.

USES:

- » Commercial kitchens
- » Breweries
- » Industrial manufacturing
- » Pharmaceutical facilities
- » Food/Beverage manufacturing
- » Anti-Slip flooring (meets ADA recommendations)

ADVANTAGES:

- » Thermal shock resistant
- » High impact & abrasion resistance
- » Fast return to service
- » Seamless, hygienic finish
- » MVER resistant
- » Low-VOC, low odor

PACKAGING & SHELF-LIFE

42 sq. ft. kit @ 3/16", broadcast to 1/4"

- » 1-gal part A
- » 1-gal part B
- » 56 lb filler bag
- » pigment (optional)
- » Available in singles, 5-gal pails, 50-gal drums and 250-gal totes

Shelf-Life::

- » 6-months factory sealed and stored at room temperature.

SUGGESTED APPLICATION:

- » Apply at thickness of 3/16" and sand broadcast to 1/4" thickness
- » See page two for detailed application instructions

ANCILLARY PRODUCTS:

- » Bio-Cem™ MonoFloor™ should be top-coated with either Bio-Cem TC or other Resinwerks™ top-coat system.
- » Broadcast sand not included in kit

MATERIAL COVERAGE

WET FILM THICKNESS	DRY FILM THICKNESS	APPROXIMATE COVERAGE
3/16"	3/16" - 1/4" (broadcasted)	42 ft² / Kit

GENERAL PRODUCT INFORMATION

Colors: tan, green, red, grey, dark grey, black

V.O.C.: 5 g/L

Pot-life: 15-20 Minutes @ 72° F

Mix-Ratio: Mix Full Kit

Cure Schedule: 72° F @ 50% R.H.

To re-coat: 4-6 Hours Minimum
24-Hours Maximum

Light Traffic: 6-8-Hours

Heavy Traffic: 24-Hours

Clean-up: Acetone / MEK

Application Temp: 40°F(4.4°C) - 85°F(29.4°C)

Environment: For Interior Use Only

GENERAL PRODUCT PERFORMANCE

TEST TYPE	TEST METHOD	RESULT
Service Temperature		-50°F - 200°F
Tensile Strength	ASTM C-307	1,100 psi
Flammability	ASTM D 635	Self extinguishing
Impact Resistance	ASTM D 4226	> 160 lb
Compressive Strength	ASTMC-579	7,000 PSI
Flexural Strength	ASTM C-580	2700 PSI
Adhesion	ASTMD-4541	500+ PSI concrete fracture
Coefficient of Friction	ASTM-D 2047	>0.6 / pass
Resistance to Fungi Growth	ASTM G-21	1-pass

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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. Concrete must have a minimum surface tensile strength of 300 PSI per ASTM D-4541. Prepare concrete in accordance with ASTM D 4259-83. Mechanical shot blasting or grinding is recommended to achieve a surface profile of ICRI CSP 3-5. Surface to be coated must be completely porous and free of excessive dust & contaminants.

NEW CONCRETE

MonoFloor Slurry can be installed on new concrete greater than 7-days old provided it has reached a minimum of 3,500 PSI to allow for proper surface preparation. Shrinkage or cracking in new slabs may telegraph through final finish.

DE-GREASING OF CONTAMINATED SUBSTRATES

Bio-Cem™ polyurethane concrete should not be applied over contaminated surfaces. All dust and remaining contaminants should be completely removed prior to coating.

TREATMENT OF JOINTS & CRACKS

Prior to installation of Bio-Cem urethane concrete, all joints, cracks and other substrate irregularities must be addressed and prepared prior to application. Key-ways must be cut at all terminations, joints and drains to a minimum width and depth of 5/16". This is critical to prevent future de-laminations. For more information, please consult resinwerks technical construction drawings.

MIXING INSTRUCTIONS: PROFESSIONAL USE ONLY

- » 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)
- » A corded industrial drill with mortar mixing paddle should be used with a large bucket or hippo mixer. (7-gal minimum)
- » Pour 1-gal A into a large heavy-duty mixing bucket
- » Add 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™ filler to mix. Mix for approximately 45-60 seconds until mixture is "clump-free" and materials are properly wetted out.

APPLICATION INSTRUCTIONS

- » 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 transition.
- » Once material has been spread, back-roll immediately with a spiked roller over the entire floor to release surface tension.

- » Broadcast kiln-dried sand to rejection within 5-10 minutes prior to slurry setting up.

LIMITATIONS

- » Do not apply over existing coatings / sealers
- » Do not apply to concrete < 3500 PSI compression strength
- » This product is not recommended for immersion service.
- » Product is not color stable and should be top-coated
- » Do not install on wet concrete
- » Do not apply this product at ambient or floor temperatures below 40°F or over 85°F or if the relative ambient humidity is above 90%.

MAINTENANCE

The long-term performance, appearance, and life expectancy of wear surface products are dependent on an adequate routine maintenance program designed specifically for the installed wear surface. Resinous floor coating systems are nonporous, causing dirt and contaminants to remain on the surface. Recommended maintenance programs consist of frequent and thorough cleaning utilizing a neutral PH cleaner. The frequency of washing will vary depending on floor usage type, traffic and age. Please contact your local Resinwerks technical representative for more information.

NOTES

Thoroughly read all Material Safety Data Sheets prior to use and maintain copies on job-site at all times.

Mock-ups and field test areas are strongly recommended in order to validate performance and appearance related characteristics (including but not limited to color, inherent surface variations, wear, anti dusting, abrasion resistance, chemical resistance, stain resistance, coefficient of friction, etc.) to ensure system performance as specified for the intended use, and to determine approval of the coating system.

Variability in job site conditions (including but not limited to surface preparation, sunlight, humidity, dew point, temperature, etc.) during application of Urethane products may lead to fish-eyes, blistering, pinholes, wrinkling, or out-gassing of air in the concrete and are not product defects.

TECHNICAL ASSISTANCE

PHONE: 720-484-5160

WEB: www.resinwerks.com

RESINWERKS
7205 GILPIN WAY, SUITE 200
DENVER, CO 80229

