

FS-Mortar™ 100

High Performance Epoxy ¼" Flooring System

DESCRIPTION

FS-Mortar™ 100 is a versatile, two-component, 100% solids epoxy primer and trowel-based flooring system when mixed with an appropriate trowel grade base sand.

WHERE TO USE

As a Primer:

FS-Mortar™ 100 is recommended for use as interior concrete primer only under epoxy trowel system where the matrix is trowel while the primer still tacky. It can also be used as one coat epoxy sealer.

As a Mortar:

FS-Mortar™ 100 may be used with an appropriate trowel grade base sand, as a three-component ¼" epoxy floor overlayment designed to provide a tough epoxy floor with excellent abrasion resistance. The floor can be then sealed with FS-Mortar™ 100 primer prior to the application of the appropriate Floorsavers epoxy topcoat.

As an epoxy floor overlayment, it provides an excellent wearing surface to industrial fork lift traffic and general production areas such as food processing plants, automotive plants, pulp and paper mills, steel mills, airplane hangers, chemical and cosmetic manufacturing areas.

BENEFITS

- 100% solids, low odor, zero VOC's
- Good adhesion to substrates
- Superior mechanical strength
- Excellent abrasion and impact resistance
- Easily cleaned and maintained; provides a more sanitary work environment.

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HANDLING PROPERTIES

Resin & Hardener Only @ 23°C (74°F)	
Mix Ratio, by volume 2 parts A: 1 part B

Mixed viscosity	..... 500 cps
Density (mixed)	..... 1.07 kg/litre (8.9 lb./US gal)
Pot Life	..... 20 minutes
Initial Set	..... 6-8 hours
Foot Traffic	..... 12-16 hours
Light Traffic	..... 24 hours
Full Cure and Maximum Resistance	..... 7 days

DATA, CURED SYSTEM 28 DAYS

Compressive Strength	..... 82 MPa (12,000 psi)
ASTM C-579	
Tensile Strength	..... 6 MPa (870 psi)
ASTM C-307	
Abrasion Resistance	..... 0.18 gm loss
(ASTM 4060)	
H22 Wheel, 1000 cycles with grout coat	
Impact Resistance	..... Pass 160 lb./inch
(ASTM D-2794)	No cracks
Water Absorption	..... 0.08%
(ASTM C67-78)	

SURFACE PREPARATION

FS-Mortar™ 100 should be applied over clean, sound, dust free surfaces. For best results, surface should be prepared as follows:

CONCRETE:

Shot blasting or equivalent to remove surface laitance, curing compounds or form oils. Concrete should be minimum 28 days old or have 3% or less moisture content. Moisture content can be determined using test method ASTM D4263.

MIXING (Screed Mortar)

Mix Part A first to eliminate the possibility of settlement. Pour all of the liquid from Part A and Part B into the mixing container and mix for approximately one minute. Transfer the mixed binder (A + B) into a suitable Kol type motor driven mixer. Gradually add the appropriate trowel grade base sand to the mixed binder to avoid excessive air entrapment. Once all of the ingredients are combined, mix continuously and thoroughly for 3 minutes while scraping the sides to ensure all material is properly mixed.

PLACEMENT

Primer Coat: Apply the primer using a squeegee and back-roll to provide uniform coverage. The epoxy topping must be placed on the wet epoxy primer; if the primer becomes tack-free, re-prime the concrete substrate.

Screed Mortar: Maintain all control joints through the screed where movement is expected. Place the epoxy topping onto the wet primer surface using a steel trowel or a screed box to the desired thickness of 4.8 mm – 6.4 mm (3/16” to 1/4”). Allow the loose epoxy topping to stand for a few minutes to permit the entrapped air to escape. Areas with pits or depressions should first be filled with a thin troweled coat, carefully working the material into the voids, prior to the final application of the desired thickness. After achieving the desired thickness, the epoxy topping should be mechanically troweled to a smooth dense finish. Do not feather edge.

Grout Coat: When the epoxy topping has sufficiently cured to sustain foot traffic, apply a neat grout coat of FS-Mortar 100. Apply using a squeegee or trowel to force the epoxy into the surface pores and back-roll immediately to remove the ridges.

Topcoat: A topcoat may be needed for aesthetics and for further protection against chemical and abrasive traffic. A slip-resistant sand texture can be achieved by lightly seeding the wet topcoat with 32 mesh aggregate. Immediately back-roll the seeded coating to encapsulate the aggregate.

LIMITATIONS

- * Do not apply FS-Mortar™ 100 if the substrate and ambient temperatures are below 10°C (50°F) and max 30°C (86°F)
- *Do not apply in areas where the humidity is greater than 85%.
- *Do not use as a primer under epoxy coatings
- *Do not apply to porous surfaces where moisture vapor transmission will occur during application
- *Do not use on an exterior, slab-on-grade concrete substrate
- *Protect from dampness, condensation and water contact during the initial 24 hours cure period

THEORETICAL COVERAGE

As a Primer:

Based on 6 - 8 mils thickness per coat:
4.9 - 6.5 m²/litre (200 - 267 ft²/U.S. gallon)

As a Matrix:

Approximate coverage per unit is:
3.0 m² @ 4.8 mm (32 sq.ft² @ 3/16")
2.2 m² @ 6.4 mm (24 sq.ft² @ 1/4")
(Yield is 0.50 ft³)

Matrix Unit:

2.52 L (0.66 U.S. Gal) Resin, Part A
1.26 L (0.33 U.S. Gal) Hardener, Part B
22.7 kg (50 lb.) of Trowel Grade Base Sand

Notes: The matrix unit of the Epoxy Resin/Hardener and the Trowel Grade Base Sand will depend on the application. These are Zeraus's suggested ratios only.

PACKAGING

3.79 litre/1 U.S. gal. units
56.7 litre/15 U.S. gal. units
Part C – 22.7 Kg (50lbs) Bag Trowel Aggregate

CLEAN UP

Clean all equipment and installation tools immediately with xylene.

SAFETY PRECAUTION

Consult the Materials Safety Data Sheet (MSDS) for specific instructions.

STORAGE

Stored in a heated warehouse. Do not freeze.

SHELF LIFE

1 year from the date of manufacture if kept in original unopened containers.