ZeraFloor ™ Resin

Versatile Epoxy Primer & Binder

DESCRIPTION

ZeraFloor™ Resin is a versatile, 100% solids, two-component low viscosity, clear, epoxy primer and binder. **Zera**Floor ™ Resin, when mixed with an appropriate trowel grade base sand, exhibits a dense floor with high strength and outstanding durability when it is installed by a steel trowel.

WHERE TO USE

As a Primer:

ZeraFloor™Resin 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 use as one coat epoxy sealer.

As a Binder:

ZeraFloor™ Resin may be used, with an appropriate trowel grade base sand, as a three-component epoxy floor topping designed to provide a tough epoxy floor with excellent abrasion resistance. The floor can then be sealed with the **Zera**Floor™ Resin prior to the application of the appropriate **Zera**Dur™ epoxy topcoat. This epoxy floor topping can be installed up to 6.4 mm (1/4") in thickness on horizontal surfaces.

As an epoxy floor topping, 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, dairies, breweries, laboratories and pharmaceutical plants. This epoxy floor topping is also suitable as a protective overlay for new concrete floors or to restore worn concrete floors. It can also be used to protect concrete from exposure to moderate splash and spillage of mild chemicals.

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.

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

ZeraFloor™ Resin should be applied over clean, sound, dust free surfaces**.** For best results, the surface should be prepared as follows:

Concrete (New):

Shot blasting or equivalent to remove surface laitence, 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 D 4263.

Concrete (Old):

Remove oil, grease, dirt and any unsound concrete using a combination of commercial degreasers, alkaline wash and shot blasting. A combination of acid-etching and power washing can also be used. Cracks and surface defects should be repaired prior to the application of coating.

Steel:

Remove greases, oils and contaminants from surfaces and

sandblast to white metals.

MIXING (Screed Mortar)

The mixing equipment used to mix the epoxy topping must be clean and free of any contaminants that may be present in the equipment from previously used products. 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 (A+B) to avoid excessive air entrapment. Once all of the ingredients are combined, mix continuously and thoroughly for 3 minutes to ensure complete mixing. During the mixing, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once to ensure a uniform mixing.

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 **Zera**Floor ™ Resin. Apply using a squeegee or trowel to force the epoxy into 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

- Minimum/maximum substrate temperature is 10˚C/30 ˚C (50˚F/86˚F)
- Maximum relative humidity during the application and cure: 85%
- Do not use as a primer under epoxy ZeraDur 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 hour 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

ZeraFloor ™ Resin is packaged in:

3.79 Litre (1 U.S. Gal) units

56.7 Litre (15 U.S. Gal) units

Trowel Grade Base Sand is packaged in:

22.7 Kg (50 lb.) bags

CLEAN UP

Clean all equipment and installation tools immediately with xylene.

SAFETY PRECAUTION

Uncured epoxy resins and hardeners represent some hazards. Avoid contact with skin and ensure adequate ventilation. Consult Material Safety Data Sheet (MSDS) for specific instruction.

MAINTENANCE

Mop or wash coatings using warm water and commercial detergents on a regular basis. Stem cleaning of coating should not be employed.

STORAGE
Store in a heated warehouse. Do not freeze.

SHELF LIFE
2 year from the date of manufacture if kept in original unopened containers

WARRANTY

"The recommendations made and the information herein is the result of accurate laboratory and field tests under controlled conditions. We guarantee that the quality and properties of the materials supplied conform to our standards. Zeraus Products Inc. makes no warranties, expressed or implied, as uses and applications are beyond our control. Zeraus Products Inc. shall not be liable for any injury, loss, or damage (direct or consequential) arising from use or inability to use the products. Before using, the user is urged to pre-test the products in his/her own environment to determine the suitability of the products for their intended use, and the user assumes all risk and liability whatsoever in connection therewith.

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