

# EPO BASE

Cement Based Surface Hardening Powder Mixture



## DESCRIPTION

**EPO BASE** is a cementitious premixed ready to use surface floor hardener based on special graded silica aggregate selected for their physical properties of abrasion and wear resistance, Portland cement and special additives to improve workability. It is evenly sprinkled on fresh concrete and floated to a smooth finish. It provides increased wear resistance to surface.

## TYPICAL APPLICATIONS

**EPO BASE** is used to produce abrasion resistant monolithic floor topping for surfacing concrete in:

- Power stations
- Heavy industries
- Work shop
- Restaurants
- Laboratories
- Showroom
- Factory and warehouse floors
- Commercial and Industrial facilities
- Car parks, etc.

## ADVANTAGES

- Supplied ready to use-no additives required
- Provides a hard, abrasion and impact resistance.
- Resistance to mild chemicals such as oil, grease, agricultural chemicals and fertilizers,
- Minimize surface dusting.
- Very high compressive and flexural strength.
- Economical and easy to layover the freshly placed floor concrete.
- Non-metallic aggregates will not rest when wet.
- Non-toxic, chloride free, safe to use.

## SPECIAL RECOMMENDATION

Can be cured and over coated with **EPO CURE**.

## PRODUCT DATA

<b>Form</b>	Powder
<b>Colour</b>	Grey
<b>Packing</b>	25 Kg Kraft Bag
<b>Consumption</b>	Approximately 4-6 Kg/m <sup>2</sup> for a coating thickness of 2-4 mm
<b>Shelf Life</b>	12 months in the unopened package as Stored in dry and cool environment.

## TECHNICAL SPECIFICATION

Test Name	Standard	Average Result
<b>Mix Density</b>	ASTM C 138	2.30 ± 0.1 g/cm <sup>3</sup>
<b>Compressive Strength</b> 1 day 7 Days	ASTM C 109	> 45 MPa > 60 MPa
<b>Bond strength/Tensile Adhesion strength</b> 7 days	ASTM D 4541	> 0.5 N/mm <sup>2</sup>
<b>Flexural Strength</b> 28 days	ASTM C 348	> 10 MPa
<b>Abrasion Resistance</b>	ASTM D 4060	< 900 mg
<b>Chloride content</b>	ASTM C 1218	< 0.1 %
<b>Slip resistance</b> Dry - Wet -	ASTM E 303	60 51
<b>Shore D Hardness</b>	ASTM D 2240	> 70

**Note:** Water contents obtained in practical applications of **EPO BASE** will varies for site to site. Above mentioned properties obtained at a water powder ratio of 0.10 at controlled lab conditions.



## APPLICATION PROCEDURE

**EPO BASE** is applied at a rate of 4 to 6 Kg/m<sup>2</sup> onto freshly placed, fully compacted and screeded good quality concrete.

**EPO BASE** should not be applied to concrete containing chlorides, high alumina cement or air contents in excess of 6%.

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Ver 01/20

**EPO GULF SPECIALITIES CO.**

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The bleed water on the concrete surface should be removed if necessary and then sprinkle 2 to 4 Kg/m<sup>2</sup> of the material onto the surface of the concrete and leave for a few minutes to allow the powder to absorb moisture from the surface of the concrete. When the powder appears damp or wet, it should be worked into the surface with wood float or power-trowel. The surface should not be trowelled if the concrete is still wet or plastic.

Immediately the first layer is trowelled in, the remaining 2 Kg/m<sup>2</sup> of the powder is sprinkled onto the surface. Once again, when the powder becomes damp it should be well worked into the surface using the power trowel. Immediately following on from this finishing operation, a curing membrane should be applied to prevent rapid moisture loss from the surface.

## CURING

Proper curing of concrete floors treated with **EPO BASE** is essential to the physical properties of the finished floor, however, if the floor is to receive further surface treatments please consult **EPO GULF TECHNICAL DEPARTMENT** for advice on recommended curing methods. For indoor applications where curing conditions are less arduous and breakdown of curing membrane is slower alternative approved methods of curing such as polythene sheets taped at the edges is acceptable.

## SURFACE TREATMENTS

Subsequent surface treatments are not normally necessary with **EPO BASE** because of the high density, low porosity finish. Where further treatments are required please consult **EPO GULF TECHNICAL DEPARTMENT**.

## PERFORMANCE STANDARDS

- **BS - 882 1983** (Aggregates from natural sources for concrete).
- **ASTM C 109, ASTM D 4060 & ASTM E 303**

## PRECAUTIONS

**Cleaning:** All equipment must be cleaned with water immediately after use. Mixes containing this product must not be emptied into drainage systems.

**Protection:** All works must be protected from rain, frost until fully hardened.

## HEALTH AND SAFETY

**EPO BASE** is non-toxic but is mildly alkaline. Gloves should be worn during application. Splashes to the skin or eyes should be removed with clean water. In the event of prolonged irritation, seek medical advice.

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