

CIKOfloor Metaltop

Non oxidizing Monolithic metal based dry shake floor hardener

Description

CIKOfloor Metaltop is a non-oxidizing metallic dry shake floor hardener that provides a hard wearing surface and high abrasion resistance for concrete floors. It forms a monolithic bond with fresh concrete. The monolithic part of applied CIKOfloor Metaltop will minimize problems such as curling, shrinkage and cracking.

CIKOfloor Metaltop is a blend of selected cement type, specially graded aggregates, wetting agents and other additives that provide a surface much denser and stronger than concrete.

Properties

- Monolithic system with non-oxidizing properties.
- Increase in abrasion and impact resistance of floor concrete.
- Reduction in permeability of water, porosity and corrosive chemicals.
- Increases the durability of concrete floor.
- Antiskid finish resistant to oil and grease
- Available in wide range of colours.
- Suitable for all kinds of commercial and industrial floors.
- Easy to apply by hand or automatic spreading machine.

Application area

CIKOfloor Metaltop is suitable for all kinds of industrial and commercial floors subjected to heavy traffic. Considering its basic properties such as superior abrasion resistance and minimal dusting, CIKOfloor Metaltop can be used in

- Loading bays/platforms and parking areas, heavy duty industrial floors.
- Power and distillation plants

- Warehouses, car parks, Workshops and garages.

Physical properties

Form	Powder
Colour	Cement Grey (standard)/ wide range of colours
Hardness (Aggregate)	>7 on Mohs scale
Compressive strength (wet cure mortar consistency) ASTM C109	>75 N/mm ² (28 days)
Bohme reading	< 5 g/cm ²
Abrasion resistance	300 to 500 % improved compared to conventional concrete

Coverage

The recommended application rates are as follows.

Medium duty traffic	4 to 5kg/m ²
Heavy duty traffic	6 to 7kg/m ²

Application instructions

The designed base concrete should have below requirements to obtain hard concrete surface with high abrasion resistance:

- 1- Cement content of 300 kg/m³ and lowest water-cement ratio around 0.42 to 0.55. CIKO range of admixtures can be used to reduce/maintain the required water-cement ratio.
- 2- Concrete Slump should be kept between 75 mm and 120 mm.
- 3- Proper concrete compaction and levelling is a must.
- 4- Allow free water on surface to evaporate or brushed away before the application of CIKOfloor Metaltop.

Application method

The concrete should be placed and levelled as per standard practices. Application of **CIKOfloor Metaltop** should start when the base concrete has stiffened to the point when the foot traffic leaves an impression of 3 to 6 mm. Normally, this stage will be achieved in 1 to 2 hours depending on the ambient conditions and the type of concrete used [basically the type of admixture incorporated into the concrete mix].

CIKOfloor Metaltop should be broadcasted evenly by hand at the rate of 4 to 5 kg for medium traffic and 6 to 7kg for heavy traffic.

It is always recommended to apply **CIKOfloor Metaltop** in two layers. The first application should be done by broadcasting **CIKOfloor Metaltop** uniformly over the wet concrete surface with 2/3rd of the required quantity. Allow the material to absorb the moist from concrete and start with a wooden or power float.

Immediately after floating the concrete surface, the second application should be carried out in cross direction to the previous using the remaining 1/3rd material and must be well floated.

For additional reinforced areas, immediately after levelling the freshly placed concrete Spread **CIKOfloor Metaltop** and steel trowel the surface. These reinforced areas will be further strengthened when subsequent full treatment is applied.

NOTE: Right judgement on the application time over wet concrete is very important to attain optimum performance of **CIKOfloor Metaltop**. If it is too early the excess water will be absorbed thus the strength will decrease subjected to dusting. Additionally, the dense metallic aggregate of **CIKOfloor Metaltop** could sink and be lost from surface. If the timing of application is too late, insufficient moisture will be available to completely hydrate the **CIKOfloor Metaltop** particles. De-bonding/crazing and pitting of the surface are likely to result later.

Curing

The finished floor should be cured as per standard curing procedures. In case of membrane curing system, immediately after the final finish, CIKOcure AC can be applied on the surface preventing mar and allow drying.

Packaging

CIKOfloor Metaltop is available in 25kg moisture resistant bags.

Shelf life

CIKOfloor Metaltop has a shelf life of 12 months if stored in accordance with CIKO instructions.

Storage

CIKOfloor Metaltop should be stored under enclosed shaded area.

Precautions

- The air entrainment of the base concrete should not be more than 3%
- For concrete with optimized water-cement ratios, **CIKOfloor Metaltop** shall not be broadcast over 3 to 4 kg/m².

Health & safety

Use standard dust mask to avoid inhalation of dust. Powder when wet or moist can cause burns to skin and eyes which should be protected during use. If comes in contact with eyes, flush with plenty of fresh water and seek medical advice.

Refer Material Safety Data Sheet for further details.

Technical Support

For further technical support, do not hesitate to contact CIKO team at any time as CIKO offers on and off site services to end users, specifier and contractors.

More from CIKO Middle East

A wide range of construction chemical products are manufactured by CIKO Middle East which includes:

- Concrete admixtures and additives
- Waterproofing and damp proof coatings
- Surface treatments
- Flooring and toppings
- Grouts and anchors
- Tile adhesives and grout
- Concrete repair materials
- Adhesives and bonding agent
- Protective coating
- Joint Sealants and Moulding compounds
- Ancillaries