

# CICO SURFACE HARDENER

## ABRASION RESISTANCE METALLIC FLOOR HARDENER FOR CONCRETE

It is a specially manufactured metallic aggregate admixture with cement and stone/granite chips to provide the hardest surface to floorings and pavement which will remain wear-proof, dustproof, waterproof and oil-proof etc.

### USES

By the use of **CICO SURFACE HARDENER**, the flooring and paving topping can be made hard surface which almost become wear and dust proof. It is ideally suited for use in all types of industrial floors which are subjected to heavy traffic and load movement. It can also withstand the impact load due to movement of heavy load over the floor topping. It does not allow any dampness or absorption of water and easy to clean by washing as the surface remains smooth without any hole or crevice etc.

### ADVANTAGES

Wherever the flooring is subjected to medium to high abrasion due to the movement of steel wheels, heavy trucks, fork lift or any other movement of heavy machineries, the surface can be made dust-proof damp-proof with the use of **CICO SURFACE HARDENER**.

### TECHNICAL SPECIFICATION

The **CICO SURFACE HARDENER** should always remain dry until it is being used with the cement and/or floor concrete.

Ordinary Portland cement, conforming to Indian Standard Specification should always be used in preference to Rapid Hardening Cement. Even the blast furnace slag cement or Portland pozzolana cement can also be used provided the quality of cement is good.

The concrete to be used in the floor topping should have clean, angular crushed granite or quartzite stone chips of size 6 mm down. The water should be as less as possible so as to maintain a very low water cement ratio.

#### Heavy Duty Floor

1 part **CICO SURFACE HARDENER** to 4 parts cement by weight with 1 to 2 parts 6 mm down stone chips of mixed powder (cement & Surface Hardener) should be the normal mix proportion.

*Note: In case of rounded/angular well graded stone chips maximum amount ( i.e., 2 part of stone chips can be loaded, whereas less amount stone chips is required when poor graded flaky aggregate is used. Conduct small site trial mix to ascertain the mixing proportion of available stone chips.*

Firstly, **CICO SURFACE HARDENER** and the cement should be mixed thoroughly in a dry state. Then the 2 parts of stone chips is added in the mix with the dry mixed material and again mix thoroughly the whole mixed material. After thorough mixing of the dry material required amount of clean fresh water to be added to have a workable consistency for properly placing and compacting the floor topping.

#### **Light Duty Floors**

1 part **CICO SURFACE HARDENER** and 5 parts of cement by weight and 2 parts 6mm down stone chips is the normal mix proportion. The mixing procedure is same as mentioned under the heading for **Heavy Duty Floors**.

### **COVERAGE**

2 kg and 1.5 kg of **CICO SURFACE HARDENER** will cover 1m<sup>2</sup> for 13mm thick floor topping for heavy duty and light duty respectively.

### **APPLICATION**

#### **New Work**

After laying a concrete base of 100mm to 150 mm thick, a granolithic layer of approximately 38mm is to be followed. Over this granolithic layer, **CICO SURFACE HARDENER** topping of thickness 13mm to 19mm is laid, leveled and finished. The **CICO SURFACE HARDENER** topping should always be laid over the granolithic surface when it remains wet. When the initial set of the floor topping takes place, the surface is to be trowelled off to a polished smooth finish.

In large projects where it is possible to lay the floor in single operation, the granolithic layer can be dispensed with. In that case, a concrete base is to be laid to the required level for laying the **CICO SURFACE HARDENER** topping over it. Surface Hardener Topping should be laid when the base layer remains wet and finished by means of trowelling to a polished smooth surface.

#### **Old work**

Chip off the old concrete surface to a depth of at least 5 mm to 7 mm by mechanical means and clear all loose particles and dust from the surface. The clean surface is to be thoroughly soaked with water for at least 12-15 hours prior to laying of the concrete base and floor topping. No surface water should remain before the application of the cement slurry over the surface. Apply a cement slurry over the entire surface and lay the ordinary granolith 13mm to 19mm thickness over which the granolith layer of **CICO SURFACE HARDENER** topping to the required thickness is laid. When the under lying granolith layer is still wet, trowel the surface to a smooth polished surface.

#### **Precaution**

Proper surface preparation is the essence for the success of **CICO SURFACE HARDENER** Floor Topping.

Dry cement should never be sprinkled over the wet surface for finishing purpose. The final trowelling should not be resorted to till the initial set has taken place.

The **CICO SURFACE HARDENER** Topping should be cured for 5-7 days as per normal good practice of curing of concrete. The **CICO SURFACE HARDENER** Topping should be laid by very skilled workmen who have the knowledge about laying this type of floor topping. For finishing purpose, the steel trowel should always be used.

## **PACKAGING**

30 kg Polyethylene lined HDPE bag.

## **SHELF LIFE**

12 months

### **Important Note:**

All CICO products are sold in the market after strict Quality Control in line of ISO 9001 and guaranteed against any manufacturing defect. Although the basic formulation of Company's products generally remains unchanged, production refinements arising from continuing research and evaluation program may occasionally result in marginal changes in properties. CICO aspires to ensure that any recommendation, advice, test data, specification, method statement and other information given in this product datasheet is accurate and best of company's knowledge. Since, the company (CICO TECHNOLOGIES LTD) has no control over the selection of its product, applicators, application methodology, how and where it is applied, therefore, the company cannot accept any liability directly or indirectly arising from the use of its product. It is important to any customer, user or specifier satisfies him / herself that the product is suitable for the intended purpose including health, safety and environmental aspect. Unless or otherwise agreed in writing, all products of the company are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. All customers, users, specifiers should ensure that they examine the suitability of the product with company's latest product data sheet.

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