

# MasterCast® 125 (Binder5®)

Styrene-Butadiene Copolymer Based Adherence and Impermeability Admixture for Plasters and Screeds

## Material Description

**MasterCast® 125** is styrene-butadiene copolymer based admixture used in plasters and screeds to increase adherence and impermeability.

## Areas of Application

- Indoor areas for vertical and horizontal applications.
- In mortars, plasters, and grouts.
- As adherence admixture in mortars prepared for repairs.

## In Plaster Mortars

Used as adherence and impermeability increasing admixture for inner and outer plasters of concrete silos, water tanks, pools, and water treatment plants.

## P.C.C. (Polymer Cement Concrete) Primer in Grouts

It is used to prevent cold joint formation and increase adherence in new concrete or grout applications on old concrete.

## In Grouts

It is used together with MasterRheobuild 1033 even in 2 cm grouts for high adherence and obtaining non-cracking surfaces; against dusting and cracking on Industrial Soils, and to improve impermeability.

## In Coating Mortars

In open spaces, used as admixture to prevent mortar prepared for laying down natural stones, bricks, and floor tiles against Freezing-Thawing cycle.

## Shake Plaster Preparation

In smooth surface finishes or gas concrete surfaces, used before plaster and ceramic application to increase the adherence in shake plaster.

## Characteristics and Benefits

- Forms strong and durable binding.
- Enables excellent adherence and impermeability.
- Increases strength against water, oil, and salt solvents.
- Improves strength to Freezing-Thawing cycle.
- Reduces tensions in wide areas by increasing flexural strength.

## Technical Properties

|                                |                                                                   |
|--------------------------------|-------------------------------------------------------------------|
| Structure of the Material      | Modified Styrene-Butadiene Copolymer                              |
| Appearance                     | White                                                             |
| Specific gravity (20°C)        | 1.00-1.05 kg/lt                                                   |
| pH Value                       | 6 - 10                                                            |
| Application Ground Temperature | +5°C +35°C                                                        |
| Service Temperature            | -20°C +80°C                                                       |
| Corrosion Behaviour            | Contains only components according to BS EN 934-1:2008, Annex A.1 |
| Dangerous Substances           | Comply with annex AZ.                                             |

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- Enables hardening without cracks by reduced contraction.
- Gives strength against saponification, does not contain additives that cause corrosion.

## Processing Method

### (A) Preparation of Substrate

Cement based surfaces have to strong, bearing, dustless, and clean. Surface must be cleaned off all kinds of oil, grease, rust, and paraffin traces that can weaken adherence. The sides of the surface, which are formed by breaking, must be cut as straight as possible, rust on the reinforcement must be cleaned, and new reinforcement must be added if necessary. If there is water leak on the surface, it has to be drained or sealed by a suitable stopper. Application surface has to be watered 12 hours before, but there must not be any free water left on the surface.

### (B) Mixing

**MasterCast<sup>®</sup> 125** is diluted by water ratios stated in each application.

### In Plaster Mortars

1 m<sup>3</sup> washed river sand in suitable gradation is mixed with 350 kg cement. Liquid mixture, prepared by adding 5 kg MasterCast 125 into 120 kg water, is added onto powder mixture until thixotropic mortar is obtained. Surface must be wetted, 12 hours before application and MasterCast 125 admixture mortar has to be applied on wet/dry surface.

### P.C.C. (Polymer Cement Concrete) Primer in Grouts

It is used to prevent cold joint formation and increase adherence in new concrete or grout applications on old concrete. A: 1 kg cement is mixed with 3 kg (0-3 mm grainy) washed river sand. B: 1 kg MasterCast 125 is mixed with 2 kg water. A and B mixtures are mixed until it becomes creamy. Then, it is applied on

surface, which was moisturized 12 hours before, with 2 mm thickness by brush. Fresh concrete has to be placed on P.C.C. before it dries. After applying second layer of P.C.C. fresh concrete is placed on top of it. There is a total of 0.35 kg/ m<sup>2</sup> coverage in first and second layers.

### Making of Grout

1 m<sup>3</sup> river sand in suitable gradation is mixed with 350 kg cement. 4 kg MasterCast 125 is added to 110 kg water. This liquid mixture is added to prepared powder mixture until suitable mortar for making primer is obtained. Primer layer, which was described in detail above, has to be applied on surface. Fresh concrete must be placed on primer layer before it dries.

### Making of Grout in Industrial Soils- Preparing of Concrete

1 m<sup>3</sup> aggregate in suitable gradation is mixed with at least 380 kg cement, 85 kg water, 3 kg MasterCast 125 and 6 kg MasterRheobuild 1033. Primer, which was prepared before, is applied on soil by appropriate tools. Mortar with MasterCast 125 is applied to soil by spreading.

### In Coating Mortars

1 m<sup>3</sup> aggregate in suitable gradation is mixed with 250 kg cement, 3 kg MasterCast 125 and appropriate amount of water. Coating material is applied on soil with prepared mortar with admixture.

### In Shake Mortars

1 m<sup>3</sup> river sand in suitable gradation is mixed with 350 kg cement and 10 kg Mastercast 125. Water is added to this mixture until it becomes creamy. Then, it is applied on surface, which was moisturized 12 hours before, with sprinkle tool and left to dry. Surface is moisturized before plaster or ceramic tile application.

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## Drying Time

After 24 hours you can walk on cement based grouts prepared by MasterCast 125 admixture. Final strength of MasterCast 125 added mortars is gained in +20°C after 28 days.

## Compatibility

In grouts, 4 kg MasterCast 125 and 5 kg MasterRheobuild 1033 can be used for 350 kg cement. With the use of MasterRheobild 1033, the mechanic properties obtained by MasterCast 125 increase highly. Both of the admixtures must be added separately to the mixture.

## Cleaning of Tools

All the tools and equipments must be cleaned by water immediately after the application.

## Packaging

**MasterCast<sup>®</sup> 125** is available in 30 kg and 5 kg canes.

## Shelf Life

12 months if stored according to manufacturer's instructions in unopened container.

## Storage

Store in original sealed containers and at temperatures between 5°C and 30°C. Store under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.

## Health and Safety

For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapor until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

## Spillage

Chemical products can cause damage; clean spillage immediately.

## Disclaimer

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