

# LAVACEM MC

## Flowable Non Shrink Micro Concrete

### Description:

LAVACEM MC is a single component, flowable, cement based non shrink micro concrete product. It is formulated as a high flowable mix with the use of minimum water content to generate high early strength and durable concrete. It's characterization of free flowing non shrink mortar makes it ideal for repair of damaged concrete or filling large void volumes in concrete elements.

LAVACEM MC composed of Portland cement, high resistant hydraulic binders, graded silica, polymer and aggregates and special chemicals.

### Applications:

- Repair of structural concrete section where it is difficult to cast mortar.
- Structural elements repair.
- Casting over steel Jacket of columns for adjusted loads.
- Damaged reinforced concrete repair.
- Repair of defected concrete bodies.
- Ideal for filling larger voids repairs.
- Repair of concrete pavements.

### Advantages:

- Shrinkage controlled, with high early strength.
- Excellent bond to all concrete substrates.
- Flowable with no risk of honeycomb or segregation.
- High compressive strength with low permeability.
- High impact resistant
- Resistant against atmospheric gas, frost and thaw cycles.
- Excellent resistant to Chloride, Salts and Chemical attack.
- Low alkaline and chloride free product.

### Instructions for Use:

#### Surface Preparation:

All concrete surfaces should be free from grease, contaminants, oil and loose material. After cleaning by mechanical tools, to avoid "feather edging", it is advisable to neatly delineate the repair boundary by saw cutting.

It is recommended to apply mechanical cleaning to reinforcing steel and particular attention should be paid to the rear of the bar to ensure all corrosion products have been removed. Once the reinforcing steel has been mechanically cleaned, it should be coated immediately with one coat of LAVAZINC EP or LAVAFER.

Before applying LAVACEM MC soak the substrate with water, allow excess water to drain. Ensure a saturated surface dry condition "SSD" prior to application of mortar.

LAVACEM MC can be used to fill gaps with at least 50 mm minimum depth and up to a maximum of 500 mm. Greater depths may be applied depending on the design of the structure being repaired. To avoid "feather edging", make saw cutting to the edges with a depth of 50mm.

The application of the mixed product over dry concrete surfaces without saturation with clean water or priming with a bonding agent may result to a bonding failure.

#### Mixing:

To prepare LAVACEM MC pour 3.0 - 3.2 liters of clean water into container and add slowly the whole contents of the product. Mix using spiral paddle on slow speed heavy duty mixer for few minutes till a homogeneous lump free consistency mix is achieved. Always add powder to water and not the other way around.

Avoid adding thinning water after the mixture is homogenous and ready for use. Apply the product immediately after mixing to obtain the full benefit of the flowability.

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## Application:

It is recommended that machine mixing capacity and labor force are adequate to ensure a continuous operation of casting.

Erect clean formwork to the area needs to be repaired. Cover the area with 5 cm excess boundary over the repair cutting edge. Apply a sealant to the formwork to prevent bleeding from the edges. Prepare a pouring entrance for the mix from the upper side by "bird mouth shape", to receive the material and deliver behind the formwork.

Mix measured volumetric amount of LAVACEM MC to fill the repair area, consequent pouring prevents any defect in the repair area. Present the mix to the formwork in continuous pouring till the whole repair area is filled.

After the setting of LAVAREP MC, remove the formwork. Avoid rapid evaporation of applied mortar, by applying clean water for curing for two days or apply a coat of a recommended MATEX curing agent. Consult with MATEX Technical Department for further instructions.

## Standards:

LAVACEM MC conforms to:

- ASTM C 109, C 1583, C 928, C 1240, C 580

## Coverage:

LAVACEM MC achieves 13 liter of mixture per 25 kg bag.

## Packaging:

LAVACEM MC is supplied in 25 kg recyclable paper bags.

## TECHNICAL PROPERTIES

Appearance	: Grey Powder
Wet Density	: 2.2 kg/Lt
Temp. of application	: 5°C to +40 °C
Adhesion bond to concrete	: 1.7 N/mm <sup>2</sup>
Water absorption	: <2.0 %
Setting time	: Initial 2 hours Final 4 hours
Drying shrinkage	: @ 28 days < see micron
Pot life	: 30-40 minutes @ 25°C
Compressive Strength	: >55 N/mm <sup>2</sup> @ 7 days >65 N/mm <sup>2</sup> @ 28 days
Flexural Strength	: 9 N/mm <sup>2</sup> @ 28 days
Tensile Strength	: 4.0 N/mm <sup>2</sup> @ 28 days
Module of Elasticity	: 25,000 N/mm <sup>2</sup> @ 28 days

## Shelf Life:

LAVACEM MC can be utilized within 12 months of production date if stored in proper conditions in unopened original packing.

## Cleaning:

Clean tools with water prior to product hardening.

## Storage Conditions:

LAVACEM MC to be stored in original packing in dry conditions away from direct sunlight and high humidity levels.

## Health and Safety:

- Use goggles and gloves during application. Do not breathe vapor of products. Use only in well ventilated areas.
- Avoid contact with eyes or skin.
- In case of contact with eyes, rinse immediately with plenty of clean water and seek medical help.

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This technical data sheet is not considered as local building codes. It shall be used as general reference for the product, based on our current knowledge and experience. However the company do not accept any liability arising from the use of its products as it has no direct control on how and where the product is applied.

