



EUCO MC

**High Strength, Shrinkage Compensated,
Free Flowing Micro Concrete & Grout**

DESCRIPTION

EUCO MC micro concrete is a high strength, shrinkage compensated, free flowing micro concrete formulation for structural concrete repairs & deeper grout applications. EUCO MC is suitable for placing in thicknesses of 20mm to 200 mm. EUCO MC provides durable, strong structural repair fully compatible with host concrete.

PRIMARY APPLICATIONS

EUCO MC is the ideal repair material for vertical or horizontal structural repairs where the thickness of repair is greater than 20mm and use of pourable material is preferable to hand or machine applied repair systems

- Extensive repairs to beams, columns and other structural elements
- Repairs to bridges, tunnels, garages, silos etc.
- Jacketing of beams, columns and other structural elements for strengthening.
- Ideal for re-profiling of concrete piles to level prior to pile head treatment
- Bridges, multi-unit residential, Loading docks, Highways & Roads, Warehouse, Industrial pavements, Parking decks and ramps
- Vertical & overhead pour applications using formwork
- Industrial/ commercial/ institutional floors
- Repairs to piers, navigation locks, dams, seawalls, and other marine structures

FEATURES/BENEFITS

- Shrinkage compensated - Volume stable in wet and hardened state reducing cracking tendency
- One component, factory made and only addition of water is required
- Uniform predictable performance even in remote situations
- Generally, no bonding agent required but saturation with water is mandatory on existing concrete
- Simple installation
- Pourable grout consistency and able to repair complex profiles easily
- Fast and easy placing - Reduced time for repairs
- Possible to repair in large & deep volumes when adding 5-10kgs,10mm passing aggregate per 25kg bag. Water demand should be adjusted accordingly
- Rapid strength gain helps in early reinstatement & removal of shuttering
- Pumpable & pourable self-consolidating performance

TECHNICAL INFORMATION

Material properties tested under laboratory conditions @ 25°C,50% RH

Property	Test Method	Values at 25° C	
Components	-	Single	
Colour	-	Grey	
Fresh Wet Density	BSEN 12350-6	2.30 ± 0.05 Kg/L	
Application Thickness	-	20 – 200 mm	
Compressive Strength	ASTM C109	1 Day	> 21 N/mm ²
		7 Days	> 55 N/mm ²
		28 Days	> 65 N/mm ²

Flexural Strength	ASTMC 580	28 Days	10 – 11 N/mm ²
Tensile Strength	ASTMC307	28 Days	6 – 7 N/mm ²
Pull off Bond Strength	BS 1881, Part 207	28 Days	1.6 – 1.8 N/mm ²
Setting Time	BS 4550	Initial	~ 5 hours
		Final	~ 8 hours
Chloride Content	-	Nil	

Values presented are typical and not necessarily referenced to create specifications.

PACKAGING

EUCO MC is packaged in 25 kg bag.

SHELF LIFE

1 year in original, unopened package, covered well and stored in pallets, away from heat, Sun light and moisture. Care should be taken that hard & lumpy materials are not used

COVERAGE/YIELD

~0.63 m² at 10 mm thickness with addition of 4.0 ltr water for 25 Kg bag.

DIRECTIONS FOR USE

Surface Preparation: Concrete substrate / pile head to be repaired should be sound, clean and uncontaminated. The form work should be rigid and tight to prevent loss of material and have properly sealed faces to ensure that no water is absorbed from the repair material. Saw cut or cut back the extremities of the repair locations to a depth of at least 10 mm to avoid feather edging and to provide a square edge. After saw cutting, chip concrete down to sound base using light pneumatic chipping tools or chisel & hammer. Any corroded steel in the repair area should be cleaned well and remove all loose debris and corrosion deposits.

Priming: Prior to placing of Euco MC Micro Concrete, saturate the substrate with water to prevent absorption of water from the mixed material. You can apply Euco MC without Primer but saturated surface dry (SSD) is a must prior to application of Euco MC. Euco MC can be used with various bonding agents from Euclid Range like **EUCO SBR LATEX** or epoxy bonding adhesives **DURAL 617NS**.

Mixing: It is highly recommended that only full bags are mixed. Damaged or opened bags should not be used. Mix Euco MC in a forced action pan mixer, or with a helical paddle attached to a low speed (300-600rpm) mixer for 3 minutes until a lump free, flowable consistency is achieved. Only use clean water. Mixing water needed: 3.75 to 4 litres per 25kg bag. Allow the mortar to rest for 2 - 3 minutes and then remix briefly before pouring into formwork. When the temperature is greater than 40°C, better to use chilled water for mixing.

Application: The mixed material should be placed within 30 minutes of mixing. It can be poured or pumped on to the repair area and fill the cavity to the required level. No vibration is required. After concrete has slightly hardened, surface may be finished to the desired texture.

Curing: Start curing Euco MC immediately after finishing and form work is stripped. Use hessian cloth soaked in water covered with Polyethylene sheet. Ponding method of curing is not suitable. Cure the repaired concrete area for minimum 7 days or apply curing compound such as **EUCO CURE WB**.

CLEAN-UP

Clean tools and equipment with water before the material hardens.

PRECAUTIONS / LIMITATIONS

- Euco MC can be applied in sections up to 200 mm depth.
- For thickness more than 100 mm, addition of pre-calculated aggregates may be required. Consult technical team for more details.
- Strictly follow water-powder ratio as specified.
- Ensure that the shuttering is 100% watertight.
- Consult structural engineer if the diameter of rebar is reduced by more than 20% than the original diameter.
- In all cases, consult the Safety Data Sheet before use.

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