

MasterEmaco S 810

Micro concrete for dry process shotcrete application of repairs and CP overlays

DESCRIPTION OF PRODUCT

MasterEmaco S 810 is a ready to use cement based single component shotcrete mortar modified with microsilica. The formulation is designed to match the requirements for a dry process shotcrete applied mortar. It gives high early strength, reduced rebound and maximum application thickness, coupled with resistivity values commensurate with accepted criteria for cathodic protection (CP) overlays.

PRIMARY USES

- Large area concrete repairs.
- Refurbishment of columns, bridges, tunnels and retaining walls.
- CP overlays
- Single application, high build application.
- Repair of fire damaged structures, marine structures, piers, quays, off shore platforms etc.
- Sealing of mine roadways, tunnels, etc.
- Rock and embankment stabilisation.
- Swimming pool construction.
- Cathodic protection overlays.

ADVANTAGES

- Single component - ready to use.
- High build - up to 150mm can be applied at one pass.
- Low rebound - grading and formulation allow for excellent penetration and compaction with minimum loss of aggregate through rebound.
- Low dust - formulation ensures dust is kept to a minimum.
- Safe to handle - no added caustic accelerators.
- Excellent adhesion to concrete and steel.
- Rapid strength gain.
- Low water absorption and chloride ion diffusion.
- High resistance to carbon dioxide penetration.

PACKAGING

MasterEmaco S 810 is supplied in 30 Kg and Jambo bag 1000 Kg

TYPICAL PROPERTIES

Properties listed are only for guidance and are not a guarantee of performance

Appearance:	Grey granular powder
Densities:	Dry bulk: 1700kg/m ³
Compressive Strengths	24 hours 15N/mm ²
BS 4551 at 20°C and	28 days 40N/mm ²
0.085	
w/p ratio	
Chloride permeability:	
AASHTO T277 93:	Very low
Resistivity:	<50,000Ωcm
Maximum aggregate size:	5mm

DIRECTIONS FOR USE

SURFACE PREPARATION

All surfaces to be treated should be sound and clean. All traces of oils, greases or surface contaminants and laitance should be removed by water, grit blasting or scabbling. All traces of rust and corrosion products should be removed by wet or dry blasting from exposed reinforcing steel to achieve SA 2½ according to Swedish standard SIS 055900.

The prepared substrate should be thoroughly soaked with clean water and all standing water removed before the application of **MasterEmaco S 810**. Extra protection can be given to reinforcing steel by the use of MasterEmaco 8100 AP (see separate data sheets).

APPLICATION

MasterEmaco S 810 should be emptied directly into the hopper of the dry process shotcrete pump. The amount of water added at the spraying nozzle will be controlled by the nozzleman - too low an addition will increase rebound and dust emission, too wet a mix will slump.

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FINISHING:

Any necessary trowelling or profiling should be done immediately after spraying has finished. If overcoating is to follow, finish with a wooden float or damp sponge.

CURING:

Normal good practice is necessary. Curing can be by use of hessian maintained in a damp condition by properly secured plastic sheeting. The most convenient method is by spray application of a film forming curing membrane from the MasterKure range.

COVERAGE:

A 25kg bag of **MasterEmaco S 810** will yield approximately 11.3 litres. Site trials are advisable to obtain accurate wastage factors due to variances in surface preparation, equipment and nozzlemen.

WATCHPOINTS

- Protect newly applied **MasterEmaco S 810** from heavy rain or frost.
- Over application should be avoided to prevent slumping away from prepared concrete surfaces or steel.
- Movement joints should be continued through the applied **MasterEmaco S 810** and sealed with a suitable sealant from the MasterSeal range.

EQUIPMENT

An extensive range of dry and wet process shotcreting and ancillary equipment is available from Master Builders Solutions affiliate MEYCO. Your representative will provide details and assistance with equipment selection on request.

EQUIPMENT CARE

All tools and equipment should be cleaned with water immediately after use.

MasterEmaco S 810 must not be left in spraying equipment or delivery hoses. Hardened **MasterEmaco S 810** can only be removed by mechanical means.

OTHER PRODUCTS

For applications requiring increased toughness and flexural strength, consider the use of **MasterEmaco S 810**. Steel fibre reinforced shotcrete mortar can often replace welded wire

fabric (mesh) in swimming pool construction, rock support and many other applications which will be subject to flexural loading. **MasterEmaco S 810** is especially beneficial for rock support in underground construction where fracture capability is an important criteria.

See separate technical data sheet.

STORAGE

Store out of direct sunlight, clear of the ground on pallets protected from rainfall. Avoid excessive compaction. Shelf life is 12 months when stored as above.

SAFETY PRECAUTIONS

As with all chemical products, care should be taken, during use and storage, to avoid contact with eyes mouth, skin and foodstuffs (which can also be tainted with vapour until product has fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. For further information, refer to the material safety data sheet.

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NOTE

Field service, where provided, does not constitute Supervisory responsibility. For additional information, contact your local MASTER BUILDERS SOLUTIONS representative.

Master Builders Solutions reserves the right to have the true cause of any difficulty determined by accepted test methods.

QUALITY STATEMENT

All products manufactured by Master Builders Solutions Egypt, or imported from Master Builders Solutions affiliate companies world-wide, are manufactured to procedures certified to conform to the quality, environment, health & safety management systems described in the ISO 9001:2015, ISO 14001:2015 & OHSAS 18001:2007 standards.

* Properties listed are based on laboratory controlled tests.

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