

MasterEmaco S 902

Cementitious rapid setting repair mortar for underwater applications

Material Description

MasterEmaco S 902 is a ready to use, fast setting, cement based marine mortar. It was specifically developed for underwater repair and restoration work.

Areas of Application

- Repairing eroded concrete or timber piles, sea walls, wharves
- Repairing leaks or joints in marine structures, concrete reservoirs, swimming pools, pipelines, well etc.

Characteristics and Benefits

- Rapid setting - quick, efficient repairs to areas exposed to wave and tide action
- Excellent adhesion - high bond strength to clean concrete and timber surfaces
- Easy to use – applied by hand
- Dense anti wash out mortar - resistant to wave action during placing
- Suitable for constant immersion - resistant to sulphurous ground waters
- Waterproof - provides a watertight seal when used to repair leaks or seal joints

Properties

Compressive strength of 50mm cubes of MasterEmaco S 902 placed at 21°C are:

Age	Compressive Strength
1 day	10 MPa
3 days	18 MPa
28 days	27 MPa

Application

Preparation

All unsound material, dust, dirt, marine life, seaweed and algae must be removed from surfaces to be restored. If applied above the waterline pre-dampen dry surfaces to eliminate rapid drying of the material.

Mixing

Mix MasterEmaco S 902 with potable water only. Water requirements vary depending on temperature, humidity and the consistency desired. Mix three volumes of MasterEmaco S 902 with approximately one volume of water will give a stiff plastic consistency.

Place MasterEmaco S 902 into container and add half the water, mix quickly with a short handled trowel, add extra water as required until no white streaks are present to get the plastic consistency required. Mix only small batches at one time, MasterEmaco S 902 must be placed within 5 minutes of mixing.

The MasterEmaco S 902 should be shaped quickly into balls of about cricket ball size and applied as soon as possible.

Do not retemper material which has begun to stiffen - discard material which has lost its plasticity.

Application

When applying MasterEmaco S 902 to eroded piles, the MasterEmaco S 902 "ball" should be centred in the cavity firmly, and quickly smoothed out from the centre to the sides with both hands, using "forward and sideways" pressure, moulding to appropriate shape and thickness.

When applying underwater, place freshly-mixed "balls" of MasterEmaco S 902 into a wire basket and lower steadily to diver. Where there is wave action or turbulence in the water, it is advisable to press the MasterEmaco S 902 firmly in place for a moment or so before smoothing it out to shape.

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Timber Pile Restoration

Remove marine growth and unsound timber by square cutting into sound wood above and below to the depth of furthest deterioration and then remove the unsound section by hand or with air tools. In cases of deep deterioration, reinforcing is required. Consult the engineer for details of the reinforcing needed. Below water, apply **MasterEmaco S 902** by hand after mixing with water to a putty-like consistency. This operation must be carried out quickly as **MasterEmaco S 902** takes its initial set within 5 minutes.

In cases of shallow deterioration only, 20-gauge galvanised chicken wire should be fastened to the pile and the **MasterEmaco S 902** built up in layers to fully encapsulate.

Concrete pile restoration, honeycombed concrete repair

Remove deteriorated concrete, rust and scale from reinforcing steel by chipping and/or sand-blasting. In cases of deep deterioration, reinforcing is required. Consult the engineer for details of the reinforcing needed. Apply **MasterEmaco S 902** underwater by hand, until adequate covering thickness is built up or restored. When repairing cracks or holes in leaking tanks open up the crack or hole to at least 15mm wide and 15mm deep and divert water if necessary with a plastic tube. Mix and ball up mortar, ramming in and holding until initial set. Tie off water diversion.

Estimating Data

20kg of **MasterEmaco S 902** mixed in accordance with recommended application directions will yield 11.2L (0.0112m³) of mortar.

MasterEmaco S 902				
L	Thickness in mm /m ²	m ³	bags /m ³	m ² /mm thickness
11.2	11.2mm	(0.0112)	89	11.2 m ²

Packaging

MasterEmaco S 902 is packaged in 20kg moisture resistant bags..

Storage & Shelf Life

MasterEmaco S 902 has a shelf life of 6 months. Store out of direct sunlight, clear of the ground on pallets protected from rainfall.

Precautions

For the full health and safety hazard information and how to safely handle and use this product, make sure that you obtain a copy of the Safety Data Sheet (SDS) from our office or website.

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Disclaimer

MasterEmaco-S902-ANZ-VI I-0523

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