

MasterCrete CI 822 (formerly MasterEmaco S 822CI)

Cementitious spray applied repair mortar for cathodic protection overlays

Material Description

MasterCrete CI 822 is a ready-to-use, cement based shotcrete mix with reduced rebound for cathodic overlays. It is specially designed for civil and mining applications using either the wet or dry shotcreting systems.

Areas of Application

Repairs to the underside of bridge decks, bridge piers and beams, tunnels, drains, sea walls, and culverts where impressed current cathodic protection systems are used.

Characteristics and Benefits

- Factory mixed - no onsite variations
- Easy to use - requires only the addition of potable water for mixing or spraying
- Economical - reduces handling and clean-up costs and speeds up repairs
- Versatile - is easily sprayed using the wet mix shotcrete system or dry mix systems
- Good working time - over one hour at 21°C
- Low resistivity - improves effectiveness of impressed current cathodic protection systems
- Controlled shrinkage - reduced cracking tendency

Properties

Age	Compressive Strength MPa (AS1012.14)	Flexural Strength MPa (AS1012.11)
24 hours	30.0	
7 days	42.0	6.0
28 days	58.0	6.6
Permeability (Taywood Method)	1.4 x 10 ⁻¹² (metres/sec.)	

Electrical Resistivity (Taywood method)	
Age	Resistivity (Ohm cm)
19 days	14400
28 days	23500
41 days	44000

All performance data is determined by testing of actual, in-place shotcreted specimens such as cores and beams taken from test panels.

Reasonable variations from the data shown can be expected, depending on the care taken in evaluating test specimens, and jobsite conditions such as the quality of substrate preparation, level of expertise of the nozzleman, curing procedures and weather.

Application

Prepare the surface to be shotcreted by removing all unsound concrete, dirt, dust and debris. For structural repairs to existing concrete members, saturate the properly prepared concrete surface for a minimum of 7 hours prior to shotcreting.

Mix **MasterCrete CI 822** with approximately 1.8-2.5 litres of water per 20kg bag.

MasterCrete CI 822 can be shotcreted in depths ranging from 10mm - 150mm in one pass.

Curing

Proper curing is extremely important. Wet curing is recommended for the first 3-5 days, after that time continue curing by the use of a quality curing compound such as **MasterKure 250**.

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Estimating Data

One 20kg bag of **MasterCrete CI 822** mixed with water yields approximately 10.2 litres (0.0102m³). This will cover approximately 10m² at 1mm thick and a bag will be sufficient to apply approximately 10mm of shotcrete to a square metre.

MasterCrete CI 822				
L	Thickness in mm /m ²	m ³	bags /m ³	m ² /mm thickness
10.2	10.2mm	(0.0102)	98	10.2 m ²

Allowance must be made for rebound and cut off for finishing which will reduce the coverage accordingly. Without allowing for cut-off, an allowance of 5-10% can be made for rebound. This is for an experienced nozzleman and ideal conditions. For overhead spraying the rebound allowance may be increased to 10-50% depending on the admixtures used. Contact your local Master Builders Solutions Technical Sales Representative for further advice.

Packaging

MasterCrete CI 822 is available in 20kg bags.

Storage & Shelf Life

MasterCrete CI 822 has a shelf life of 12 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.

Disclaimer

MasterCrete-CI 822-ANZ-VI-1124

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