

MasterEmaco S 680

Cementitious spray applied repair mortar for aggressive environments

Material Description

MasterEmaco S 680 is a ready-to-use, high alumina cement based shotcrete mix with reduced rebound. It is specially designed for sewer repair applications or where acid and/or abrasion resistance is required using dry shotcreting systems.

Areas of Application

- Repairs to brick, cast in place concrete and precast concrete sewers.
- Reinstating linings of sewers after repair with **MasterEmaco S 820Cl**.
- Tunnel linings or other places where resistance to acidic waters is required.

Characteristics and Benefits

- High Alumina clinker and cement – all ingredients reactive and form an acid resistant matrix
- Easy to use – requires only the addition of potable water for mixing for hand application or wet mix spray
- Self-healing – long term reactivity of matrix heals surface cracks increasing life of repair.
- Good working time – over one hour at 21°C
- Controlled shrinkage – reduced cracking tendency

Properties

Age	Compressive Strength MPa	Flexural Strength MPa
1 day	~70.0	~9.0
28 days	~100.0	~12.0
Bonding Strength (substrate failure)		>2.5Mpa
Coefficient of Thermal Expansion		$8.5 \times 10^{-6}/^{\circ}\text{C}$
Taber abrasion CS17 wheel		58g

** All performance data is determined by testing 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. A surface profile on old concrete should be CSP 7 or greater. If applying over recently sprayed **MasterEmaco S 820Cl** ensure that the surface has been cleaned and that the surface has not been troweled smooth. For brick lined sewers ensure that all loose mortar in the joints has been removed and that the face of the bricks is clean.

Mix **MasterEmaco S 680** with approximately 1.8-2.5 litres of water per 20kg bag.

MasterEmaco S 680 can be shotcreted in depths ranging from 10 - 150mm in one pass.

Curing

Proper curing is extremely important however given the environment (moist and humid) that this product is placed in the use of curing compounds or other forms of curing are not necessary.

Estimating Data

One 20kg bag of **MasterEmaco S 680** mixed with water yields approximately 10.2 litres (0.0102m³).

Allowance must be made for rebound and cut off for finishing which will reduce the coverage accordingly.

MasterEmaco S 680				
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

An allowance of 10-15% can be made for rebound which assumes an experienced nozzleman and ideal conditions. For overhead spraying the rebound allowance may be increased to 10-50%. Refer to Master Builders Solutions for further advice.



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Packaging

MasterEmaco S 680 is available in 20kg bags.

Storage & Shelf Life

MasterEmaco S 680 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.

Disclaimer

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STATEMENT OF RESPONSIBILITY

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NOTE

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