

MasterCrete PRI 157 (formerly MasterEmaco P 157)

SBR polymer based bonding and modifying agent for concrete and mortars

Material Description

MasterCrete PRI 157 is an aqueous emulsion of styrene-butadiene copolymer latex, specially formulated for use in cementitious mixtures to improve wear resistance, durability, waterproofing and bonding properties. **MasterCrete PRI 157** is also compatible with sulphate-resisting or high alumina cement and gypsum plaster

Areas of Application

MasterCrete PRI 157 is recommended for use:

- With cement as a bonding slurry
- In weather resistant exterior or interior renderings
- In floor screeds and toppings, or plasters for improved chemical resistance
- In repair of honeycombed and spalled concrete, beams and precast elements

Characteristics and Benefits

- Easy to use – add to mixing water to improve mortars and screeds
- Economical – can create a range of polymer modified mortars and screeds with simple ingredients and lower cement contents than non-modified mortars
- Improved workability – mortars are easier to apply
- Addition of polymer - improved bonding and impermeability and resistance to salts and other chemicals
- Controlled shrinkage - reduced cracking tendency of modified mortars

Properties

Typical mortar modified with MasterCrete PRI 157

	28 days
Compressive Strength	55-65 MPa
Flexural Strength	10-13 MPa
Tensile Strength	5-7 MPa
Bond (to substrate)	>1.5 MPa
VOC content SQAQMD 304-91	50 g/L

The performance data is typical and based upon controlled laboratory conditions. Actual performance on the job site may vary from these values based on actual site conditions.

Supply form	milky white liquid
Specific gravity	1.01
pH value	~ 10.5
Storage temperature	sensitive to frost
Application temperature	not below 5°C

Application

Surface Preparation

The substrate must be clean, sound and free of dust and loose particles, cement laitance, oil, grease, mould release oil or curing compounds which must be removed from concrete surfaces by using gritblasting or other means and a surface profile of CSP 3 and above is desired.

Clean steel reinforcing bars to a minimum grade of SA 2 according to ISO 8501-1 / ISO 12944-4. For extra protection, or when the steel is left exposed before repair work is completed, apply **MasterCrete PRI 5000** active protection cement based primer. When repairing spalled or deteriorated concrete, ensure that the concrete has been cut back to sound material and square edged.

Before applying **MasterCrete PRI 157**, be sure to pre-wet the concrete substrate thoroughly to saturate the pores completely with water. During application of MasterCrete PRI 157, the temperature of the substrate should not be below 5°C and the ambient temperature stays above that for the next 12 hours. To avoid too high a surface temperature, it is advisable to shade application areas.

Mixing

Stir well before addition to mortar mixes. Mortars should be mixed in a pan type mixer or by means of a low speed mixer (300-600rpm) with a helical paddle. Hand mixing is not recommended.

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Method of Use

Bonding slurry (priming) - apply a slurry onto the still damp substrate, with a stiff brush. The mortar must be placed wet-on-wet. If the slurry does dry, a further slurry coat must be applied. Renderings and repair mortars (to vertical surfaces) - after brushing the bonding slurry onto the prepared surface, apply immediately **MasterCrete PRI 157** mortar in average thickness of 10mm, as thicker layers tend to sag. However, several layers can be applied in quick succession. If thicker layers are applied, suitable formwork has to be used.

Screed and toppings (to horizontal surfaces)

Always place screed, topping or patching mortar onto the still wet bonding slurry. Use low water-cement ratio for thick layers of mortar. Depending on use and exposure of the flooring mortar, premix the mixing water with MasterCrete PRI 157 in ratio of 1 part MasterCrete PRI 157 to 1-4 parts of water by volume.

Application	Sand kg	Cement kg	MasterCrete PRI 157 litre	Water litre	Approx Yield (thickness) /m ²
Topping or large overlays,	2l	7	2.5	1.25	10-12mm
Concrete & Masonry Repairs, Setting & Grouting Pavers & Stone	2l	7	3.8		10-2mm

Levelling concrete	12	6	3.8		3mm
Plaster & Stucco	12	6	1	3	5-7mm
Bond slurry	7	7	3.8		6m ² @1m m

Curing

Freshly applied screeds and renderings, when mixed with **MasterCrete PRI 157**, should be kept damp and be protected from direct sunlight, rain, wind or frost, until sufficiently hardened. Excessive rapid drying may cause shrinkage, insufficient strength and other defects.

Packaging

MasterCrete PRI 157 is available in a 5 litre and 20 litre pails.

Storage & Shelf Life

MasterCrete PRI 157 has a shelf life of 12 months. Store out of direct sunlight and discard if subject to freezing.

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

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STATEMENT OF RESPONSIBILITY

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