



The Chemical Company

# EMACO<sup>®</sup> 157 PRIMER

SBR acrylic based bonding and polymer modifying agent for concrete and mortars

## DESCRIPTION

**Emaco 157 Primer** 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.

**Emaco 157 Primer** is also compatible with sulphate-resisting or high alumina cement and gypsum plaster.

## RECOMMENDED FOR

**Emaco 157 Primer** is the ideal SBR-latex 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
- In tile or mosaic bedding compounds for bedding tiles or re-fixing slip bricks

## FEATURES AND BENEFITS

- **Water resistant**
- **Excellent adhesion to concrete, steel and brick**
- **High abrasion resistance**
- **Good resistance to salts, mineral oils and many other chemicals**
- **Reduces bleeding**
- **Greatly increased durability**
- **High flexibility**
- **Plasticizing effect and reduced shrinkage**
- **Highly increased tensile strength**
- **Non-toxic.**
- **Improved corrosion protection**
- **Lower water/cement ratio**
- **Promotes high early strength in mortars**

## PERFORMANCE DATA

Typical mortar modified with Emaco 157 Primer

	28 days
Compressive Strength	55-65 MPa
Flexural Strength	10-13 MPa
Tensile Strength	5-7 MPa
Linear temp. expansion coefficient at 20°C	12.8x10 <sup>-6</sup> mm/m°K
Bond (to substrate)	>1.5 MPa
Frost/Thaw resistance	Resists alkalis, chlorides, lactic acids, sugar etc.
VOC content *	50 grams per litre

\* Test Method: SCAQMD method 304-91

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.

## SPECIFICATIONS

Supply form:	liquid
Colour:	milky white
Specific gravity:	1.01
pH value:	approx 10.5
Storage temperature:	sensitive to frost
Application temperature:	not below 5°C
Toxicity:	non-toxic

## ESTIMATING DATA

Depending on type of application (refer to "Method of Use").

## APPLICATION

### Substrate Condition

The substrate must be clean, sound and free of dust and loose particles. Cement laitance, oil, grease, mould release oil or curing compounds must be removed from concrete surfaces by using gritblasting or other means. Steel surfaces should be degreased with a suitable solvent and/or treated by gritblasting or wire brushing where necessary.

Steel rebars must also be clean from grease, oil or rust and ideally treated by gritblasting. Corroded rebars should be protected using **Barrafer A** (refer separate data sheet). When repairing spalled or deteriorated concrete, ensure that the concrete has been cut back to sound material. In cases where corrosion is absent, wire brushing to a clean bright surface is sufficient.

Before applying **Emaco 157 Primer**, be sure to pre-wet the concrete substrate thoroughly to saturate the pores completely with water. During application of **Emaco 157 Primer**, the temperature of the substrate should not be below 5°C. To avoid too high a surface temperature, it is advisable to shade application areas.

### Mixing

Stir well before use. Preferably, mixing should be done in an efficient pan type mixer or by means of a low speed drill with appropriate paddle. Hand mixing is not recommended.

### Method of use

**Bonding slurry (priming)** - Apply a slurry onto the still damp substrate, consisting of 1 part **Emaco 157 Primer** and 1 part by volume of cement, mixed to a lump-free creamy consistency. A stiff brush should be used to work the bonding slurry well into the damp surface. This slurry should not be applied in a thickness exceeding approximately 2mm. The mortar must be placed wet-on-wet. If the slurry does dry, a further slurry coat must be applied.

**Renderings (to vertical surfaces)** - After brushing the bonding slurry onto the prepared surface, apply immediately **Emaco 157 Primer** modified mortar, in average thicknesses of 10mm, as thicker layers tend to

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sag. However, several layers can be applied in quick succession. If thicker layers are applied, suitable formwork has to be used.

To provide good mechanical bond, scratch the freshly applied coat of rendering when the next coat is to be applied the following day. Mix **Emaco 157 Primer** in a ratio of 1 part **Emaco 157 Primer** to 2 parts water by volume, then use this diluted mixture as the mixing water for the sand/cement compound.

**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, pre-mix the mixing water with **Emaco 157 Primer** in ratio of 1 part **Emaco 157 Primer** to 1-4 parts of water by volume. For extreme conditions, i.e. if adhesion, waterproofing, vapour resistance or chemical resistance is critical, the recommended ratio is 1:1, in case of low loading or stress, mix 1:4.

**Repair mortars (to horizontal and vertical surfaces)** - Premix **Emaco 157 Primer** with water in ratio of 1:1 to 1:2 before mixing with sand/cement. The thinner the repair patch is, the higher the dosage rate of **Emaco 157 Primer** (ratio 1:1). Apply the **Emaco 157 Primer** modified mortar onto the still tacky bonding slurry.

**Tile or mosaic bedding compound** - Dampen the substrate as well as the tiles. Apply a bonding slurry to the damp substrate and to the back of the tile. Before the slurry starts to dry, plaster the tile with mortar in the required thickness and firmly press to the floor or wall to ensure full contact. Strike off surplus mortar and do not disturb until set. For mortar, use a 1:1 **Emaco 157 Primer** and water mixture. For thin bed applications, press the tiles straight onto the substrate using only the bonding slurry. Strut tile surfaces until set.

## CURING

Freshly applied screeds and renderings, when mixed with **Emaco 157 Primer**, 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.

## CLEANING

Clean tools with water before the material hardens.

## PACKAGING

Available in 20L pails and 205L drums.

## SHELF LIFE

**Emaco 157 Primer** should be stored out of direct sunlight. If kept in a dry place in tightly closed original packing above freezing point, it has an 18 month shelf life.

## GENERAL GUIDELINES

Materials for **Emaco 157 Primer** modified mixtures:

- Sand should be washed, well graded and free from excessive fines.
- Although **Emaco 157 Primer** is compatible with high alumina cement, hardening will be delayed. Always use fresh cement.
- Expansion joints in the substrate must be carried through the **Emaco 157 Primer** modified mixture.
- **Emaco 157 Primer** modified mixtures should be applied to damp, but never wet, surfaces. Where running water is present, this must first be sealed and plugged.
- Do not over trowel and avoid re-trowelling of setting mortar.
- **Emaco 157 Primer** may float to the surface and impair the adhesion of subsequently applied materials.
- Do not work at temperatures below 5°C.

## PRECAUTIONS

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

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## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF Construction Chemicals** publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use. **BASF Construction Chemicals data sheets are updated on a regular basis and it is the user's responsibility to obtain the most recent issue.**

## NOTE

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**BASF Construction Chemicals Australia Pty Ltd** Incorporated in NSW A.B.N. 46 000 450 288

**Sydney-Head Office:** 11 Stanton Road Seven Hills, NSW 2147 Australia Ph. (02) 8811 4200

**Newcastle:** (02) 4961 3819 **Brisbane:** (07) 3633 9900 **Townsville:** (07) 4774 7344 **Melbourne:** (03) 9549 0300

**Adelaide:** (08) 8139 7500 **Perth:** (08) 9366 2600 **Kalgoorlie:** 0417 772 355

**BASF Construction Chemicals New Zealand Head Office:** 45 William Pickering Drive, Albany, Auckland Ph: (09) 414 7233

**BASF Websites:** [www.basf-cc.com.au](http://www.basf-cc.com.au) [www.basf-cc.co.nz](http://www.basf-cc.co.nz) [www.basf-ugc.com](http://www.basf-ugc.com)