



The Chemical Company

# EMACO<sup>®</sup> 168 PRIMER

Acrylic based bonding and polymer modifying agent for concrete and mortars

## DESCRIPTION

**Emaco 168 Primer** is an acrylic-latex bonding additive that replaces all or part of the mixing water in Portland cement-based mixes or bonding slurries to improve durability and adhesive bond. It can be used on clean, sound concrete and sealed, wooden surfaces.

## RECOMMENDED FOR

**Emaco 168 Primer** is the ideal acrylic-latex to produce site mixed polymer modified cementitious repair mortars. It is recommended for use:

- With cement as a bonding slurry between old and new concrete/mortar.
- In weather resistant external or interior renderings to concrete, brickwork, cork and other thermal insulation materials.
- 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.
- As primer for cementitious repair mortars.

## FEATURES AND BENEFITS

- **Water resistant**
- **Excellent adhesion to concrete, steel and brick.**
- **Expansion and elastic modulus properties similar to concrete**
- **High abrasion resistance**
- **Good resistance to salts, mineral oils and many other chemicals**
- **Reduces bleeding**
- **Greatly increased durability**
- **Improved flexibility**
- **Plasticising effect and reduced shrinkage**
- **Greatly increased tensile strength**
- **Non-toxic. Can be used in contact with potable water**
- **Improved corrosion protection**
- **Allows lower water/cement ratio**

## SPECIFICATIONS

Supply form	liquid
Colour	milky white
Specific gravity	1.03kg/litre
Viscosity	approx 5cps
pH value	approx 10
Solubility	can be mixed with water
Storage temperature	sensitive to frost
Application temperature	not below 5°C
Physiological effect	neutral
Toxicity	nontoxic
VOC content *	<1grams per litre

\* Test Method: SCAQMD method 304-91  
Test Reports are available upon request.

## 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 wire brush, bush hammer, scabblers, gritblasting or other means.

Steel rebars must also be free from grease, oil or rust and ideally be 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 rebar corrosion is absent, wire brushing to a clean bright surface is sufficient.

Before applying **Emaco 168 Primer**, be sure to pre-wet the substrate thoroughly to saturate the pores completely with water. During application of **Emaco 168 Primer** the temperature of the substrate should not be below 5°C. To avoid too high surface temperature, it is advisable to shade application areas.

### Mixing

Use a packaged dry mix, or thoroughly mix dry, clean, sand and cement. High early Portland cement is preferred but regular Portland cement is satisfactory. Place dry mix in a clean container or mixer and slowly add the chosen **Emaco 168 Primer** dilution. Mix to a uniform consistency. A fluid consistency is suggested for thin bond coats and a stiff mix for deeper fills. Do not mix more material than can be placed within 20 minutes.

### Method of Use

**Bonding Slurry** - Brush a fluid bonding slurry mixture firmly into the surface to eliminate air pockets and improve bond. The use of Emaco 168 Primer alone as a primer and surface sealer is only recommended for some BASF formulated mortars and toppings. Refer to individual product data sheets for application details.

**Mortar** - Place mixture while bond slurry is still wet. Recoat with bonding slurry if dried. Screed and trowel into place. Work quickly and use light pressure. Keep tools clean to avoid buildup. The surface skins quickly and may become sticky. It may receive a delayed trowel by retempering with a 2:1 blend of water and Emaco 168 Primer sprinkled lightly on the surface. Delay trowelling until surface has started to tack off.

**Brush or spray application** - Brush or spray mixtures using **Emaco 168 Primer** additive will set slightly faster than normal. Proceed with application using good trade practice making sure all brushes, hoses, hoppers, etc. are cleaned frequently to prevent buildup. For block and other high suction materials be sure surface is damp just ahead of placing. Clean tools frequently with water to avoid buildup.

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## ESTIMATING DATA

As a guide the following table sets out sand cement formulations with Emaco 168 Primer/water ratios.

Application	SAND		CEMENT		BARRA	WATER	Approx
	Weight (kg)	Volume (m <sup>3</sup> )	Weight (kg)	Volume (m <sup>3</sup> )	EMUL.AC (litre)	(litre)	Yield (thickness) /m <sup>2</sup>
Topping or large overlays, thin bed terrazzo	21	0.013	7	0.0045	2.5	1.25	10-12mm
Concrete & Masonry Repairs, Setting & Grouting							
Tile & Stone	21	0.013	7	0.0045	3.8		10-2mm
Levelling concrete	12	0.0075	6	0.004	3.8		3mm
Plaster & Stucco & Tuckpointing	12	0.0075	6	0.004	1	3	5-7mm
Bond slurry	7	0.0042	7	0.0045	3.8		6m <sup>2</sup> @1mm
Rubbing Mix	7	0.0042	7	0.0045	1	3	4-5mm

- For Sand/Cement Formulations - the above are starting formulations. (Use leaner cement and coarser sands for deeper fills and non-traffic applications and apply the mixture in two or more applications to avoid shrinkage cracks).
- For **Emaco 168 Primer**/Water Ratios the above ratios are for normal conditions, when bonding or drying conditions are more critical increase the amount of **Emaco 168 Primer**. Increasing the water will reduce strengths and adhesive bond.
- Adjust water addition when aggregates are wet.

## CURING

Freshly applied patches should not be exposed to direct sunshine, wind and rain. Covering with wet hessian or plastic sheet is recommended for a period of 24 hours after placement.

## CLEANING

Tools should be cleaned with water before the material hardens.

## SHELF LIFE

**Emaco 168 Primer** has a shelf life of 18 months if stored out of direct sunlight in a dry place in tightly closed original packing, not below freezing point.

## PACKAGING

Available in 5 litre plastic jerry cans and pails of 20 litres.

## GENERAL GUIDELINES

Materials for **Emaco 168 Primer** modified mixtures:

- Sand – should be washed, well graded and free from excessive fines.

- Cement – although **Emaco 168 Primer** is compatible with high alumina cement, hardening will be delayed. Use always fresh cement.
- Expansion joints in the substrate must be carried through the **Emaco 168 Primer** modified mixture.
- Emaco 168 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 - avoid re-trowelling of setting mortar.
- Do not work at temperatures below 5°C.

## PRECAUTIONS

**Emaco 168 Primer** is not toxic but can be irritating to skin and eyes. Wear goggles and gloves when handling.

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

Field service where provided does not constitute supervisory responsibility. Suggestions made by **BASF** either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not **BASF Construction Chemicals**, are responsible for carrying out procedures appropriate to a specific application.

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