

# MasterProtect® 300

**High build, Crack-bridging, Elastomeric, protective, and waterproof coating for Concrete & Masonry**

## DESCRIPTION

**MasterProtect 300** is a single component, high performance, acrylic resin based coating for long term protection of concrete & masonry from aggressive atmospheric gases such as, carbon dioxide, sulphur dioxide and chloride ions. It is available in standard pastel colours. It can be made available in custom colours subject to prior agreement.

## RECOMMENDED USES

**MasterProtect 300** is recommended for external protection of concrete to prevent ingress of atmospheric corrosive gases, wind driven rain, and water borne chlorides.

- Applications include protection of:
- Bridges, Flyovers, Aqueducts, viaducts
- Residential & Commercial Buildings
- Multi storey car parks & podiums
- Chimneys, cooling towers and silos.
- Jetties and berths.
- Overhead water tanks.
- Industrial buildings and power plants.

**MasterProtect 300** is not recommended for application in areas likely to be submerged in water and on floors subjected to traffic

## FEATURES AND BENEFITS

- **Anti-carbonation and sulphate coating** - High resistance to CO<sub>2</sub> & SO<sub>2</sub> diffusion.
- **Resistant to diffusion of chloride ions** – suitable for marine applications.
- **UV resistant** – suitable for exposure.
- **Resists water ingress and permeable to water vapour** – suitable for exposure to splashes or wind driven rain
- **Resists dirt pick up, and growth of fungus** – suitable for use in the tropics
- **MasterProtect 300** – copes with thermal movements of buildings.
- **Washable** - coating with excellent durability

## PERFORMANCE DATA

Elongation (ASTM D 638)	>300%
Tensile strength, (ASTM D 638)	> 2.5 MPa
Adhesion, (AS 1580 408.2)	4/5 (excellent)
Dirt pickup (AS 1580 481.1.4, 12 months), on a scale of 0-5	1 (0 = 'no dirt retained')
Water vapor permeability (DIN 52615)	26.0 g/m <sup>2</sup> /24 Hours
Chloride ion diffusivity	4.98 x 10 <sup>-10</sup> cm <sup>2</sup> /s
Reduction in chloride ion ingress	97% at 28 Days
CO <sub>2</sub> diffusion resistance Equivalent air layer thickness, R	> 50m
Appearance after 2000 hr. accelerated weathering	No color change or chalking

## PROPERTIES

Aspect	Viscous Dispersion
Consistency:	Thick paste
Density:	1.35 ± 0.05 kg/litre
Volume Solids	46%
Application temperature	5°C to 40°C
DFT at 0.9 Kg/m <sup>2</sup>	300 μ
Touch dry	1 Hour at 25°C
Re-coatable:	4 Hours at 25°C
Full Care	7 Days

## APPLICATION

New masonry and concrete should be at least 14 days old before treatment and with moisture level in substrate below 7% by volume.

### Surface preparation

Correct substrate preparation is critical for optimum performance. The surface to be treated must be thoroughly cleaned. Remove all traces of formwork, release agent, grease, efflorescence, laitance, algae, or other contaminant that may prevent proper adhesion.

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Remove organic materials by scraping, brushing or high pressure water cleaning. Spores must be treated with a suitable fungicide sterilizing agent and carefully rinsed.

On non-decorated concrete surface containing blow holes and/or minor irregularities, and on some rough rendered or dashed surface, it is advantageous to use **MasterEmaco N5100** to close the surface, thus preventing the possibility of pinholes occurring. Cracks wider than hairline should be patched using **MasterBrace 1438** or sealed using acrylic caulk before treatment.

## Priming

Prime the surface using Masterseal 399 or MasterKure 181 as primer.

Allow the primer to dry for 2-3 hr (at temp. >25°C) before applying **MasterProtect 300**. At lower temperatures, allow a longer time to dry.

**Note:** If **MasterKure 181** is used as the curing membrane, priming may not be required. Contact BASF for advice.

## Mixing

**MasterProtect 300** is ready for use. Stir (do not dilute) to obtain a uniform mixture before use.

## Application

Apply **MasterProtect 300** in one coat using airless spray to achieve a wet film thickness of 650µ or in two coats each of 325µ WFT using roller or brush, with the second coat applied 2 – 4hrs after the first and at right angle to it. The prepared substrate must be air-dry when the first coat is applied. Where a textured finish is required use a medium nap roller to apply the product and over roll with a textured roller to give the desired finish in one direction only.

Only apply **MasterProtect 300** when the ambient temperature and substrate temperature are at least 5°C and will not fall below 5°C within 24 hours. To avoid condensation which influences the adhesion negatively, surface temperature during application should be at least 3°C higher than the dew point.

## Curing

**MasterProtect 300** is self-curing.

## Equipment

Airless sprayer, medium nap roller or brush.

## ESTIMATING DATA

The coverage rate is strongly influenced by the roughness and porosity of the substrate. Minimum recommended rate of application for **MasterProtect 300** is 0.45 Kg/m<sup>2</sup>/coat. Each pack of 25kg is sufficient for an area of 28 m<sup>2</sup> to achieve the recommended final dry film thickness of 300µ.

## PACKAGING

**MasterProtect 300** is available in 2kg containers.

## SHELF LIFE

Store under cover, out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air conditioned environment.

Shelf life is 12 months when stored as above.

## 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 Master Builders Solutions Material Safety Data Sheet (MSDS) from our office or our website.

## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions 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.

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