

# MasterProtect® 300

**Water based, Aliphatic Acrylic, 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
- **MasterProtect300** – copes with thermal movements of buildings.
- **Washable** - coating with excellent durability

## PROPERTIES

Aspect	: Viscous Dispersion
Density	: 1.20 ±0.10gm/cc at 25°C
Volume Solids	: 40%
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
Recoatable	: 4 Hours at 25°C

Full cure	: 7 Days
Elongation,(ASTM D 2370)	: >300% @ 300µ
Tensile strength, (ASTM D 2370)	: >1.0 @300 micron
Pull off Bond Strength (ASTM D 7234)	: >1.5 MPa or Concrete Failure
Water Vapour Transmission(ASTM E 96) @300 micron (gm/m <sup>2</sup> /24hr)	: > 70
Chloride ion penetrability (ASTM-C-1202-2007)	: Negligible
Weatherability Resistance (ASTM G 53) – QUV exposure for 1000 hr	: Passes
CO <sub>2</sub> diffusion Resistance	
Equivalent air layer thickness, R@300 micron	: > 50m
% Elongation (ASTM D 2370)	: >300% @300µ

## 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. 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 N 303** to close the surface, thus preventing the possibility of pinholes occurring. Cracks wider than hairline should be patched using MASTERFLEX 1500 or sealed using acrylic caulk before treatment.

### Priming

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

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Allow the primer to dry for 2-3hr (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 Master Builders Solutions 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 – 4 hrs 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 with in 24 hours. To avoid condensation which influences the adhesion negatively, surface temperature during application should be at least 3°C higher then 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 20kg is sufficient for an area of 22 m<sup>2</sup> to achieve the recommended final dry film thickness of 300µ.

## PACKAGING

**MasterProtect 300** is supplied in 20kg 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

It is highly recommended to use necessary PPE (Gloves, mask etc.,) during installation of the product. In case of Incidents of direct inhalation, causing dizziness/giddiness, loss of consciousness, contact with eyes etc, seek immediate medical advice. The requirements may vary depending on the application areas. Please ensure to have proper ventilation while working in confined areas. Contact Master Builders Solutions representative in case you need further details or refer to the material safety datasheet of the product to know more.

**MasterProtect300/03/0618**

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