

MasterProtect[®] 300

Elastomeric, crack bridging, waterproof and anti-carbonation coating for concrete and masonry

DESCRIPTION

MasterProtect 300 is a high performance elastomeric, waterproof coating based on water borne acrylic co-polymers. It is a single component, ready-to-use material which can be applied by brush, roller or airless spray. When cured, it provides an aesthetic, durable, breathable coating which is waterproof, crack bridging and protects the structure from water-borne aggressive agents such as chloride ions which initiate corrosion in the reinforcing steel and CO₂ which reduces the protective properties of the concrete.

TYPICAL APPLICATIONS

MasterProtect 300 is designed for the protection of reinforced concrete structures. The product is also suitable as a seamless and elastomeric waterproofing coating for timber, fibre cement and corrugated sheets, metal roofing's and asphalt.

Areas of application are:

- Concrete repairs
- Marine environments
- Bridge and highway structures
- Underpasses
- Multi storey car parks
- Commercial buildings
- Industrial buildings
- Waterproofing a variety of substrates
- Flat roofs and sloping roofs

ADVANTAGES

- Elastomeric - capable of bridging cracks
- Easily applied by roller, brush or airless spray
- Provides barrier against salts and atmospheric gases
- Waterproof - protects concrete from waterborne salts
- U.V. stable - maintains its appearance
- Breathable allows water vapour to escape from the substrate avoiding blisters

PACKAGING AND COLORS

MasterProtect 300 is supplied in 20 L pails and 18.9 L available for export only.

MasterProtect FL 100 – 25 kg bags

MasterProtect FL 200 – 25 kg bags

MasterKure181S - 210 L drums

MasterKure 181 - 200 L drums

MasterTile P 302 - 20 L pails

MasterProtect 300 is available in Light Ivory, Grey, Dark Grey and White. Other colours available upon request.

TYPICAL PROPERTIES*

Relative density	1.38 at 25°C
Solids content by volume	62%
Solids content by weight	73%
Reduction in chloride ion ingress @ 28 days	97% M40 concrete
Chloride penetration after 2000hrs accelerated weathering AASHTO T259, T260	No penetration
Appearance after 2000hrs accelerated weathering	No colour change, cracking, chalking or blistering observed
Determination of chloride ion diffusion (Vinci Test Method)	No chloride ion diffusion after 6 months
Determination of solar reflectance index	>85%
Permeability to CO ₂ EN 1062-6	S _D >100 m
Permeability to water vapour EN ISO 7783-1	Class I, S _D >5 m (permeable to water vapour)
Capillary absorption and permeability to water EN 1062-3	Class W ₃ , Low 0.1 kg/(m ² . h ^{0.5})
Crack bridging ability EN 1062-7 Method A, continuous opening of the crack Method B, cyclic opening of the crack	Class A4 1250 µm / 0.5 mm/min Class B3.1
Adhesion strength by pull-of test EN 1542	≥1 N/mm ²
Artificial weather after 2000 h EN 1062-11	No blistering No cracking No flaking Slight colour change, loss of gloss and chalking may be acceptable, but shall be described
Reaction to fire application EN 13501-1	Euro Classes
Elongation at break	>300%
Chemical resistance	Resistant to spillage of gasoline, diesel, sewage, weak acids and alkalis

Note: Take all necessary precautions when potentially faced with high application temperatures and humidity of more than 80%, consult Master Builders Solutions Technical Services department for further assistance.

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APPLICATION GUIDELINES

MasterProtect 300 can be applied by brush, roller or airless spray equipment. For airless spray application dilute with 7% (1.4 L / 20 L unit) by volume of potable water. Use a tip size of 19-23 thou.

SURFACE PREPARATION: CONCRETE / CONCRETE BLOCK WITH RENDERS

All concrete surfaces should be treated to achieve a sound, clean surface free from laitance, oil, grease, mould release agent, residual curing compound, dust or other contaminants that could impair adhesion.

PRIMING

All external surfaces should be primed with **MasterKure 181S** or **MasterKure 181** applied at approximate rate of 5 m²/L, to eliminate excessive suction and promote adhesion. In temperatures >25°C, application should be made a minimum of three hours before applying the **MasterProtect 300** coating. In cold, humid conditions 24 hours is required to ensure full solvent release.

For internal surfaces such as car park walls, columns and soffits **MasterTile P 302** may be used as an alternative primer. Please go to the latest **MasterTile P 302** datasheet for application rates and details.

Coating the concrete at an early stage prevents penetration of deleterious salts.

FILLER / SCRAPE COAT

Surface depressions, blow holes, aggregate pop-outs etc., may be rectified with:

MasterProtect FL 100 - Used for application to external and internal surfaces if required.

MasterProtect FL 200 - Used for applications to internal concrete / masonry surfaces ONLY.

The appropriate filler is tightly scraped onto the primed and dry surface to be over-coated, paying particular attention to ensure blemishes are filled. Deeper aggregate pop-outs may require filling with repair mortars such as

MasterBrace ADH 2200 / MasterEmaco N 307 in two layers.

The treated surface should be left to cure until the deepest depressions are dry to the touch before overcoating.

SURFACE PREPARATION: ROOF WATERPROOFING

Surfaces to be treated should be clean and dust free. All traces of oil, grease, mould release agent and residual curing compounds should be removed together with any other contaminant that could impair adhesion. Previous waterproofing treatments should be either completely removed or repaired. Cracks in asphalt or built-up felt systems should be filled with a joint sealant (**MasterSeal NP 472**) and allowed to cure.

PLACING / APPLICATION

MasterProtect 300 is applied to the prepared surface in two coats, the first being allowed to dry, before the second is applied.

In hot dry climates, application will be assisted by dampening brushes.

Where the roof is in poor condition, or where substantial movement is expected in the roof structure, apply a sandwich system incorporating reinforcing fabric.

In this application, the fabric is bedded into the wet film of the first coat of **MasterProtect 300** using a charged brush. Ensure that full contact is achieved and there is no air entrapped. Apply a second coat of **MasterProtect 300** when the first has dried, at right angles to the first.

Weather conditions

MasterProtect 300 is not resistant to rain until the film has dried. This may take less than 30 minutes in hot dry climates and up to 24 hours in temperate humid conditions. Generally, the product should not be applied in rain or if rain is forecast. Similarly, **MasterProtect 300** will freeze in its wet state so should not be applied to frozen substrates or when the temperature is below 5°C or likely to fall during application.

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COVERAGE / YIELD

Approximately 0.64 L/m² to achieve a DFT of 400 microns (applied in a minimum of two coats). Wet film thickness per coat ± 320 microns. This is the recommended application thickness at which all physical properties have been tested.

Minimum coverage: 0.40 L/m² to achieve a single DFT of 250 microns.

STORAGE AND SHELF LIFE

Shelf life is 12 months from date of manufacturing in unopened original containers. Product must be kept out of direct sunlight and in a dry, cool, preferably air-conditioned warehouse below 35°C temperature.

Store clear of the ground on pallets and do not stack pallets.

HEALTH AND SAFETY

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use. Use in well ventilated areas and avoid inhalation.

QUALITY AND CARE

All products originating from Master Builders Solutions Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001 and ISO 14001.

* Properties listed are based on laboratory controlled tests.

® = Registered trademark of the MBCC Group in many countries.

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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.

NOTE

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

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