

# MasterProtect® 160

Architectural anti-carbonation acrylic coating

## DESCRIPTION

**MasterProtect 160** is a tough high grade, solvent free, single component; acrylic based product for the protection of concrete, mortar, masonry, natural stone and wood against aggressive environmental attack. **MasterProtect 160** also achieves high aesthetics and is available in a wide range of colours.

## RECOMMENDED USES

**MasterProtect 160** is used for the protection of concrete facades, walls, bridge parapets, balconies, columns, beams etc against carbonation of concrete and ingress of water borne salts. **MasterProtect 160** is used as part of the BASF concrete repair system. **MasterProtect 160** is recommended where architectural or decorative finishes are required.

## FEATURES AND BENEFITS

- **Long life** -UV resistant
- **Barrier to water ingress** - waterproof and weatherproof
- **Allows structure to breathe** - permeable to water vapour
- **Keeps appearance for many years** -dirt repellent
- **Available in many colours** - decorative
- **Anti-carbonation coating** - high CO<sub>2</sub> – and SO<sub>2</sub> diffusion resistance which provides protection for the concrete substrate from carbonation of the concrete.
- **Excellent wetting and penetrating properties** – no need for separate primer adheres well on absorbent substrates.
- **MasterProtect 160 is compatible with Hydrophobic materials** - **MasterProtect 355**, and **MasterProtect H 1100** can be used as a hydrophobic priming and protection system.

## PROPERTIES

Supply form	Thixotropic paste
Colour	Various
Density (approx.)	1.45kg/litre
Solids Content	50% V/V (±0.5%)
Application Temperature	10°C - 35°C
pH Value (approx.)	9-10

Drying @ 25°C/50% RH	
Touch Dry	2hrs
Re-coat	6hrs
Serviceable	24hrs
Full Dry	7 days
Gloss level	Semi

Dirt Pick up AS 1580 481.1.4 (12 months)	1
Vapour transmission ASTM E-96 (360 micron film thickness)	25.0gm/m <sup>2</sup> /24hours
Carbon dioxide diffusion	Rb 459.6m (Engelfried method)
Chloride Ion diffusion	1.3 10 <sup>-9</sup> cm <sup>2</sup> sec <sup>-1</sup>
Elongation	524%
Tensile strength	36.4kg/cm <sup>2</sup> (ASTM D-412)
Vapour permeability DIN 5265 (500 micron thickness)	12.6 gm/m <sup>2</sup> /24hrs

## APPLICATION

### Substrate Condition

Generally applied direct to off-form concrete without residual form oils. Non-absorbent substrates have to be sound, free of dust, oil, grease etc and should be dry. Absorbent substrates also must be sound and clean but must be dampened with clean water. Honeycombs and holes should be patched prior to the application with a **MasterEmaco N 5100**. The temperature of substrate, air and material should be at least 10°C.

### Priming

The surface should be primed with **MasterProtect P 155** applied by brush or roller at a rate of not less than 0.08L/m<sup>2</sup> or 12.5m<sup>2</sup>/L (refer to **MasterProtect P 155** Data Sheet). Alternatively **MasterProtect 355** or **H1100** can be used.



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## Mixing

**MasterProtect 160** should be stirred before use. Depending on the absorbency of the substrate and type of application, the first coat of **MasterProtect 160** may be pre-diluted with up to 10% of clean water. Mix the water in with a low speed electric drill fitted with a suitable paddle.

## Method of Use

Normally, two coats of **MasterProtect 160** are applied. The second layer is applied as soon as the previous one is touch-dry ie depending on temperature and humidity within 6 hours. **MasterProtect 160** is applied by medium nap roller, brush or airless spray. The first coat of **MasterProtect 160** should not be applied to new concrete or freshly applied repair mortar until its moisture content is less than 12%. An alternative procedure is to apply a coat of **MasterProtect P 155** primer to the freshly finished repair mortar to restrict evaporative water loss in very warm conditions with low humidity and to provide a primer for the **MasterProtect 160**.

## Drying

The drying time depends very much on the kind of substrate, temperature, air circulation, thickness of film and relative humidity. High temperature and/or low humidity accelerate the drying process. At 25°C and approximately 50% humidity, a normal coat of approximately 0.2 litres/m<sup>2</sup> dries within 2 hours. NOTE: Within the first 48 hours after being applied, the coating must be protected from rain and frost. Do not allow rain to puddle on the coating.

## ESTIMATING DATA

Applied by a medium nap roller on a dense, low porosity substrate, the following consumption could be anticipated:

Application Rate per coat	Film Thickness in two coats (approximately)			
	Low profile		High profile	
	Wet	Dry	Wet	Dry
MasterProtect P 155	80 microns	20 microns	80 microns	20 microns
MasterProtect 160 2.85m <sup>2</sup> /L	335 microns	160 microns	500 microns	240 microns

## CLEANING

Since **MasterProtect 160** is an acrylic emulsion, tools and skin can be cleaned with water. Once set, remove **MasterProtect 160** mechanically.

## COLOURS

**MasterProtect 160** is available in a broad range of colours.

## PACKAGING

**MasterProtect 160** is available 15 litre pails.

## SHELF LIFE

**MasterProtect 160** has a shelf life of 12 months. Store out of direct sunlight, clear of the ground on pallets protected from rainfall.

## 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 Safety Data Sheet (SDS) from BASF office or website.

MasterProtect-160-ANZ-V7-0716

### STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this BASF 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 BASF either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not BASF, are responsible for carrying out procedures appropriate to a specific application.

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