



The Chemical Company

MASTERSEAL[®] 160

Protective & architectural acrylic anti carbonation coating

DESCRIPTION

MASTERSEAL 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. **MASTERSEAL 160** also achieves high aesthetics for quality structures. **MASTERSEAL 160** is available in a wide range of colours.

RECOMMENDED FOR

MASTERSEAL 160 is used for the protection of concrete facades, walls, bridge parapets, balconies, columns, beams etc against carbonation of concrete.

MASTERSEAL 160 is used as part of the BASF CONSTRUCTION CHEMICALS CONCRETE REPAIR SYSTEMS. **MASTERSEAL 160** is recommended where architectural or decorative finishes are required.

FEATURES AND BENEFITS

- UV resistant
- Waterproof
- Permeable to vapour
- Weatherproof
- Dirt repellent
- Decorative
- Washable on internal surfaces
- Single component
- High CO₂ – and SO₂ diffusion resistance
- Available in a wide colour range

MASTERSEAL 160 has excellent wetting and penetrating properties and adheres well on absorbent substrates.

MASTERSEAL 160 provides excellent protection in only two coats.

MASTERSEAL 160 – after drying – is dirt repellent and highly resistant to ageing. By virtue of **MASTERSEAL 160**'s high resistance to CO₂ and SO₂ diffusion, the substrate is effectively protected against the harmful effects of carbon dioxide, sulphur dioxide and chloride ions. The substrate retains its ability to breathe.

MASTERSEAL 160 is compatible with **MASTERSEAL 355**, and **360** for use as a hydrophobic priming protection system.

PERFORMANCE DATA

Tests results on **MASTERSEAL 160**
(Taywood Engineering)

Water Vapour Transmission

Water vapour transmission rate (WVT):	25g/m ² /24hr
Water vapour diffusion coefficient DH ₂ O:	2.5x10 ⁻³ cm ² /sec
Diffusion resistance coefficient (F):	101

Equivalent air layer thickness (mm) (Sd):	0.036m @ 360 microns
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Carbon Dioxide Diffusion

CO ₂ diffusion resistance coefficient (F):	9.9x10 ⁵
(After 2000 hrs weathering):	6.5x10 ⁵
Equivalent air layer thickness (R):	406m @ 410 microns
(After 2000 hrs weathering):	263m @ 400 microns

SPECIFICATIONS

Supply form	Thixotropic paste
Colour	Various
Density (approx.)	1.3kg/litre
Solids Content	
V/V (±0.5%)	50%
Application	
Temperature Min.	5°C
Temperature Max.	35°C
pH Value (approx.)	9-10
Drying @ 25°C/50% RH	
Touch Dry	2hrs
Re-coat	2-4hrs
Serviceable	24hrs
Full Dry	10 days
Gloss level	Semi

APPLICATION DIRECTIONS

Substrate Condition

Generally applied direct to off-form concrete with 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. Contact BASF Construction Chemicals sales office for recommended repair mortar. The temperature of substrate, air and material should be at least 5°C.

Mixing

MASTERSEAL 160 should be stirred before use. Depending on the absorbency of the substrate and type of application, the first coat of **MASTERSEAL 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.



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Method of Use

Normally, two coats of **MASTERSEAL 160** are applied. The second layer is applied as soon as the previous one is touch-dry ie depending on temperature and humidity within 2-4 hours. **MASTERSEAL 160** is applied by medium nap roller, brush or airless spray.

The first coat of **MASTERSEAL 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 **EMACO 168 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 **MASTERSEAL 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/m² 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. Make sure correct falls are in place to ensure run off.

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	
	Wet	Dry
MASTERSEAL 160 5m ² /L 0.2L/m ²	200 microns	100 microns

Total application rate two coats

COLOURS

MASTERSEAL 160 is available in a broad range of colours. Light grey and concrete grey are available ex stock. All other colours will be manufactured to order in minimum quantities.

CLEANING

Since **MASTERSEAL** is an acrylic emulsion, tools and skin can be cleaned with water. Once set, **MASTERSEAL 160** is very difficult to remove.

SHELF LIFE

MASTERSEAL 160 has a 12 month shelf life if kept tightly close in its original container at a moderate temperature, protected against direct sunlight.

PACKAGING

MASTERSEAL 160 is available in 15 litre pails

PRECAUTIONS

Exercise care when handling. Avoid contact with skin and eyes. If contact is made with skin, remove contaminated clothing, wash contacted area well with soap and water. If irritation persists seek medical aid. If in eyes do not rub in. Wash immediately with plenty of water.

If swallowed give a glass of water and seek medical advice. Avoid inhalation of spray mists.

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** 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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