

MASTERSEAL™ 550 EL

An elastomeric, cementitious, waterproof coating for concrete and masonry

Description

MASTERSEAL 550 EL is an elastomeric flexible, two component polymers modified cementitious system that requires only on site mixing forming ideal waterproof coating on concrete, masonry, and most other construction materials.

When cured, a 2mm thick MASTERSEAL 550 EL membrane shall accommodate movements up to 0.5mm, or up to 1.2mm when reinforced with 100% virgin polypropylene woven fabric.

Uses

- Water-retaining structures subjected to movements
- Basement-waterproofing
- To protect concrete from water, carbonation and de-icing salts.
- Waterproofing of roofs, sunken floors in bathrooms, WC, etc.
- Waterproofing coating for drinking water tanks, sumps, etc.

Advantages

- Retains flexible when submerged
- Good chemical resistance against soft water, domestic waste water, manure or other liquids moderately aggressive to mineral substrates.
- Resist to occasional foot traffic
- Water vapour permeable
- CO₂ barrier, provides anticarbonation benefits
- Excellent adhesion. Bonds to porous and non-porous surfaces.
- Non toxic-suitable for contact with potable water.
- Saves time - Can be applied to 24 hour-old concrete

Typical properties

| | |
|---------------------------------|---|
| Mixed Density | : 1850 kg/m ³ |
| Mixing Ratio, by weight | : 3 (powder) : 1(liquid) |
| Pot Life | : 120 Minutes at 25°C |
| | : 30 Minutes at 40°C |
| Recoatable | : 8 – 12 Hours |
| % elongation | : >42% (Ambient) |
| | : >30% (under water) |
| Tensile strength | : > 20 kg/cm ² |
| Water penetration (DIN 1048) | : 1.5 bars - no leakage (at 2mm DFT) |

Standard compliance

- BS 1881 Part 5 1983 - I.S.A.T.
- DIN 1048 Water Penetration Test

Specification clause

Treat the surface using MASTERSEAL 550 EL, an elastomeric flexible, two component polymers modified cementitious composite system that requires no addition of water at the site. The product shall be applied in minimum two coats to achieve total DFT of 1mm. The material shall be mixed and applied fully in accordance with the manufacturer's instructions. The product shall exhibit at least 40% elongation at ambient & 30% elongation in under water condition with tensile strength greater than 20 Kg/cm². The product shall resist 1.5 bars pressure when tested as per DIN 1048 at 2mm DFT. When applied at 2mm DFT, elastomeric coating shall be able to bridge crack up to 0.5mm width.

Directions for use

Surface preparation:

The surface to be coated must be clean and sound. Remove all traces of formwork, release agents, previous coatings, laitance and any other contaminants that may affect the bond adversely. Suitable cleaning methods include high pressure water jetting and grit blasting. Mechanical wire brushing may be appropriate for small areas. After the above surface preparation, surfaces must be thoroughly washed with clean potable water to remove all dust and loose particles.

Spalled concrete should be cut back to sound concrete and made good with a suitable cementitious repair mortar such as EMACO S48C T. All cracks and bolt holes must be cut out and filled solid with MASTERSEAL 505 or Emaco S48C T.

Mixing

MASTERSEAL 550 EL is supplied in premeasured units and should be mixed on site utilising clean containers. Slowly add the powder to the liquid and mix, using a slow speed drill fitted with a suitable paddle. Leave the mixed material to stand for 5 minutes to allow for full saturation to take place. Remix to restore the consistency. Do not mix more material than can be used in half an hour.

DO NOT RE-TEMPER WITH WATER.

Application

Always apply MASTERSEAL 550 EL to pre-dampened surface. High-suction substrates require more dampening than dense substrates. However, make sure there is no free-standing water. Apply by brush or broom. Mixed material must be used within 30 to 45 minutes, or less under hot weather conditions.

First Coat: Brush or broom the mix firmly onto the pre-dampened, prepared surface. Care must be taken not to spread the material too thinly. When the material begins to drag or "ball", do not add more liquid/water but dampen the surface again.

Second Coat: Allow at least overnight to cure before applying subsequent coats. Dampen the first coat and remove excess moisture. Brush or broom the mix onto the surface (as above) finishing in the opposite direction to the first coat.

With reinforcing mesh: 100% virgin polypropylene woven mesh is used to reinforce MASTERSEAL 550EL. Embed the mesh in thick base layer of approximately 0.5 mm thickness, covered with the first coat of MASTERSEAL 550 EL while base coat is still wet. Ensure that the mesh is a minimum of 200 mm wide when treating existing cracks, joints, junctions.

Curing

Under hot or excessive drying conditions fog-spray after the initial set has taken place for as long as practicable. In cold, humid or unventilated areas it may be necessary to leave the application for a longer time curing period or to introduce forced air movement. Never use dehumidifiers during curing periods.

Equipment Cleaning

Not hardened material may simply be removed with water.

Coverage

Each square metre will require minimum of 0.9 Kg of mixed material per layer. The coverage rate for each layer will be strongly influenced by the roughness of the substrate.

1.8 kg / m² in two coats to achieve 1 mm thickness.

3.6 kg / m² in three coats to achieve 2 mm thickness.

Packaging

MASTERSEAL 550 is available in 20kg pack and in white and grey colours.

Storage and 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 of the powder is 6 months and liquid is 12 months when stored as recommended.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice please consult BASF's Technical Services Department.

Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet. MSDS available on demand or on BASF construction chemicals web site.

Note

All BASF Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue.

Field services where provided, does not constitute supervisory responsibility, for additional information contact your local BASF representative.

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