

MASTERPROTECT 180

CONCRETE PROTECTION SYSTEM

(A non-toxic solvent free high build, protective epoxy resin coating)

GENERAL

- The area to be coated shall be marked on the drawings and on the structure.
- All areas not to be coated, but which may be affected by spillage or overspray shall be fully masked. Flora and fauna shall be protected.
- Any further areas to be coated shall be at the discretion of the Engineer and subject to re-measurement.
- All deviations from the original Bill of Quantities or scope of works must be agreed in writing with the Engineer before application starts.

SURFACE PREPARATION: CONCRETE

- All surfaces shall be free from oil, grease, friable matter and general curing compounds (wax based curing membranes shall not be used in areas to be over coated).
- Concrete surfaces shall be cleaned using high pressure water jetting, grit blasting or other methods approved by the Engineer.
- Arises shall be rounded off and surface protrusions shall be ground down to ensure a smooth substrate.
- All blow holes and other surface defects shall be made good using MasterBrace 1438.
- Ensure concrete is at least 28 days old.
- For both new and existing concrete, provide mechanical surface profiling to the substrate to CSP 3 (approximating medium-grit sandpaper) as described by the International Concrete Repair Institute.
- Do not use acid etching for surface preparation. Do not use any method that will leave fractured concrete in place. Corners shall be rounded off and surface protrusions shall be ground down to ensure a smooth substrate.

SURFACE PREPARATION: STEEL

- All previous surface treatments shall be removed, taking the surface back to base metal.
- The base metal shall be abraded and preferably shot blasted with grit, steel shot or proprietary abrasive to a minimum grade of SA 2 according to ISO 8501-1 / ISO 12944-4. Where shot blasting is impractical, pre-treatment may be carried out with pneumatic de-scaling guns, tap hammers, rotary wire brush or by flame scaling.
- Clean with solvent or a strong detergent to ensure surface is free from grease etc.
- Do not allow surface to re-oxidise before application of MasterProtect 180

MIXING

- Empty Part B (reactor) contents to Part A (base) and thoroughly using a slow speed drill fitted with a suitable mixing paddle until a uniform streak free colour is obtained. No additions or omissions are required. Mixing time shall not be more than two minutes.
- Care shall be taken to insert the mixing head slowly into the base material due to the high viscosity of the resin.

PLACING

- Apply MasterProtect 180 using good quality rollers of short haired brushes or by airless spray.
- The first coat shall be applied giving total coverage of the prepared area.
- Inspect the coating for any blow holes and other minor defects, made good with using MasterBrace 1438 by spatula or trowel.
- Apply in two coats of contrasting colours to ensure complete coverage.
- If the application is delayed for more than 16 hours at 40°C or 36 hours at 20°C after the previous coat (the higher the ambient temperature, the shorter the maximum period), then abrade the previous coat to provide an adequate mechanical key and solvent wipe with xylene immediately prior to the application of subsequent coats.
- When using airless spray, use a 45:1 or higher ratio pump with minimum 9mm diameter hoses and HD tip 19-23 thou.
- For overcoating areas due to damage etc., strip off any unsound coating completely and abrade the areas to be treated using a stiff rotary wire brush or coarse sand paper to give an adequate key. Proceed with over coating as for new work.

TEMPERATURE CONDITION

- MasterProtect 180 shall be used when the ambient temperature is above 10° C.
- Substrate temperatures should not be less than 10° C. In hot weather areas, to be coated shall be shaded from direct sunlight to prevent the substrate temperature exceeding 40° C.
- Coating shall not be applied if the humidity is likely to rise above RH 85° C or the dew point is reached before or during the application.

POTLIFE

- Approximately 30 minutes at 30°C.

COVERAGE

- 0.29 to 0.40 kg/m²/coat, two coats recommended.
- Dry film thickness: 180 to 240 microns / coat.

CURING

- Initial cure: 12 hours at 30°C.
- Final cure: 4 days at 30°C.

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