

# MasterProtect<sup>®</sup> 1812

Pitch extended epoxy coating to protect marine and waste water handling structures

## DESCRIPTION

**MasterProtect 1812** is a two components, solvent free, pitch extended epoxy resin system to provide a high build coating that protects concrete and metal substrates from a wide range of aggressive chemicals

## RECOMMENDED USES

Applications include;

- Sewage treatment tanks & pipelines
- Effluent treatment tanks, drains, pipes
- Splash zone of off-shore structures.
- Structures exposed to sulphate attack
- Below ground protection to concrete & metal structures

**MasterProtect 1812** is not recommended for surfaces in contact with potable water and food stuffs.

## FEATURES AND BENEFITS

- **Resists abrasion**.- suitable for contact with grit containing streams
- **Suitable for both industrial and marine environments** - Resistant to a broad spectrum of chemicals.
- **High film build** – durable.
- **Adheres to damp surfaces** – suitable for marine environments
- **Easy application** – brush, roller or spray.

## PERFORMANCE DATA

DFT, in two coats	300 microns
Touch dry at 25°C	4 Hours
Recoat at 25°C	12 Hours
Final cure at 25°C	5 Days
Adhesive strength ASTM D 4541	>1.5 MPa (concrete failure)
Abrasion Resistance, (ASTM D4060, CS17 wheel)	17 mg / 1000 cycles
Slant shear bond strength (ASTM C882)	> 10 MPa

## PROPERTIES

Aspect	Black viscous liquid
Volume Solids	100%
Mixed density	1.65 kg/litre
Mixed Viscosity	6000 cps at 25°C
Pot life	60 Minutes at 25°C 30 Minutes at 40°C

- Resistance to chemicals
- Sea water
- Effluent
- Sewage
- Dilute acids and alkalis

Resistance to aggressive environment Exposure to accelerated weathering (ASTM D4587-91)	No cracking No blistering No flaking
Exposure to salt spray (Hong Kong CE department, model spec for protective coating)	Resistant
Exposure to sewage (MTS international test method)	Resistant
Exposure to marine environment -cyclic immersion in chloride solution	Resistant

## STANDARDS

ASTM C881, Type III, Grade 2, Class C.

## APPLICATION

### Surface preparation

It is most important to ensure that thorough surface preparation is undertaken prior to application of the **MasterProtect 1812** coating.

### Concrete

Ensure concrete is at least 28 days old and sound. Oil, grease, mould release agent, curing membrane, and such other contaminants must be removed by mild detergent and water, and by thoroughly scrubbing with a soft brush.

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If the wall surface is damp or water is seeping out, it is necessary to stop the leakage before coating. For advice on the appropriate method for the site situation, contact Master Builders Solutions.

It is important to note that the final finish obtained is entirely dependent on the surface finish of the substrate.

Even out all unevenness such as blowholes, pin holes and other surface defects with **MasterBrace 2200** before application of coating.

## Steel

Remove all previous surface treatments and corrosion products by sand/shot blasting to SA 2½ finish or to bright metal finish. Application of **MasterProtect 1812** should be straight after the steel preparation to prevent surface rusting.

## Mixing

**MasterProtect 1812** is supplied in pre-proportioned kits for complete mixing. Properly stir each component separately before mixing together to ensure uniform consistency. Combine Hardener and Base component in a suitably sized container. Ensure to scrape the sides of the containers to ensure a complete reaction.

Mix properly for 3 minutes with a slow-speed drill and wing style mixing paddle at 300 - 400 rpm until a homogeneous colour is achieved. Keep the paddle below the surface to avoid entrapping air. Do not mix by hand.

## Application

**MasterProtect 1812** can be applied using short nap roller, shorthaired brushes or by airless spray.

Apply in two coats, each at a W.F.T. of 150 microns, the second coat applied after the first coat has dried (4-6 hours at 30°C) and at right angles to it. Should the application of second coat be delayed, abrade the previous coat to give an adequate mechanical key and wipe with a suitable solvent before the application.

## ESTIMATING DATA

**MasterProtect 1812** Each 6kg pack yields 3.6 L on mixing and is sufficient to coat approximately 12 m<sup>2</sup> in 2 coats each of 150 microns (300µ in two coats) on a fair faced concrete surface. Actual coverage depends on the numbers of coats, surface profile, loss and wastage.

## PACKAGING

**MasterProtect 1812** is available in 15kg and 20kg packs.

## SHELF LIFE

**MasterProtect 1812** 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 Master Builders Solutions 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 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

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### MB Solutions Singapore Pte Ltd

1 Harbourfront Avenue #07-07/08  
Keppel Bay Tower, Singapore 098632  
Tel : +65 6232 4888