

MasterRoc[®] PT 180

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

DESCRIPTION

MasterRoc PT 180 is a protective high build epoxy resin coating specifically developed to protect concrete tunnel segments. Supplied as a two-pack system comprising pigmented base and a hardener, it requires only on site mixing to produce an easily applied protective and chemically resistant finish. **MasterRoc PT 180** can be safely used in areas such as coating of potable water storage tanks. It is solvent free and can be used with safety in small rooms or tanks without the need to provide special ventilation. **MasterRoc PT 180** coatings will not support the growth of bacteria.

PRIMARY USES

For the external protection of concrete used for tunnel segmental linings exposed to ground water, certain chemicals, oils and fuel. Contact your Master Builders Solutions representative for further advice.

As an impervious, resilient and chemically resistant floor or wall coating in food manufacturing plants, breweries, canning and bottling factories. As a gas and vapour barrier.

As a protective and decorative coating in laboratories, abattoirs, etc. Other usage areas include oil refineries, paper mills, power stations, garages, hospitals, sugar refineries, hangars and most liquid containment areas.

APPEARANCE AND FINISH

High gloss, heavy bodied, ultra dense surface. Hygienic and easily cleaned. Standard colours are light grey and dusty grey.

ADVANTAGES

- Durable
- Non-toxic
- Waterproof and protective
- High chemical resistance
- High temperature water resistance
- Solvent free
- High build coating
- Easily applied by brush, roller or airless spraying equipment

PACKAGING

MasterRoc PT 180 is supplied in 5 kg units.

TYPICAL PROPERTIES*

Working life at 25°C	40 minutes
Mixed density at 25°C	1.5 g/cm ³
Initial cure	24 hours @ 25°C
Final cure	7 days @ 25°C
Coverage	0.3-0.6 kg / m ² / coat
Wet film thickness	200-400 microns per coat dependent on ambient temperature
Bond to concrete	In excess of the cohesive strength of concrete

APPROVALS

WRAS Approval for use with Potable Water.
 Note: For BS 6920 conformity test, product was applied in 2 coats; the first was cured @ 20°C for 36 hours and second coat cured @ 20°C for 21 days.

APPLICATION GUIDELINES

SURFACE PREPARATION

The substrate should be a smooth or semi-smooth sound surface such as concrete or metal. It is most important to ensure that thorough surface preparation is undertaken prior to application of the **MasterRoc PT 180** coating.

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CONCRETE

Ensure concrete is free from excessive laitance, grease, oil, curing compound, etc. Ensure concrete is sound, cutting back where necessary and making good using suitable Master Builders Solutions **MasterEmaco** or **MasterBrace** repair systems. Ensure all blow holes and surface imperfections are made good prior to application of the **MasterRoc PT 180** coating.

Ensure concrete has less than 4% moisture on the surface. Contamination by oil, grease, fats etc. must be removed before other forms of preparation begin. Remove laitance to expose blow holes, by light grit blasting.

STEEL

All previous surface treatments should be removed taking the surface back to base metal. The base metal should be abraded and preferably shot blasted with grit, steel shot or proprietary abrasive. Where shot blasting is impractical pre-treatment may be carried out with pneumatic de-scaling guns, tap hammers, rotary wire brushes or by flame scaling. Cleaning with solvent or a strong detergent is advisable to ensure surface is free from grease etc. Do not allow surface to re-oxidise before application of **MasterRoc PT 180**.

MIXING

MasterRoc PT 180 is supplied in two pre-weighed components, base and reactor. No additions or omissions are required. Add reactor contents to the base component and mix thoroughly for using a slow speed drill fitted with a suitable mixing paddle until a uniform streak free colour is achieved.

PLACING / APPLICATION

MasterRoc PT 180 coating can be applied using good quality rollers or short haired brushes or by airless spray. It is recommended that **MasterRoc PT 180** coating be applied in two coats of contrasting colours to ensure complete coverage.

Prior to the application of each coat the surface should be examined for signs of pin-holing, etc. Where pin-holing is evident these should be filled using **MasterBrace ADH 2200** thixotropic epoxy resin filler

If the application is delayed 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 the previous coat must be thoroughly abraded to give an adequate mechanical key and solvent wiped.

AIRLESS SPRAY

For application by airless spray, use a 45:1 or higher ratio pump, minimum 9mm dia hoses and HD tip 19-23 thou.

OVERCOATING

Where areas need to be overcoated due to damage etc. it is important that the areas to be treated are well abraded using a stiff rotary wire brush or coarse sand paper to give an adequate key. Completely strip off any unsound coating and proceed with overcoating as for new work.

CHEMICAL RESISTANCE

MasterRoc PT 180 is resistant to intermittent spillages of the following typically encountered chemicals:

- Formaldehyde, 40% solution
- Sulphuric Acid, 50% solution
- Hydrochloric Acid, 50% solution
- Hydrochloric Acid 5% solution
- Lactic Acid, 50% solution
- Nitric Acid, 10% solution
- Sodium Hydroxide, 50% solution
- Diesel oil
- Wine
- Sea and brackish water
- Aviation hydraulic fuels (Skydrol)
- Vegetable oils

Note: Higher concentration of mineral acids may cause matting of the surface and colour changes.

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CLEANING

All equipment must be cleaned immediately after use with a suitable thinner Xylene / MEK / Acetone. Similar cleaning procedures should be adopted for break periods exceeding 15 minutes duration.

SPECIFICATION CLAUSE

MasterRoc PT 180: Where indicated, apply **MasterRoc PT 180** protective epoxy coating as manufactured by Master Builders Solutions, or similar approved to the following specification:

Composition:	Two component, non-toxic, pigmented solventless epoxy resin based compound.
Coverage:	0.3-0.6kg/m ² /coat, two coats are recommended.
Wet film thickness:	200 to 400 microns/coat.

STORAGE

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. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult Master Builders Solutions Technical Services Department.

HEALTH AND SAFETY

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. For further information, refer to material safety data sheet.

QUALITY AND CARE

All products originating from Master Builders Solutions Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001 and ISO 14001.

* Properties listed are based on laboratory controlled tests.

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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

Field service where provided does not constitute supervisory responsibility. Suggestions made by Master Builders Solutions either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not Master Builders Solutions, are responsible for carrying out procedures appropriate to a specific application.

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