

MasterProtect 180

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

MATERIAL DESCRIPTION

MasterProtect 180 is a protective high build epoxy resin coating specifically developed to protect concrete and steel. Supplied as a two-pack system comprising pigmented base and a hardener, it requires only on site mixing to produce an easily applied decorative and chemically resistant finish. **MasterProtect 180** can be safely used in areas where contact with foodstuffs is envisaged or for coating potable water storage tanks. **MasterProtect 180** coatings will not support the growth of bacteria.

PRIMARY USES

For the internal protection of concrete or metal tanks containing drinking 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 colour is light grey.

ADVANTAGES

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

PACKAGING

MasterProtect 180 is supplied in 5 Kg units.
Part A = 4.358kg; Part B = 0.642kg

TYPICAL PROPERTIES*

Working life @ 25°C	30 minutes
Mixed density @ 25°C	1.5g/cm ³
Initial cure	24 hours @ 25°C
Final cure	7 days @ 25°C
Coverage	0.29 – 0.40kg / m ² / coat
Finish film thickness	180-240 microns per coat
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 PROCEDURE

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 **MasterProtect 180** coating.

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 **MasterProtect 180** coating.

Ensure concrete is at least 28 days old. 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

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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 **MasterProtect 180**.

Mixing:

MasterProtect 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 using a slow speed drill fitted with a suitable mixing paddle until a uniform streak free colour is achieved.

Application:

MasterProtect 180 coating can be applied using good quality rollers or short haired brushes or by airless spray. It is recommended that **MasterProtect 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 diameter 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 sandpaper to give an adequate key. Completely strip off any unsound coating and proceed with overcoating as for new work.

CHEMICAL RESISTANCE

MasterProtect 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.

EQUIPMENT CARE

All equipment must be cleaned immediately after use with Methyl Ethyl Ketone. Similar cleaning procedures should be adopted for break periods exceeding 15 minutes duration.

SPECIFICATION CLAUSE

MasterProtect 180: Where indicated, apply **MasterProtect 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: 0.29 to 0.40kg/m²/coat, two coats are recommended.

Dry film thickness: 180 to 240 microns/coat.

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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.

SAFETY PRECAUTIONS

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.

NOTE

Technical support, where provided, does not constitute supervisory responsibility. For additional information contact your local MB Construction Chemicals Solutions

South Africa (Pty) Ltd representative. MB Construction Chemicals Solutions South Africa (Pty) Ltd shall not be liable for technical advice provided.

MB Construction Chemicals Solutions South Africa (Pty) Ltd reserves the right to have the true cause of any difficulty determined by accepted test methods. Undertaking such tests is not, and shall not be deemed to be, an admission of liability or an assumption of any risk, loss, damage or liability.

QUALITY AND RESPONSIBLE CARE

All products originating from MB Construction Chemicals Solutions South Africa (Pty) Ltd are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001, environmental and occupational health and safety standards.

* Properties listed are based on laboratory controlled tests.

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