

MasterProtect® 1814

A non-toxic, semi flexible high build, epoxy polysulfide coating for wholesome water

DESCRIPTION

MasterProtect 1814 is a protective semi flexible high build epoxy polysulfide resin coating specifically developed for applications in areas where contact with wholesome water storage tanks or foodstuffs is envisaged. **MasterProtect 1814** protects concrete and steel from contact with aggressive chemicals, oils, mild acids, solvents and has a broad spectrum of chemical resistance. Supplied as a two-pack system, comprising pigmented base and a hardener, it requires only on-site mixing producing an easily applied decorative and chemically resistant finish. **MasterProtect 1814** coatings will not support the growth of bacteria. **MasterProtect 1814** has been tested according to BS 6920 conformity test for use in water up to 50°C.

TYPICAL APPLICATIONS

- Internal protection of concrete or metal tanks containing drinking water, cold warehouse, food freezers, certain chemicals, oils and fuel.
- As an impervious, resilient and chemically resistant floor or wall coating and as a gas and vapor barrier.
- As a protective and decorative coating in laboratories, abattoirs, etc.
- Other usage areas include oil refineries, paper mills, power stations, marine applications, garages, hospitals, hangars and most liquid containment areas.

Contact your Master Builders Solutions representative for further advice.

APPEARANCE & FINISH

High gloss, heavy bodied, ultra-dense surface. Hygienic and easily cleaned.

ADVANTAGES

- Non-toxic
- Safe for use with wholesome water
- Waterproof and protective
- Durable
- Crack bridging ability
- UV resistant
- Superior chemical resistance
- Easily applied by brush or roller

PACKAGING AND COLORS

MasterProtect 1814 is supplied in 15 L units. Standard color is RAL 7035 and RAL 7040. Other colors available upon request.

TYPICAL PROPERTIES*

Mixed density at 25°C		1.50 kg/L
Pot life	@40°C	40 min
	@25°C	65 min
Tack free time	@25°C	9 h
	@40°C	6 h
Inter coat time	@25°C	9 h
	@40°C	6 h
Tensile strength at 7 days (ASTM D 412)		>7 MPa
Elongation at 7 days (ASTM D 412)		>15 %
Tear Strength (ASTM D 624 Angle C)		> 30 kN/m
Hardness (Shore D)		>65
Pull-off strength		> 10 N/mm ²
Accelerated Weathering (ASTM G53-96) 500 h		Resistant
Adhesion to steel		Excellent
Adhesion to concrete		Concrete failure
Chloride Permeability (ASTM C 1202-18)		Nil
Water Permeability at 5 bars (DIN 1048 part 5)		Nil
Abrasion Resistance (ASTM D 4060) Wheel CS-10 / weight 500 g / 500 cycles		< 50 mg
Crack Bridging Ability (ASTM C 836/C836-18)		> 2 mm

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APPLICATION GUIDELINES

SURFACE PREPARATION

All surfaces, concrete or metal shall be cleaned using high pressure water jetting, grit blasting or other methods approved by the engineer to provide adequate mechanical key for excellent bonding as further indicated in the method statement. It is most important to ensure that thorough surface preparation is undertaken prior to application of the **MasterProtect 1814** 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 **MasterEmaco** or **MasterBrace** repair systems. Ensure all blow holes and surface imperfections are made good prior to application of the **MasterProtect 1814** coating.

On a well-prepared surface **MasterProtect 1814** can be applied without the use of primer, in case the concrete is porous, apply a primer coat using **MasterEmaco P 102** allow to tack free prior to applying **MasterProtect 1814**.

Ensure concrete is sound and at least 28 days old and the moisture content is less than 4%. 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 or any other method as described in the method statement.

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-oxidize before application of **MasterProtect 1814**.

MIXING

MasterProtect 1814 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 color is achieved.

PLACING / APPLICATION

MasterProtect 1814 coating can be applied using good quality rollers or short haired brushes or by airless spray. It is recommended that **MasterProtect 1814** coating be applied in two coats of contrasting colors to ensure complete coverage.

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. For wholesome water application wait for 14 days application prior to use.

APPLICATION TEMPERATURE

The quality of the final coating is dependent on the substrate and the material temperatures. We recommend a substrate temperature of min. +10°C and max. +45°C. The optimal material temperature of +20°C to +25°C is ideal as it will have a longer pot life which helps in increased application time.

For Wholesome water application material needs to be applied in temperature-controlled environment (use cooler in case of high temperature and hot air blower for low temperature), maintain min 30 °C for 7 days to ensure full cure property of wholesome water coating.

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.

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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 1814 is resistant to the various typically encountered chemicals:

- Gasoline
- Diesel Fuel
- Isopropanol
- Sodium Chloride Saturated
- Sodium Hydroxide 50%
- Ammonium Hydroxide 50%
- Nitric Acid 20%
- Sulphuric Acid 10%
- Hydrochloric Acid 5%
- Acetic Acid 10%
- Lactic Acid 10%
- Sea and brackish water

CLEANING

All equipment must be cleaned immediately after use with a suitable thinner (Xylene / MEK / Acetone).

SPECIFICATION CLAUSE

Where indicated, apply **MasterProtect 1814** protective epoxy polysulfide coating as manufactured by Master Builders Solutions, or similar approved to the following specification:

Composition: Two components, pigmented non-toxic, epoxy polysulfide resin-based compound.

Coverage: 0.25L/m²/coat, minimum two coats are recommended. Dry film thickness: 500 microns. Higher thickness shall be applied with multiple layers application.

The full pack of 15 liters of **MasterProtect 1814** will cover 30 m² theoretically at 0.5 mm thickness.

Note: The mentioned coverage is entirely subject to surface finish, smoother surface will achieve the mentioned coverage accordingly.

STORAGE AND SHELF LIFE

Shelf life is 12 months when stored under cover, out of direct sunlight and protected from extremes of temperature.

HEALTH AND SAFETY

Read and follow all caution statements and on the MSDS for this product. Employ good workmanlike safety precautions. Wear protective clothing, gloves and eye protection.

When used as a tank lining or in enclosed areas through air circulation must be used during and after application until the application is cured. In addition to ensuring proper ventilation, appropriate respirators must be used by all application personnel. Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use.

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.

® = Registered trademark of the MBCC Group in many countries.

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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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