

# MasterProtect<sup>®</sup> 1816

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

## DESCRIPTION

**MasterProtect 1816** is a protective 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 1816** 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 1816** coatings will not support the growth of bacteria. **MasterProtect 1816** has been tested according to BS6920 (High Temperature Usage) and is approved for use in cold & hot water up to 50°C.

## PRIMARY USES

For the internal protection of concrete or metal tanks containing drinking water, cold warehouse, food freezers, certain chemicals, oil 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 AND FINISH

High gloss, heavy bodied, ultra dense surface. Hygienic and easily cleaned. Standard colors are window grey and black.

## ADVANTAGES

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

## PACKAGING

MasterProtect 1816 is supplied in 10 liter.

## TYPICAL PROPERTIES

Volume Solids	100 %
Mixed Density at 25°C	1.234 kg/l
Pot Life at 25°C	50 min
Tack free time at 25°C	7 h
Full cure at 25°C	7 days
Inter-coat time at 25°C	9 h
Tensile strength at 7 days ASTM D412	6.5 MPa
Elongation at 7 days ASTM D412	64%
Hardness (Shore D) ASTM D2240	47
Adhesion to steel	Excellent
Adhesion to concrete	Concrete failure
Chloride Permeability AASHTO T-277	Nil
Water Permeability at 5 bars DIN 1048	Nil

## APPLICATION PROCEDURE

### SURFACE PREPARATION:

Surfaces must be clean and dry. Use suitable methods to remove dirt, dust, oil, and all other forms of contamination that could interface with the adhesion of the coating.

### CONCRETE:

Concrete must cured for 28 days. Mechanically surface profile the substrate to CSP3 as described by the International Concrete Repair Institute. Voids and pinholes must be repaired with suitable products from **MasterBrace** range.

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## STEEL:

Prepare to SSPC-SP6. Surface profile 50 – 75 micron. Do not allow surface to re-oxidise before application of **MasterProtect 1816**.

## MIXING:

**MasterProtect 1816** 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 at least 3 minutes using a slow speed drill fitted with a suitable mixing paddle until a uniform streak free color is achieved.

## APPLICATION:

MasterProtect 1816 coating can be applied using good quality rollers or short haired brushes or by airless spray. It is recommended that MasterProtect 1816 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. +14°C and max. +30°C. The optimal material temperature is +20°C to +25°C. 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 14°C for 14 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.

## OVERCOATING:

Where areas need to be over coated 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 over coating as for new work.

## CHEMICAL RESISTANCE

**MasterProtect 1816** is resistant to the following typically encountered chemicals:

- Formaldehyde
- Ammonium hydroxide
- Hydrochloric Acid
- Phosphoric Acid
- Sodium Chloride Saturated
- Vegetable oil
- Sodium hydroxide
- Deionized water
- Diesel oil
- Gasoline
- De-icing salt
- Chlorine water – 50ppm

## EQUIPMENT CARE

All equipment must be cleaned immediately after use with MasterTop Thinner No. 2. Similar cleaning procedures should be adopted for break periods exceeding 15 minutes duration.

## SPECIFICATION CLAUSE

Where indicated, apply **MasterProtect 1816** protective epoxy polysulfide coating as manufactured by Master Builders Solutions or similar approved to the following specification:

Composition:	Two component, non-toxic, pigmented epoxy polysulfide resin based compound.
Coverage:	Two coats at 0.25L/m <sup>2</sup> /coat
Dry film thickness:	500 microns

## 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

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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's 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 & animals.

Reseal containers after use. For further information, refer to material safety data sheet.

## NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local Master Builders Solutions representative.

Master Builders Solutions reserves the right to have the true cause of any difficulty determined by accepted test methods.

## QUALITY AND CARE

All Master Builders Solutions Products are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health and safety standards of ISO 9001 and Master Builders Solutions ESHQ recommendations.

\* Properties listed are based on laboratory controlled tests.

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

## CONTACT

Should you require any further information, please do not hesitate to contact us:

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### Disclaimer:

In view of widely varying site conditions and fields of application of our products, this technical data sheet is meant to provide general application guidelines only. This information is based on our present knowledge and experience. The customer is not released from the obligation to conduct careful testing of suitability and possible application for the intended use. The customer is obliged to contact the technical help-line for fields of application not expressly stated in the technical data sheet under "Fields of Application". Use of the product beyond the fields of application as stated in the technical data sheet without previous consultation with Master Builders Solutions and possible resulting damages are in the sole responsibility of the customer.

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