

MasterProtect[®] 190

A two component solvent free high build flexible epoxy polyurethane resin coating system

DESCRIPTION

MasterProtect 190 is a two-component solvent free, liquid epoxy polyurethane resin. The superior adhesion and chemical resistance of the epoxy resin, in combination with the flexibility of polyurethane and water resistant qualities of epoxy produce a system that will provide a high build, ultra dense coating to protect concrete, other cementitious substrates, and metal, against a wide range of aggressive media present in the sewerage environment. The coating will not support the growth of bacteria. **MasterProtect 190** in appearance, is smooth, the unique formulation of the system with the aliphatic polyurethane modification exhibit some degree of the flexibility and better resistance to U.V. **MasterProtect 190** is high gloss in finish, heavy bodied, ultra dense surface. Hygienic and easily cleaned. Standard colors are light grey, dark grey, black, white, red, green and blue.

TYPICAL APPLICATIONS

MasterProtect 190 is particularly suitable for use in offshore or marine environments and sewerage work applications such as aeration tanks clarifiers and permanent submerged condition where chemical resistance is of paramount importance. MasterProtect 190 is used to provide heavy-duty protective, waterproof, and flexible coating. Uses include the lining of tanks, pipes and ducting, coating concrete, asbestos cement, steel pipes and nonferrous metals.

ADVANTAGES

- No primer required.
- Limited UV resistant.
- High build coating,
- Easy application: brush, roller or spray.
- Economical.
- Excellent chemical resistance to aqueous media
- Non-solvented.
- Excellent broad-spectrum chemical resistance.
- Abrasion resistant.
- Seamless finish. \
- Pre-weighed components.
- Long-term corrosion protection.

PACKAGING

MasterProtect 190 is supplied in 10 Liter.

TYPICAL PROPERTIES

Pot life :	30°C 30 mins
Tack free time :	approx. 4 hours at 35°C
Initial cure :	12 hours at 30°C
Final cure :	4 days at 30°C

STANDARDS

BS 5493.

TYPICAL PROPERTIES

Water Absorption:	Nil % (ASTM C413-88)
Linear shrinkage	0.48mm(1.65%) (ASTM C531-85)
Modulus of elasticity:	1.18 PSI x 105
Solids:	~100%
Tensile Strength:	9.6 N/mm2 (BS 2782)
Elongation at break:	25-30% (BS 2782)
Adhesion strength:	2.2 N/mm ²
Specific gravity:	1.47-1.62 gm/cm ³ at 25°C

SPECIFICATION CLAUSE

Where indicated apply **MasterProtect 190** protective epoxy coating as manufactured by Master Builders Solutions, or similar approved to the following specification
 Composition:
 Two component, non-toxic, pigmented solvent less epoxy polyurethane resin based compound.
 D.F.T. 180 to 240 microns/ coat.

CHEMICAL RESISTANCE

MasterProtect 190 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

Tests were carried out in accordance with ASTM D 1308 conducted at room temperature and specimens were soaked in the solution for a period of 7 days of

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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 190** 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 190** 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 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 190**.

MIXING:

MasterProtect 190 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.

APPLICATION:

MasterProtect 190 coating can be applied using good quality rollers or short haired brushes or by airless spray. It is recommended that **MasterProtect 190** coating be applied in two coats of contrasting colors 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.

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.

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's Technical Services Department.

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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

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.

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CONTACT

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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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