

# MasterProtect<sup>®</sup> 1896

High performance corrosion resistant vinyl ester coating

## DESCRIPTION

**MasterProtect 1896** is a non-toxic high performance vinyl ester corrosion resistant protective coating for application on concrete and steel substrates. In addition to excellent physical strength, impact and thermal shock resistance **MasterProtect 1896** also exhibits superior resistance to acids, alkalis, hypochlorites and many solvents. **MasterProtect 1896** is airless spray applied on to the substrate. It can also be used in combination with a heavy duty reinforcing layer of fiberglass cloth to form a protective chemical resistant lining. Supplied as a two-pack pre-catalysed system comprising of vinyl ester resin and a catalyst. It requires only on site mixing producing an easily applied chemically resistant finish. Ultimate protection is developed within 4 days at room temperature (25°C) and can take longer for temperatures below this.

## PRIMARY USES

**MasterProtect 1896** is used to ensure excellent bond strength to concrete and steel as well as secondary protective layer. **MasterProtect 1896** system offers maximum corrosion and temperature resistance protection to concrete and steel structures against acids, alkalis, hypochlorites and solvents.

**MasterProtect 1896** can also be used as a gas and vapor barrier coating or as a primer. Other usage areas include oil refineries, paper mills, power stations, garages, tanks, silos for storage, cement silos, hospitals, sugar refineries, hangars, laboratories and most chemical containment areas.

Contact your Master Builders Solutions representative for further advice.

## APPEARANCE AND FINISH

Light Grey, Light Blue, Light Yellow and has slight gloss.

## ADVANTAGES

- Durable
- Service temperature up to 105°C\*
- Waterproof and protective
- High chemical resistance
- Exceptional adhesion to concrete and steel
- Pre-catalysed
- Non-toxic when fully cured
- Easily applied by brush or roller

## PACKAGING

**MasterProtect 1896** comprises of vinyl ester resin as base and pre-weighed catalysed as reactor unit. These components are supplied in 20 kg units.

## TYPICAL PROPERTIES\*

Pot-Life	15 minutes @ 25°C
Bond to concrete	Concrete failure-3.0 MPa
Mixed density	1.15 Kg / L
Heat Deflection Temperature	105°C

## APPLICATION PROCEDURE SURFACE PREPARATION

### 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. Steel surface should be grit blasted according to specifications to meet a minimum profile of 70 µm

Cleaning with solvent or a strong detergent is advisable to ensure surface is free from grease etc. Following surface preparation, one coat of **MasterProtect 1896** should be applied at a film thickness of approximately 150 µm. Two coats are recommended. Do not allow surface to re-oxidise before application of **MasterProtect 1896**.

### 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 1896**.

Ensure concrete is at least 28 days old and has a minimum compressive strength of 25 MPa and has a moisture content of less than 2% by mass of concrete. 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 prior to priming grit blasted surface with **MasterProtect 1896**.

# MasterProtect® 1896

High performance corrosion resistant vinyl ester coating

## MIXING

**MasterProtect 1896** is supplied in two pre-weighed components, liquid resin and catalyst. Add catalyst contents to the liquid resin and mix thoroughly using a slow speed drill fitted with a suitable mixing paddle. To ensure an even distribution of catalyst for curing DO NOT PART MIX.

## APPLICATION

Substrate temperature to receive **MasterProtect 1896** should be at above 10°C for proper application. Coat concrete surface with **MasterProtect 1896** to 300 µm thick (WFT).

Ensure that the surface is tack free before proceeding. **MasterProtect 1896** can be applied using good quality rollers or short haired brushes or airless spray. We recommend airless spray.

## 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 or sand blasted to give an adequate key. Completely strip off any unsound coating and proceed with priming as for new work.

## CHEMICAL RESISTANCE

**MasterProtect 1896** is resistant to the following typically encountered chemicals up to 100°C

- Acetic Acid, 25% concentration
- Aluminum Chloride, 100% concentration
- Aluminum Chlorohydroxide, 50% concentration
- Ammonium Thiocyanate, 20% concentration
- Barium Chloride, 100% concentration
- Benzene Sulfonic Acid, 30% concentration
- Carbon Monoxide Gas, 100% concentration
- Hydrochloric Acid, 36% concentration (52°C)
- Lactic Acid, 100% concentration
- Mineral Spirits, 100% concentration
- Aviation hydraulic fuels (Skydrol)
- Motor Oil, 100% concentration
- Phosphoric Acid, 100% concentration
- Sea Water, 100% concentration
- Sulfuric Acid, 25% concentration
- Vinegar, 100% concentration
- Ammonium Hydroxide, 28% concentration (resistant up to 52°C)

- Urea (saturated solution), resistant up to 82°C
- Sodium Hypochlorite, 15% concentration (resistant up to 66°C)
- Sodium Hydroxide, 50% concentration (93°C)

## THEORETICAL THICKNESS

Film thickness	WFT	DFT
<b>MasterProtect 1896</b>	300 µm	150 µm

## THEORETICAL THICKNESS

	Coverage
<b>MasterProtect 1896</b>	0.30 kg/m <sup>2</sup>

## PACKAGING

<b>MasterProtect 1896</b>	20 kg
Hardener	as required

## EQUIPMENT CARE

All equipment must be cleaned immediately after use with Styrene solvent. Similar cleaning procedures should be adopted for break periods exceeding 10 minutes duration.

## STORAGE AND SHELF-LIFE

Store under cover out of direct sunlight and protect from extremes of temperature and fire hazard. 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. Shelf life of MasterProtect 1896 resins, hardeners and primers is three months at 20°C. Due to the limited shelf life of **MasterProtect 1896** resin Master Builders Solutions will not warranty shelf life and will not accept any material returns.

Do not store at temperature higher than 32°C

For specific storage advices 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.

# MasterProtect<sup>®</sup> 1896

High performance corrosion resistant vinyl ester coating

## 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:

[www.master-builders-solutions.com/en-sa](http://www.master-builders-solutions.com/en-sa)  
[enquirycc.saudi@mbcc-group.com](mailto:enquirycc.saudi@mbcc-group.com)  
M: +966 13 853 8600

Master Builders Solutions Saudi Arabia for  
Manufacturing LLC.  
P.O. Box 1884, Al Khobar, KSA

---

### 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.

#### 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.

All descriptions, drawings, photographs, data, ratios, weights i.e. stated herein can be changed without advance notice and do not represent the condition of the product as stipulated by contract. It is the sole responsibility of the recipient of our products to observe possible proprietary rights as well as existing laws and provisions. The reference of trade names of other companies is no recommendation and does not exclude the use of products of similar type. Our information only describes the quality of our products and services and is no warranty. Liability is accepted for incomplete or incorrect particulars in our data sheets only in the event of intent or gross negligence, without prejudice to claims under product liability laws.