

MasterProtect® 1825

A non-toxic high build, phenol novolac protective epoxy resin coating

DESCRIPTION

MasterProtect 1825 is a protective high build phenol novolac epoxy resin coating specifically developed to protect concrete. 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.

TYPICAL APPLICATIONS

For the internal protection of concrete tanks containing certain chemicals, oils and fuel particularly in oil refineries, paper mills, power stations, garages, hospitals, sugar refineries, hangars, laboratories, sewage and waste water treatment plants and most other liquid containment areas.

ADVANTAGES

- Excellent chemical resistance
- Easily applied by brush, roller or spray
- High build coating
- Application for anti-slip finish system
- Solvent free
- Non-toxic
- Hygienic and easily cleaned
- High gloss and ultra dense surface

PACKAGING AND COLORS

MasterProtect 1825 is supplied in 4 L (5.2 kg) units and available in Grey.

TYPICAL PROPERTIES*

Volume solids	>98%
Mixed density at 25°C	1.3 g/cm ³
Pot life	
• 25°C	30 min
• 40°C	15 min
Recoat Interval	
• 25°C	16 h
• 40°C	10 h
Initial cure @ 25°C	24 h
Final cure @ 25°C	7 days
Abrasion resistance ASTM D4060 (CS10 Wheel, 1000g, 1000 cycles)	55 mg
Compressive strength 14 days ASTM C579	>75 N/mm ²
Flexural strength 14 days ASTM C580	>55 N/mm ²
Tensile strength 14 days ASTM C638-2001	>30 N/mm ²
Pull off strength ASTM D4541	>2.5 N/mm ²
Shore D Hardness ASTM D2240	D/79/1

APPLICATION GUIDELINES

Concrete must be structurally sound and fully cured for minimum of 28 days.

Remove curing and release compounds and other surface hardeners and floor coatings in accordance with the manufacturer's instructions.

SURFACE PREPARATION

Mechanical surface profiling is the preferred method of surface preparation for both new and existing concrete substrates. Mechanically profile the substrate to CSP 3 (approximating medium-grit sandpaper) as described by the International Concrete Repair Institute.

Do not use acid etching for surface preparation. Do not use any method that will leave fractured concrete in place.

Arises shall be rounded off and surface protrusions shall be ground down to ensure a smooth substrate. Larger cavities shall be filled with appropriate epoxy repair mortars, **MasterBrace ADH 2200**.

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PRIMER AND FILLING

MasterProtect 1825 does not require a primer, on very porous concrete substrate application **MasterProtect P 659** is recommended.

MIXING

MasterProtect 1825 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 (350 rpm) drill fitted with a suitable mixing paddle for 1 minute and until a uniform streak free colour is achieved.

Note: This product is very reactive and once mixed MUST be applied well within the suggested pot-life. DO NOT under any circumstances mix the material and leave it in its original container for any length of time – pour into shallow paint trays and apply immediately.

PLACING / APPLICATION

MasterProtect 1825 coating can be applied using good quality rollers or short haired brushes or by airless spray. It is recommended that **MasterProtect 1825** coating be applied in a minimum of two coats of 0.250 l/m² each. Additional coats may be required for harsh conditions or increased service life.

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 **MasterProtect 1810**.

Each coat must be applied within the recoat interval of the previous application. If the recoat interval is missed then the previous coat must be solvent wiped, then thoroughly abraded to give an adequate mechanical key and solvent wiped again.

Glass fabric reinforcement

If required for enhanced physical properties **MasterProtect 1825** can be applied in conjunction with the use a glass fibre reinforcing fabric (**MasterSeal C-Glass**). This would be applied to the second coat whilst wet and then a 3rd coat applied as the final finish. Multiple C-Glass layers can be applied if necessary, to create DFT thicknesses in excess of 1 mm.

Non-Slip Finishes for horizontal surfaces shall be applied by applying **MasterTop SR 3** broadcast over the top of the first coat of

MasterProtect 1825 at a rate of approximately 600 grams / m². The following top coat to be applied by roller or airless spray at an application thickness of 300-500 microns WFT.

Airless spray

For application by airless spray, use a 45:1 or higher ratio pump, minimum 9 mm dia hoses and HD tip 19-23 thou.

If spray application is proposed bear in mind the short “Pot-Life” of this product when being used at elevated temperatures. DO NOT mix more than one kit at a time UNLESS the spray equipment being used is capable of discharging the mixed resins very rapidly (multiple spray guns) as there will a risk of the epoxy resins rapidly thickening if a large volume is mixed and NOT used very quickly.

Repair and maintenance

Where areas need to be overcoated due to damage etc. it is important that the areas to be treated are solvent wiped, abraded using a stiff rotary wire brush or coarse sand paper to give an adequate key and solvent wiped again. Completely strip off any unsound coating and proceed with overcoating as for new work.

Note: Higher concentration of mineral acids may cause matting of the surface and colour changes.

Chemical resistance

MasterProtect 1825 is resistant to intermittent spillages of the following typically encountered chemicals:

Sulfuric Acid - 98%	Skydrol
Sulfuric Acid - 70%	Xylene
Sulfuric Acid - 10%	Citric Acid - 50%
Acetic Acid - 25%	MIBK
Hydrochloric Acid - 37%	Sewage water
Hydrofluoric Acid - 25%	Diesel Fuel
Lactic Acid - 20%	Bleach
Nitric Acid - 30%	Jet Fuel
Tartaric Acid - 50%	Toulene
Sodium Hydroxide - 50% solution	Sea water
Phosphoric Acid - 85%	

For other chemicals and duration of resistance, please consult Master Builders Solutions Technical Services Department.

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CLEANING

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

Similar cleaning procedures should be adopted for break periods exceeding 15 minutes duration.

Spray equipment should be thoroughly flushed with a suitable thinner (Xylene / MEK / Acetone) immediately spraying has been stopped for more than 5 minutes.

STORAGE AND SHELF LIFE

Store under cover out of direct sunlight and protect from extremes of temperature and do not exceed 35°C. 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 advices consult Master Builders Solutions Technical Services Department.

When stored below 35°C in original, unopened containers **MasterProtect 1825** will have a shelf life of 12 months.

HEALTH AND SAFETY

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.

Mixed material should be sprayed or poured out into trays and brushed or rolled before the pot-life of the material. Do not leave mixed quantities beyond 300 grams (200 ml) to sit for prolonged time or exposed to high temperatures as this can cause exothermic reaction to occur and excessive smoking. If smoking of the product should occur, quickly fill it with sand and remove it to a well-ventilated area. Do not breathe in the smoke. Reseal all empty containers after use and dispose of in accordance with the local authority regulations. For further information, refer to material safety data sheet.

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.

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NOTE

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