



The Chemical Company

MASTERSEAL[®] BC 1823

Phenol Novolac Epoxy Amine Cured High Build Coating

Description

MASTERSEAL[®] BC1823 is a glass flake reinforced protective high build phenol novolac epoxy resin coating specifically developed to protect concrete and steel. 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 and external protection of concrete or metal tanks and pipes containing certain chemicals, oils and fuel particularly in oil refineries, paper mills, power stations, garages, hospitals, sugar refineries, hangars, laboratories, abattoirs and most other liquid containment areas.

Chemical resistance

MASTERSEAL[®] BC1823 is resistant to intermittent spillages of the following typically encountered chemicals:

- Sulfuric Acid - 98%
- Hydrochloric Acid - 37%
- Phosphoric Acid - 85%
- Sodium Hydroxide – 50% solution
- Ammonia – 25% solution
- Jet Fuel (JP-4)
- Skydrol
- Unleaded Petrol
- Chlorine water – 1000ppm
- Crude Oil
- Sodium Chloride – 50% solution

For other chemicals and duration of resistance, please consult BASF's Technical Services Department.

Features & Benefits

- High gloss
- Durable
- Ultra dense surface
- Hygienic and easily cleaned
- Non-toxic
- Excellent chemical resistance
- Solvent free
- High build coating
- Easily applied by brush or roller

Colour

Standard colours are red, grey, brown, white, black and yellow.

*Typical properties

Volume Solids	100%
VOC	3.0 g/L
Mixed density at 25°C	1.37g/cm ³
Pot life	
• 25°C	14 minutes
• 40°C	7.5 minutes
Recoat Interval	
• 25°C	90 – 180 minutes
• 40°C	50 – 90 minutes
Initial cure	24 hours @ 25°C
Final cure	7 days @ 25°C
Bond to concrete	>1.5 MPa

Packaging

MASTERSEAL[®] BC1823 is supplied in 4 litre (5.475 kg) units.



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Application procedure

Surface preparation:

Concrete Substrates

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.

Mechanical surface profiling is the method of surface preparation for both new and existing 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.

Arrises 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, i.e. CONCREXIVE 2200 or CONCREXIVE ERL.

Steel Substrates

Steel substrates shall be prepared to SSPC-SP6 with a surface profile 50-75 micron. Do not allow the prepared surface to reoxidise prior to applying the primer.

Priming & Filling

All substrates must be primed with MASTERSEAL[®] P1801. Defects such as pin holes shall be filled with MASTERSEAL[®] F1810.

Mixing:

MASTERSEAL[®] BC1823 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.

Application:

MASTERSEAL[®] BC1823 coating can be applied using good quality rollers or short haired brushes or by airless spray. It is recommended that MASTERSEAL[®] BC1823 coating be applied in a minimum of two coats of 0.25 l/m² (0.34 kg/m²) each. It is recommended that the coats be of contrasting colours to ensure complete coverage. 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 MASTERSEAL[®] F1810

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.

Airless spray:

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

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.

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

Equipment care

All equipment must be cleaned immediately after use with acetone. 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 and do not exceed 40°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 BASF'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 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 300grams (200ml) 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 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 BASF representative.

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

Quality and care

All products originating from BASF's 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, ISO 14001 and OHSAS 18001.

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* Properties listed are based on laboratory controlled tests.

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