BASF
The Chemical Company

MASTERSEAL® BC1841

Phenol novolac epoxy liner for horizontal applications where high chemical & abrasion resistance are required.

Description

MASTERSEAL® BC1841 is a coloured multi component easy to apply solvent free Novolac epoxy resin mortar specifically designed to meet the in-service demands of a chemical resistant lining mortar. MASTERSEAL® BC1841 is particularly suitable for use in sewage environments, petrochemical industry, neutralization tanks, bund areas and etc

The selected blend of fillers and resins produce a mortar with exceptional handling properties. The coloured finish cured mortar is highly impervious and combines high chemical and mechanical resistance.

Typical applications

- Lining and benching manholes.
- Sewage digester tanks.
- Water retaining structures.
- Secondary containment structures
- Wherever an impervious lining or mortar is required with maximum chemical resistance.

Chemical resistance

MASTERSEAL® BC1841 has excellent resistance to a wide range of aqueous media, raw sewage, dilute mineral acids, alkalis, salt water, detergents and etc. It is also resistant to hydrocarbons and chlorinated solvents. (Test report available upon request).

Features & Benefits

- Suitable for applications up to 10mm on horizontal surfaces.
- Fast return to service
- High mechanical strength.
- Non toxic.
- Low abrasion value

*Typical properties

Volume Solids	100%	
VOC	12.0 g/L	
Applied density at 25°C :	~1.89 g/cm³	
Pot life		
• 25°C	20 minutes	
• 40°C	13 minutes	
Recoat Interval		
• 25°C	50 – 90 minutes	
• 40°C	34 – 45 minutes	
Final cure	7 days @ 25°C	
Thermal compatibility with concrete (ASTM C884):	Pass	
Compressive Strength ASTM D579 (25°C)	4 hours	>40 N/mm²
	12 hours	>60 N/mm²
	1 day	>70 N/mm²
	3 days	>80 N/mm²
	7 days	>90 N/mm²
Flexural Strength ASTM C580	7 days	20 N/mm²
Tensile strength ASTM C307	10N/mm²	
Abrasion Resistance ASTM D4060 – CS17	80 mg / 1000 cycles	

MASTERSEAL® BC1841 may yellow on exposure to certain chemicals or environments. This yellowing does not affect the chemical or mechanical properties of the system.

Packaging

MASTERSEAL® BC1841 is supplied in 9.0 litre (17.064kg) units.

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Application procedure

Surface preparation:

Concrete

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 5 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 flat substrate. Larger cavities shall be filled with appropriate epoxy repair mortars, i.e. CONCRESIVE 2200.

Substrate temperature should ideally be between 5°C to 30°C before starting application of the MASTERSEAL®1841 system.

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.

Sealing

It is essential to seal concrete surfaces prior to the application of the primer coat to prevent absorption of the primer coat into the substrate. The substrate must be sealed using MASTERSEAL® P1801. Defects such as pin holes shall be filled with MASTERSEAL® F1810.

Priming

All surfaces must be primed with MASTERSEAL® P1801.Subsequent applications of MASTERSEAL® BC1841 must be applied before the primer has become tack-free; this is dependent on the temperature but would normally be:

Temperature	Tack Free Time
25°C	130 minutes
40°C	60 minutes

Mixing:

MASTERSEAL® BC1841 is supplied in three pre-weighed components: base, reactor and filler. Thoroughly mix the base and reactor for up to a minute and then mix in the aggregate to obtain a trowelable mortar of uniform colour and appearance. Use a forced action mechanical mixer, such as a Mixal or Creteangle, and mixing should not exceed 3 minutes in total. Ensure a mixed material temperature of between 10°C to 25°C.

Application:

Please refer to the relevant MASTERSEAL® 1800 series system method statement for precise application instructions.

MASTERSEAL® BC1841 lining can be applied on horizontal surfaces with the use of suitable screed boxes and lightweight power trowels maybe considered.

When used as a standalone system, i.e. with not topcoat applications, the product should be applied in two coats of 3mm thickness minimum to reduce the risk of discontinuities through the lining.

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When used as part of another MASTERSEAL® 1800 system with topcoats then the system may be applied between 3 – 10mm in thickness and in one application.
The maximum thickness of any individual coat should not exceed 10mm.

Theoretical coverage
One 9.0 litre unit will cover approximately 3.0m^2 at 3mm thickness.
If a subsequent coat is required then it 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.

Equipment care
All equipment must be cleaned immediately after use with acetone. Similar cleaning procedures should be adopted for break periods exceeding the stated pot life as stated within the typical properties section.

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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