METALOK360 ANTICORROSIVE COATING – PRODUCT DATA SHEET - MAC EPOXY

Metalok360
Carbon Fibre Repair Epoxy

MCFR Epoxy
Product Packing

945ml part A/B
Clear gloss

MCFR is based on pure liquid epoxy polymers and proprietary curing agents to create a low-viscosity, ambient curing resin system capable of high heat operation with outstanding physical characteristics. Designed specifically for MCFR repair system, **MCFR** has a high glass transition temperature, compressive strength, and modulus of elasticity. Easy to work with and ambient curing means repairs can be completed without special application procedures and returned to service quickly.

Recommended Uses:

SATURATION RESIN: For use with carbon reinforcing fibres to create composite repairs of concrete, steel, tank tops, pipes, or similar structures.
PRESSURE TRANSFER COMPOUND: Very high compressive strength and modulus provide excellent material for void and annulus filling of pipe sleeves, void spaces, etc.
PENETRATING SEALER: Use to seal and protect concrete, brick, and other similar surfaces against chemical attack and water penetration.

Surface Preparation:

CONCRETE: Surfaces should be allowed to cure for a minimum of 20 days before coating. Excessive weak surface laitance must be removed by either acid etching or abrasive sweeping before coating. Aged, uncoated concrete surfaces are best prepared by abrasive sweeping. Contamination by oil or grease should be removed with an industrial degreaser before abrasive blasting or acid etching.

STEEL: Most commonly used with fibre reinforced polymers (MCFR) for structural reinforcement and sealing. When used with carbon fibre, it is recommend to apply an initial non-conductive seal coating to insulate the steel from possible cathodic effects. Prepare steel by abrasive blasting to SSPC-SP10, “Near White Blast” with a 2-4 mil anchor profile. Small areas may be prepared using mechanical tools such as needle scalers or abrasive discs.

Mixing Procedure:

This material is a two-component product, premeasured to produce the desired kit size once part A and B are mixed. For small kits, a Jiffy type mixer with a high torque motor is recommended for proper blending. Pour the curing agent into the base and mix for about 1 minute, taking care to reach all corners and walls to eliminate unmixed material. *Unmixed material will never harden.* Material may immediately be used.

Application

It is convenient to have a work table set up adjacent to the repair/application site. Cover the surface with a nonstick material such as a polyethylene sheet to improve saturation and clean up. Apply a thin layer of **MCFR** to act as an adhesive for the fabric to lay into. This will also ensure proper impregnation of the fabric from the underside. Pour mixed resin onto the fabric and spread using plastic straight-edged spreaders or similar tools. Aim to achieve complete saturation without an excess of resin. Too much resin will make a messy application and drip off the work surface. When saturation of the fabric is complete, roll the fabric around a suitable core such as a PVC pipe. Deliver this roll to applicators who should apply by unrolling around the prepared surface,
maintaining light tension to prevent bubbles or air pockets from forming in a wrap.

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METALOK360™
"360° metal to metal pipe sealing system"

Product Information:

COMPOSITION:	Vehicle Type	Epoxy/Aliphatic Polyamines
	Pigmentation	None
	Mixed Density	1.11 g/ml3
	Colours	Clear
	Finish/Gloss	High gloss
	Flash point	>94°C
	Solids by volume	100%, VOC free
	Thinner	Not needed.
APPLICATION:	Mixing Ratio by volume (A:B)	2.5:1.0
	Pot life	30 minutes at 25°C
	Induction Time	Not needed
	Mixed Viscosity	600 cps
	Application Method	Brush, Roller, spray
	Recommended Application Thickness:	6 mils on flat surface.
	Spreading Rate / gal	250 sq.ft./gallon @ ~6 mils 16 sq.ft. /quart for FRP
	Dry Time, dust free	2 hours @ 25°C
	Dry Time, Service	24 hours @ 25°C
	Maximum Overcoat Window	48 hours at 25°C
	Application Temperature	45°-110°F
	Cleaner	MEK or Lacquer thinner
SHELF LIFE:	Shelf Life	24 months
	Storage Conditions	Sealed, and stored in a protected environment avoiding direct sunlight exposure.
TRANSPORTATION:	USDOT, IATA, IMO	Curing agent ships UN 2735, PG II. Limited quantity <1L

Testing Results

PROPERTY	TEST METHOD	RESULTS
Gel Time		90 min
Hardness	Shore D	80+
Adhesion to steel	ASTM D4541	3,000+psi
Glass Transition Temp.	ASTM E1356	112.59°C
Ambient Cured		
Compression Properties:	ASTM D695	14,280 psi
Young's Modulus	ASTM D3039	280,000 psi
Post Cured		
Compression Properties:	ASTM D695	25,100 psi
Young's Modulus	ASTM D3039	243,000 psi

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WE URGE YOU TO READ THE SAFETY DATA SHEET (SDS) BEFORE USING AND TO CALL METALOK360,
AS NECESSARY FOR ADVICE OR INFORMATION BEFORE ANY ACTUAL OR CONTEMPLATED APPLICATION.

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SAFETY: This is a hazardous material if misused. Read and understand the Safety Data Sheet (SDS) before use.

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