



CeramaClad AR

Wear Resistant Abrasion Coating

DESCRIPTION

CeramaClad AR is an elastoplastic ceramic composite chemistry incorporating an advanced blend of urethane and epoxy chemistry coupled with a proprietary blend of ceramic and elastoplastic additives to produce an impact and abrasion resistant coating system that offers higher flex versus conventional ceramic epoxy coatings.

This 100% solids, zero VOC technology offers fast return to service and edge retentive properties. The coating system is designed to be applied by brush or plastic spreader.

For enhanced abrasion resistance CeramaClad AR can be modified with CeramaBead 10 (fine bead) or CeramaClad 40 (course bead) as a component C in the epoxy system to bulk up the coating system and offer a trowel applied thick film protection system.

SUGGESTED USES :

Induction fan	Chutes	Scrubbers	Screw conveyor
Pump casing	Pipe lining	Pump impellers	Dust collector lining

PERFORMANCE PROPERTIES

Performance Property	Test Method	Result
Hardness	ASTM D 2240	Greater than 80 Shore D
X-cut Adhesion	ASTM D 6677	Rating 10
Pull off Adhesion	ASTM D 4541	Greater than 3,500 psi
Abrasion	ASTM D 4060	Less than 20 mg loss
Compressive Strength	ASTM D 695	10,000 psi
Flexural Strength	ASTM D 790	13,500 psi
Chemical Resistance	ASTM D 543	Excellent
Temperature Resistance	Bake cycle	Up to 250 °F (will darken)
Solids Content	ASTM D 1259	100%
Volatile Organic Compounds	ASTM D 2369	0 grams/liter

PHYSICAL PROPERTIES

Color	Dark Gray (will darken with temperature)
Pot life (75 °F)	30 minutes (volume dependent)
Mix ratio (Resin:Hardener)	4:1 by volume
Dry to Touch at 75 °F	6 hours
Cure to service at 75 °F	24 hours
Theoretical coverage	1604 sqft/gallon/mil
Low temperature application	Minimum 50 °F
Minimum recoat time at 75 °F	4 hours
Maximum recoat time at 75 °F	16 hours
Sag resistance (single pass)	40 mils (1000 microns), over 100 mils with CeramaBead modification

MIXING INSTRUCTIONS

Pre mix Resin Part A and Hardener Part B individually, be sure that any settled material at the bottom of the can is dispersed. Mix for 2 to 3 minutes until a uniform color and consistency is achieved.

MIX AND APPLY (short bristle brush)

This is a two-component system. COMPLETE UNIT MUST BE MIXED AND APPLIED AT ONE TIME. DO NOT MIX PARTIAL QUANTITIES FROM CONTAINERS OR PROPER RATIOS MAY NOT BE OBTAINED. No reducing or thinning of the material is permitted. Pour premixed Part B Hardener into premixed Part A Resin. Mix for 2 to 3 minutes using a Jiffy mixer head and a mechanical drill. To ensure complete mixing, scrape sides and bottom of container and continue mixing for an additional 1 or 2 minutes. DO NOT HAND MIX. Begin application immediately - no induction time. Contents of the container may be portioned off into smaller containers to maintain pot life. Once mixed, the product may be applied by trowel, putty knife or short bristle brush. Work the material into the surface profile to completely wet out the substrate surface to ensure proper adhesion.

For bridging gaps or holes impregnate the coating system with fiberglass sheet. Expanded metal and mechanical fasteners may be used where the coating thickness exceeds 1/4" and the CeramaBead technology is incorporated into the coating system.

SURFACE PREPARATION

- 1) Ensure that surface is clean, dry and uncontaminated. Proceed only if the substrate temperature is more than 5°F above the dew point temperature and relative humidity is below 85% during surface preparation and coating application. All surface must be cleaned with FMP RapidPrep Cleaner.
- 2) Abrasive blast clean with garnet or aluminum oxide (G40 or coarser). DO NOT USE steel shot or non-angular media.
For steel surfaces, blast to a White Metal Blast (SSPC-SP5; NACE 1; SA 3):
- minimum 3.0 mil profile for immersion and elevated temperature service.
- 3) In areas where abrasive blasting cannot be performed, it is recommended that the surface be prepared by bristle blasting or grinding with a coarse abrasive disc such as 25 grit. With either power tool method the surface must be a clean with no visible rust or surface contamination.

CHLORIDE AND SULFATE CONTAMINATED SUBSTRATES

Where the risk of chloride or sulfate contamination is high, the substrate surfaces shall be inspected for soluble salt contamination prior to applying the coating system.

Levels of contamination shall be below 2 µg/cm². Neutralization of the surface shall be performed with commercially available solutions such as Chlorid™ and high pressure water jetting.

It is highly recommended that where the substrate has been exposed to salt water immersion that the surface is abrasive blasted, allowed to sit for 24 hours, followed by high pressure water jetting with a neutralization solution before reblasting for the application of the coating.

INSPECTION

Immediately following the application of the coating visually inspect the coating for pinholes and areas of missed coating. These areas can be repaired immediately if the coating is tacky to touch.

Further inspection is to be performed once the coating has cured. Visually inspect the coating for discoloration, pinholes, uncured coating, blisters, and other visual defects. Mechanical removal and reapplication may be required depending on the defect type.

Where the coating is to be used for immersion service or service where corrosion protection is required, discontinuity testing in accordance with relevant ASTM standards shall be performed. The minimum recommended voltage is 3,500 volts or 120 volts/mil based on the average coating thickness.

PACKAGING AND COVERAGE

Kit Size	Theoretical Coverage Rate / Kit	Nominal Thickness
1.2 gallon (4.5 liter)	48 square feet (4.45 square meter)	40 mils (1000 microns)

NOTE: Waste factor is not included in the theoretical coverage rate. Actual field coverage rates will be dependent on the surface roughness, over spray, applicator experience, drum heel waste and overbuild beyond the nominal thickness.

CLEAN-UP AND STORAGE

- 1) Use commercial solvents (Xylene, Methyl Ethyl Ketone) to clean tools immediately after use.
- 2) Once the coating is dry, the material must be abraded off.
- 3) Keep containers tightly sealed and store upside down. For cleanup, M.E.K. or a 50:50 blend of M.E.K. and Xylol.
- 4) Store between 10°C(50°F) and 27°C(80°F). DO NOT FREEZE. Use product within 36 months of receiving.

SAFETY

FOR INDUSTRIAL USE ONLY. Before using any products, please refer to the Material Safety Data Sheet (MSDS). Follow standard confined space entry and work procedures, if appropriate. Wear eye safety protection, chemical resistant gloves. Use NIOSH approved respirator where mist occurs.

TECHNICAL SUPPORT

For technical support, please call 905-676-1969 or email tech@fmpcoatings.com

ORDER INFORMATION

RAPIDPREP CLEANER – 100 (1 gallon)

CERAMA CLAD AR – 602 (1.2 gallon kit)

CERAMABEAD 10 – 701

CERAMABEAD 40 – 702

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