



CeramaClad XP11

High Performance Coating System

DESCRIPTION

CeramaClad XP11 is a polymer ceramic composite chemistry incorporating an advanced proprietary blend of ceramic additives modified in a novalac epoxy resin system. The matrix is designed to achieve maximum wear and chemical resistance characteristics for the restoration and protection of metallic surfaces subjected to erosion, corrosion and chemical attack. It provides outstanding chemical resistance allowing it to be used in a wide variety of chemicals including crude oil and sulphuric acid service. This 100% solids, zero VOC technology offers fast return to service and edge retentive properties. The coating system is designed for application versatility, it can be applied by brush and roller, hot potted through a single component airless pump or applied through a heated 1:1 ratio plural component pump for maximum production throughput.

SUGGESTED USES :

Bag house	Scrubbers	Stacks	Chemical storage tanks
Air heater	Chutes	Secondary containment	Petroleum storage tanks

PERFORMANCE PROPERTIES

Performance Property	Test Method	Result
Hardness	ASTM D 2240	78 Shore D
X-cut Adhesion	ASTM D 6677	Rating 10
Pull off Adhesion	ASTM D 4541	Greater than 2,500 psi
Abrasion	ASTM D 4060	Less than 20 mg loss
Compressive Strength	ASTM D 695	12,000 psi
Cathodic Disbondment	ASTM G95 1.5 volts for 28 days	Less than 5 mm at 75 °F
Flexural Strength	ASTM D 790	11,500 psi
Chemical Resistance	ASTM D 543	Excellent
Temperature Resistance	Bake cycle	Up to 480 °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)	40 minutes
Mix ratio (Resin:Hardener)	1:1 by volume, 0.9:1 by weight
Dry to Touch at 75 °F	6 hours
Cure to service at 75 °F	48 hours
Theoretical coverage	1604 sqft/gallon/mil
Low temperature application	Minimum 35 °F
Minimum recoat time at 75 °F	4 hours
Maximum recoat time at 75 °F	48 hours

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 colour and consistency is achieved.

MIX AND APPLY (brush and roll)

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. 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 brush. Work the material into the surface profile to completely wet out the substrate surface to ensure proper adhesion.

To improve the appearance of the material a low nap roller may be used to back roll the material. No reducing or thinning of the material is permitted.

SINGLE LEG AIRLESS SPRAY

Requires two experienced personnel to mix and operate the pump. Constant attention to the product reaction temperature and viscosity is required. 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. 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.

Minimum recommended airless pump is a 56:1. Preheating the coating will improve flow but will reduce the pot life. Remove all filters from inlet leg, spray unit and airless gun. Coating hose lines should be 1/2 inch diameter, a maximum length of 100 feet, with a 3/8 inch diameter 10 foot whip hose. If the product temperature reaches (130 °F) at any time during the spray application, the application must stop. The pump, gun and hose lines must be flushed out immediately with the recommended cleaning solvent to prevent hardening and seizing of the equipment.

HEATED PLURAL COMPONENT AIRLESS SPRAY

Requires experienced personnel with a working knowledge of plural component spray equipment. Constant attention to the spray machine temperature, mixing and pressure is required.

Minimum pump requirement is 3500 psi, 1:1 ratio heated plural component pump. Remove all filters from the leg inlet, spray pump and gun. Install two (2) 1/2" X 8 inch elemental in-line static mixers between the remote mix manifold and 25 foot long 3/8" integration hose. Place a third static mixer 1/2" X 8 inch static mixer between the 3/8" integration hose and the 10 foot 1/4" whip hose connected to the gun.

Both A and B side containers must be preheated to 115 °F. The inline pump heaters and heated hose bundle are to be set to 130 °F. DO NOT HEAT ABOVE 140 °F.

Recommended reverse clean tips, size 0.021 to 0.030.

Suggested spray pressure is 2, 500 psi.

Purge all hoses, static mixers and remote manifold within 5 minutes of stopping the spray application.

SPRAY APPLICATION

Prior to full coating application, stripe all continuous welds and edges by brush. Apply the coating at no more than 8 to 10 mils per pass. Apply the coating to the specified thickness in a crisscross multi pass technique.

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.
- 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 3.5 mil profile for immersion and elevated temperature service.

CLEAN-UP AND STORAGE

- 1) Use commercial solvents (Acetone, 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 6 months of receiving.

SAFETY

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.

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