

Novocoat™ EP3700FG Ceramic Carbide

SELECTION & SPECIFICATION DATA

Type	Epoxy with fine ceramic bead fillers
Description	Novocoat EP3700FG Ceramic Carbide, a trowelable 2-part epoxy filled with fine ceramic beads, is a metal repair and wear protection putty used to restore and line equipment subject to fine particle abrasion.
Features	<ul style="list-style-type: none"> • No VOCs • Outstanding abrasion resistance • No shrinkage, expansion or distortion • Quick return to service • Heat resistant to 250°F (121°C)
Uses	<ul style="list-style-type: none"> • Metal repair • Coal chutes and silos • Pneumatic conveyors • Rock crushers • Bag houses • Ball mills • Non-skid
Color	Gray
Finish	Matte
Solids Content	99 -100% solids by volume

SUBSTRATES & SURFACE PREPARATION

All	Substrate must be clean, dry and free of contaminants.
Steel	<p>Immersion: SSPC-SP 10/NACE 2 Near White Metal Blast with angular profile of 2.5 - 3.5 mils.</p> <p>Non-immersion: SSPC-SP 6/NACE 3 Commercial Blast with angular profile of 1.5 - 3.0 mils, SSPC-SP 2 Hand Tool or SSPC-SP 3 Power Tool Cleaning are suitable for mild environments.</p> <p>Self-priming on steel.</p>
Weld Repair	Use a flame to sweat out oil from deeply impregnated surfaces. Stabilize cracks by drilling the extremities. Long cracks should be drilled, tapped and bolted every few inches. Vee-out all cracks using a file. Degrease using clean rags.

MIXING & THINNING

Ratio	1A:1B by volume
Mixing	Mix equal parts of the resin and hardener thoroughly until color of material is uniform and free of streaks.
Thinning	Do not thin.
Pot Life	<p>40 minutes at 77°F (25°C)</p> <p>Pot life is shorter at higher temperatures. A larger volume of mixed material will have a shorter pot life than a smaller volume.</p>
Cleanup	MEK or Acetone

APPLICATION GUIDELINES

Conditions	Substrate surface temperature 50°F - 140°F (10°C - 60°C) and at least 5°F (3°C) above the dew point and rising. If surface temperature is above 140°F (60°C), consult Armor Technical Service for guidance.
Application	Apply directly onto the prepared surface with the spreader or mixing knife provided. Press down firmly to remove entrapped air, fill all cracks, and ensure maximum contact with the surface. Use reinforcement cloth over holes and cracks.
Brush & Roller	Brush or roller can be used to smooth uncured surface with solvent if desired.

CURE SCHEDULE & RECOAT WINDOW

SUBSTRATE TEMPERATURE	WORKING TIME	DRY-TO-TOUCH	MAXIMUM RECOAT	TIME TO 80 SHORE D HARDNESS
41°F (5°C)	1.5 hours	3 hours	7 days	35 hours
50°F (10°C)	1 hour	2.5 hours	48 hours	24 hours
77°F (25°C)	40 min	75 min	24 hours	6.5 hours

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PACKAGING, ESTIMATING & HANDLING

ITEM#	PRODUCT	PACKAGING
M-EP3710-6LBKT-01	Novocoat EP3700FG Ceramic Carbide, Light Gray - Part A Resin, Light Gray - Part B Hardener	6 lb (2.7 kg) Kit 2.9 lb (1.3 kg) Pail 3.1 lb (1.4 kg) Pail
M-EP3710-25LBKT-01	Novocoat EP3700FG Ceramic Carbide, Light Gray - Part A Resin, Light Gray - Part B Hardener	25 lb (11 kg) Kit 12.2 lb (5.5 kg) Pail 12.8 lb (5.8 kg) Pail
Theoretical Coverage	9.16 square feet per 25 lb kit at 250 mil 2.20 square feet per 6 lb kit at 250 mil Allow for loss in mixing and application.	
Storage & Shelf Life	Maintain products in original packaging and sealed until ready for use. Estimated shelf life is 24 months for part A and 12 months for part B when stored in a dry area at 75°F (24°C). Actual shelf life may vary with storage conditions. Do not store below 40°F (4°C) or above 110°F (43°C).	
	If there is any question with respect to the quality of the components, check reactivity prior to use. For assistance consult with Armor.	
SAFETY		
Safety	Mixes and applications of this product present a number of hazards. Read and follow the hazard information, precautions and first aid directions on the individual product labels and safety data sheets before using.	
Ventilation	Provide thorough air circulation during and after application until the material has cured when used in enclosed areas.	

TYPICAL PHYSICAL PROPERTIES

PROPERTY	VALUE
Dry adhesion ASTM D4541 Blasted steel 1 coat	>2,800 psi (19 MPa)
Compressive strength	>5,900 psi
Taber abrasion ASTM D4060 1000 cycles, H-22 wheels dry, 1 kg load	510 mg loss 18 mils loss 56 cycles per mil loss
Coefficient of thermal expansion	1.1 x 10 ⁻⁶ /°F (2.0 x 10 ⁻⁶ /°C)
Thermal stability Weight loss after 48 hours at 300°F (149°C)	0.0003 g
Specific gravity - Mixed	2.2 g/mL
VOC	0 lb/gal (0 g/L)
Density - Mixed	18 lb/gal (2.2 kg/L)

SERVICE TEMPERATURE

SERVICE	MAXIMUM TEMPERATURE
Dry	250°F (121°C)
Splash/spill	200°F (93°C)
Immersion	150°F (66°C)
Temperature limitations will vary with chemical exposure. Consult Armor Technical Service for guidance.	

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