Novocoat™ EP3800 Ceramic Carbide FC

SELECTION & SPECIFICATION DATA

Type
Ceramic-filled Novolac Epoxy

Description
Novocoat EP3800 Ceramic Carbide FC is a fast-setting, high-performance ceramic-filled novolac epoxy repair/wear compound for highly abrasive service. Novocoat EP3800 Ceramic Carbide is available in FC grade with faster cure and SC grade with longer working life.

Features
- No VOCs
- Outstanding abrasion resistance
- Application and cure at room temperature
- No shrinkage, expansion or distortion
- Quick return-to-service

Uses
- Metal repair
- Coal chutes and silos
- Rock crushers
- Dry bag houses
- Ball mills

Color
Red

Finish
Matte

Solids Content
99 - 100% by volume

SUBSTRATES & SURFACE PREPARATION

All
Substrate must be clean, dry and free of contaminants.

Steel
Immersion: SSPC-SP 10/NACE 2 Near White Metal Blast with angular profile of 2.5 - 3.5 mils.

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.

Self-priming on steel.

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
5 minutes at 77°F (25°C)

Pot life is shorter at higher temperatures. A larger volume of mixed material will have a shorter pot life than a smaller volume.

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 ErgonArmor 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)	Not workable	40 min	24 hours	4 hours
50°F (10°C)	10 min	30 min	12 hours	3 hours 15 min
77°F (25°C)	5 min	20 min	2 hours	1 hour 40 min

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PACKAGING, ESTIMATING & HANDLING

ITEM#	PRODUCT	PACKAGING
M-EP3840-6LBKT-01	Novocoat EP3800 Ceramic Carbide FC, Red	6 lb (2.7 kg) Kit
	- Part A Resin, Light Gray	2.8 lb (1.3 kg) Pail
	- Part B Hardener, Red	3.2 lb (1.5 kg) Jar
M-EP3840-25LBKT-01	Novocoat EP3800 Ceramic Carbide FC, Red	25 lb (11.4 kg) Kit
	- Part A Resin, Light Gray	11.7 lb (5.3 kg) Pail
	- Part B Hardener, Red	13.3 lb (6 kg) Pail

Theoretical Coverage

2.1 square feet per 6 lb unit at 250 mils
8.7 square feet per 25 lb unit at 250 mils
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 12 months for part A and 6 months for part B when stored in unopened packages, 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 ErgonArmor.

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)
Flash point ASTM D1310	>200°F (93°C)
Taber abrasion ASTM D4060 1000 cycles, H-22 wheels dry, 1 kg load	430 mg loss 15 mils loss 66.8 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	Part A: 2.07 Part B: 2.25
VOC	0 lb/gal (0 g/L)
Density	18.3 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 (65°C)

Temperature limitations will vary with chemical exposure. Consult ErgonArmor Technical Service for guidance.

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