# Novocoat™ EP4900 Ceramic Carbide

## SELECTION & SPECIFICATION DATA

**Type**
Ceramic-filled Novolac Epoxy

**Description**
Novocoat EP4900 Ceramic Carbide is a high performance ceramic filled novolac epoxy repair/wear compound for severe environments such as coal chutes, coal silos, rock crushers, and dry bag houses.

**Features**
- 100% solids, no VOCs
- Outstanding abrasion resistance
- Application and cure at room temperature - no hot work involved
- No shrinkage, expansion or distortion
- Quick return-to-service under proper cure conditions
- Meets the performance requirements of AWWA C210 and FDA requirement 21 CFR 175.300 for food contact

**Uses**
- Coal chutes and silos
- Dry bag houses
- Non-skid
- Rock crushers

**Color**
Light gray

**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. De-grease using clean rags.

## MIXING & THINNING

**Mixing**
Do not mix partial kits. For small kits, transfer the entire contents of the resin and hardener onto the mixing board. For large kits, completely empty the hardener container into the resin container, scraping it clean. Mix together thoroughly until color of material is uniform and free of any streaks.

**Thinning**
Do not thin.

**Pot Life**
40 minutes at 75°F (24°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 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

| TEMPERATURE | MINIMUM RECOAT | MAXIMUM RECOAT | RETURN-TO-SERVICE (HYDROCARBON IMMERSION) |
|---|---|---|---|
| 50°F (10°C) | 1 hour | 48 hours | 7 days |
| 77°F (25°C) | 1 hour | 36 hours | 24 hours |
| 140°F (60°C) | 15 minutes | 45 minutes | 4 hours |

Return-to-service will vary with chemical exposure. Consult with Armor Techincal Service for guidance.

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## PACKAGING, ESTIMATING & HANDLING

| ITEM# | PRODUCT | PACKAGING |
|---|---|---|
| M-EP4910-QTCS-01 | Novocoat EP4900 Ceramic Carbide, Light Gray<br>Case includes 1 mixing board.<br>Each kit includes:<br>- Part A Resin, Light Gray<br>- Part B Hardener<br>- Mixing knife, spreader | 4 x 3.3 lb (1.5 kg) Kits<br><br><br>3 lb (1.4 kg) Jar<br>0.3 lb (0.13 kg) Jar |
| M-EP4910-1GLKT-01 | Novocoat EP4900 Ceramic Carbide, Light Gray<br>- Part A Resin, Light Gray<br>- Part B Hardener | 16.5 lb (7.48 kg) Kit<br><br>15 lb (6.8 kg) Pail<br>1.5 lb (0.68 kg) Jar |

**Theoretical Coverage**

6.30 square feet at 250 mil per 16.5 lb unit
1.26 square feet at 250 mil per 3.3 lb unit
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<br>ASTM D4541<br>Blasted steel 1 coat | >2,800 psi (19 MPa) |
| Flash point<br>ASTM D1310 | Greater than 200°F (93°C) |
| Taber abrasion<br>ASTM D4060<br>1000 cycles, H-22 wheels dry, 1 kg load | 465 mg loss<br>21.2 mils loss<br>48.1 cycles per mil loss |
| Flexural Strength<br>ASTM D790 | 7,870 psi (54 Mpa) |
| Coefficient of thermal expansion | 1.1 x $10^{-6}$/°F (2.0 x $10^{-6}$/°C) |
| Thermal stability<br>48 hours at 300°F (149°C) | 0.0003 gram loss |
| Specific gravity | Part A: 2.32<br>Part B: 1.48 |
| VOC | 0 lb/gal (0 g/L) |
| Density maximum | 16.5 lb/gal (2.0 kg/L) |

## SERVICE TEMPERATURE

| SERVICE | MAXIMUM TEMPERATURE |
|---|---|
| Dry | 360°F (182°C) |
| Splash/spill | 300°F (149°C) |
| Immersion | 240°F (115°C) |

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

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