

SELECTION & SPECIFICATION DATA

Type	Epoxy Paste
Description	Novocoat EP3900 Machinable Paste is a composite rebuild material for metal parts and surfaces. It has a smooth, spreadable consistency that makes it easy to apply.
Features	<ul style="list-style-type: none"> • No VOCs • Machinable • Kits include tools • Excellent UV stability • Excellent impact resistance and corrosion protection • AWWA C210 compliant • FDA compliant to 21 CFR 175.300 for food contact
Uses	<ul style="list-style-type: none"> • Metal repair and restoration • Pitted steel repair • Rebuild tube sheets, shafts, bearing housings, etc.
Color	Dark gray

CHEMICAL RESISTANCE

<ul style="list-style-type: none"> • Acetic Acid up to 10% • Ammonium Hydroxide* • Aromatic & Aliphatic Solvents • Black Liquor • Butyl Acetate • Butyl Carbitol • Chlorides • Hydrogen Sulfide • Isopropyl Alcohol • Mineral Acids • Nitric Acid up to 30% 	<ul style="list-style-type: none"> • Mild Organic Acids • Phosphoric Acid • Potassium Hydroxide* • Sodium Hydroxide* • Sulfides • Sulfuric Acid up to 80% • 1,1,1-Trichloromethane • Urea Solutions • White Liquor
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*Ambient temperature only

SUBSTRATES & SURFACE PREPARATION

All	Substrate must be clean, dry and free of contaminants.
Steel	<p>Immersion: SSPC-SP 10/NACE2 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-SP2 Hand Tool or SSPC-SP3 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.
Substrate Temperature	<p>50°F – 140°F (10°C – 60°C)</p> <p><90% relative humidity</p> <p>If >140°F (60°C), consult ErgonArmor Technical Service.</p>

MIXING & THINNING

Ratio	4A:1B by weight
Mixing	Do not mix partial kits. Transfer the entire contents of the resin and hardener onto the plastic mix board. Mix together thoroughly until color of material is uniform and free of streaks.
Thinning	Do not thin.
Pot Life	<p>40°F (4°C) 1 hour and 20 minutes</p> <p>75°F (24°C) 50 minutes</p> <p>92°F (33°C) 20 minutes</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

Application	Apply directly onto the prepared surface with the plastic applicator or spatula 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. Fully machinable using conventional tools once cured.
Brush & Roller	Brush or roller can be used to smooth uncured surface with solvent if desired.
Top-Coating	If the compound is to be coated, apply the coating within the recoat window. If this is not possible, allow the compound to cure, then brush-blast, wire-brush or sand to create a rough, angular profile on the surface before coating.
Cold Joints	When it is necessary to join multiple sections of the compound to create a continuous protective layer over a large area, do not attempt to feather and overlap adjoining sections. If adjoining sections cannot be applied within the recoat window, continue the full thickness of the compound up to the joint between sections. Allow the first section to cure, then create a rough, angular mechanical profile, using one of the means listed above, on the edge that will be joined to the next section to ensure a satisfactory mechanical bond.

CURE SCHEDULE & RECOAT WINDOW

Recoat window at 75°F (21°C)	1/2 – 2 hours
Light loading at 75°F (21°C)	12 hours
Chemical service at 75°F (21°C)	5 days

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.

PACKAGING, HANDLING & STORAGE

Theoretical Coverage 12.8 square foot per gallon at 1/8 in thickness
Allow for loss in mixing and application.

Package Sizes Dark Gray, 4 x 2.2-lb (1 kg) Kit Case
Each 2.2 lb (1 kg) kit includes
- Part A Resin Dark Gray, 1.76 lbs (0.8 kg) Jar
- Part B Hardener - 0.44 lbs (0.2 kg) Jar
- Mixing knife and spreader
Each case includes a mixing board.
Item #: M-EP3920-QTCS-01

Dark Gray, 11 lbs (5 kg) Kit
- Part A Resin Dark Gray, 8.8 lbs (4 kg) Kit
- Part B Hardener - 2.2 lbs (1 kg) Jar
- Mixing knife, spreader and mixing board
Item #: M-EP3920-1GLBK-01

Dark Gray, 11 lbs (5 kg) Kit
- Part A Resin Dark Gray, 8.8 lbs (4 kg) Pail
- Part B Hardener - 2.2 lbs (1 kg) Pail
Item #: M-EP3920-1GLKT-01

TYPICAL PHYSICAL PROPERTIES

TEST METHOD	RESULTS
Flash point	>250°F (12°C)
Pull-off adhesion test ASTM D4541	>2850 psi
Coefficient of thermal expansion	1.1 x 10 ⁻⁶ /°F
Thermal stability Weight loss after 48 hours at 300°F (149°C)	0.0003 g
Specific gravity	Resin: 2.12 Hardener: 1.59
Density	13.37 lbs/gal
VOC	0 g/l

SERVICE TEMPERATURE

SERVICE	MAXIMUM TEMPERATURE
Dry	490°F (255°C)
Splash/spill	293°F (145°C)
Immersion*	194°F (90°C)

*Immersion with solvents, mineral acids, or alkalis, or if over 150°F (66°C), consult ErgonArmor Technical Service.

STORAGE & SHELF LIFE

Shelf Life 12 months at 75°F (24°C) when stored under recommended conditions.

Storage Conditions 40°F – 110°F (4°C – 43°C)
0 – 100% relative humidity

Store in a dry area out of direct sunlight. Maintain product in original packaging and sealed until ready for use.

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TERMS AND CONDITIONS OF SALE

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