ErgonArmor™ Novocoat™ SC2200 Rapid Set Pipe Coating

SELECTION & SPECIFICATION DATA

Type

Cycloaliphatic Amine Cured Novolac Epoxy

Description

Novocoat SC2200 Rapid Set Pipe Coating is a 100% solids novolac epoxy coating that is fast-setting and cures down to 0°F (-17°C). Cured films up to 40 mils DFT provide an excellent balance of flexibility and toughness making it highly versatile for a variety of petrochemical and industrial applications. Novocoat SC2200 Rapid Set Pipe Coating is available in spray grade (plural component application only) and bag kits for brush, roller, or trowel applied touch-up and girth weld repairs.

Features

- 100% solids, no VOCs
- 40 mils per coat in a single coat application
- Resistance to cathodic disbondment
- Good flexibility at colder temperatures
- Good abrasion and impact resistance
- Excellent thermal cycling properties
- Excellent corrosion protection
- Quick return-to-service

Uses

- External pipe lining
- Internal pipeline and vessel lining
- Girth weld coating
- High performance tank lining

Color

Putty

Finish

Gloss

Dry Film Thickness (DFT)

Total Dry Film Thickness (TDFT) should range 20 - 40 mils per coat for optimum performance. This range of thickness is achievable in a single coat with proper atomization, good technique, and proper substrate temperature. For applications requiring TDFT's above 50 mils, two coats should be applied.

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.

Previously Painted Surfaces

Consult with ErgonArmor Technical Service.

MIXING & THINNING

Ratio

3A:1B by volume

Mixing

Due to the rapid set of this material, plural spray is the only method recommended for application other than for girth weld repairs.

Thinning

Consult with ErgonArmor representative before adding thinner to product or using hose lengths/ diameters outside the stated recommendations.

Pot Life

35 minutes at 41°F (5°C)
25 minutes at 59°F (15°C)
17 minutes at 77°F (25°C)
9 minutes at 95°F (35°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

Temperature

Substrate temperature should be 35°F - 110°F (2°C - 43°C) and a minimum of 5°F (3°C) above the dew point to achieve best adhesion. Maximum substrate temperature should be kept to 140°F (60°C). Contact ErgonArmor for conditions where the substrate temperature exceeds 140°F (60°C).

Spray Application

The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.

Airless Spray Plural Component

Due to the fast reactivity of this coating system, this product should be applied via heated plural component spray systems only.

Tip Size: 0.025 - 0.029 reversible type
Part A Fluid Line: 1/2 in ID
Part B Fluid Line: 3/8 in ID
Spray Line: 1/2-inch ID x 50 feet maximum
Whip: 1/4-inch ID
Whip Length: 10 feet maximum
Pump Size: 56:1 or greater
Output: 4,000 - 6,000 psi, filter removed
Static Mixer: 1/2-inch ID x 12-inch behind mixing valve
Part A Resin: 135°F - 140°F (57°C - 60°C)
Part B Hardener: 90°F - 95°F (32°C - 35°C)

Touch-ups & Girth Weld Repairs

Manually mixed material should be brushed, rolled, or trowel applied within the specified pot life of the mix.

Brush

Medium bristle brush

Roller

Short-nap synthetic roller cover with phenolic core

Trowel

Flexible plastic trowel or grout float

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CURE SCHEDULE & RECOAT WINDOW

TEMPERATURE	MINIMUM RECOAT	MAXIMUM RECOAT	RETURN TO SERVICE (HYDROCARBON IMMERSION)
50°F (10°C)	1 hour	24 hours	24 hours
77°F (25°C)	30 minutes	2 hours	4 hours
95°F (35°C)	15 minutes	45 minutes	3 hours
Dry-to-touch: 1.5 hours at 77°F (25°C)			

Return-to-service varies with chemical exposure. Consult ErgonArmor Technical Service for guidance.

PACKAGING, ESTIMATING & HANDLING

ITEM#	PRODUCT	PACKAGING
M-R3470-QTCS-01	Novocoat SC2200 Rapid Set Pipe Coating Case includes tools Each kit includes: - Part A Resin, Beige - Part B Hardener, Black - Mixing knife, chip brush	4 X 2.7 lbs (1.2 kg) Kit Case 2.3 lbs (1 kg) 7.5 oz (213 g)
M-R3470-20GLKT-01	Novocoat SC2200 Rapid Set Pipe Coating - Part A Resin, Beige - Part B Hardener, Black	 5 gal (19 L) 5 gal (19 L)
M-R3470-100GLKT-01	Novocoat SC2200 Rapid Set Pipe Coating - Part A Resin, Beige - Part B Hardener, Black	 50 gal (189 L) 25 gal (95 L)
M-R3470-200GLKT-01	Novocoat SC2200 Rapid Set Pipe Coating - Part A Resin, Beige - Part B Hardener, Black	 50 gal (189 L) 50 gal (189 L)

Theoretical Coverage

80 square feet per gallon at 20 mils
40 square feet per gallon at 40 mils
Allow for loss in mixing and application

Storage & Shelf Life

Maintain product in original packaging and sealed until ready for use. Estimated shelf life is 12 months 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. Consult ErgonArmor Technical Service for assistance.

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	SYSTEM	VALUE
Compressive strength, 5 days ambient temperature ASTM C109		12,000 - 15,000 psi
Wet adhesion ASTM D4541 Wet 5 days 158°F (70°C) water	Blasted steel 1 coat	>2,500 psi
Dry adhesion ASTM D4541	Blasted steel 1 coat	>2,700 psi
Abrasion resistance ASTM D4060	1000 cycles, CS17 wheel 1000 gm load	0.59 mils loss of DFT 1,750 cycles per mil
Impact resistance ASTM G14-88		70 - 80 in-lbs
Cathodic disbondment CSA Z245.20-06	28 days at 185°F (85°C)	4.9 mm disbondment
Cathodic disbondment CSA Z245.20-06	28 days at 77°F (25°C)	1.1 mm disbondment
Dielectric strength (in paraffinic oil) ASTM D149	Blasted steel 1 coat	730 - 760 volts/mil

TEMPERATURE RESISTANCE

SERVICE	MAXIMUM TEMPERATURE
Dry, continuous	300°F (149°C)
Dry, intermittent	350°F (177°C)
Under insulation	300°F (149°C)

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

Discoloration and loss of gloss occur above 200°F (93°C) but do not affect performance.

Rev. 10/2025