

SELECTION & SPECIFICATION DATA

Type	Cycloaliphatic Amine Cured Novolac Epoxy
Description	RR&C Rapid Set Epoxy 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. RR&C Rapid Set Epoxy 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<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>
Previously Painted Surfaces	Consult with your Sherwin-Williams representative.

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 your Sherwin-Williams representative before adding thinner to product or using hose lengths/diameters outside the stated recommendations.
Pot Life	<p>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)</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

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 Sherwin-Williams 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	<p>Due to the fast reactivity of this coating system, this product should be applied via heated plural component spray systems only.</p> <p>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)</p>
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

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 with your Sherwin-Williams representative for guidance.

PACKAGING, ESTIMATING & HANDLING

ITEM#	PRODUCT	PACKAGING
RSE-QTCS-SW	RR&C Rapid Set Epoxy - "Girth Weld/Repair Kit" Putty Case includes tools Each kit includes: - Part A Resin, Beige - Part B Hardener, Black - Mixing knife, chip brush	4 X 28.3 fl oz (830 ml) Kit Case 21 fl oz (615 ml) 7.3 fl oz (215 ml)

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 with your Sherwin-Williams representative 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

SERVICE TEMPERATURE

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 with your Sherwin-Williams representative for guidance.

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

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