RR&C Liquid Ceramic Epoxy High Temp

SELECTION & SPECIFICATION DATA

Type
Cycloaliphatic Amine-Cured Novolac Epoxy

Description
RR&C Liquid Ceramic Epoxy High Temp is a high functionality, densely cross-linked, rapid cure, 100% solids novolac epoxy coating, developed as a high-performance solution for severe service.

Features
- Resistant to wide range of acids and caustics
- Very low permeation & low moisture rate for demanding tank lining service
- Excellent performance in abrasive slurries, hot brine, hot vapors & gas streams
- Solvent Free - 100% solids
- Quick return-to-service - 24 hours at 77°F (25°C) for hydrocarbon immersion service
- Outstanding durability in severe chemical, abrasive & temperature service

Uses
- Internal lining for tanks, vessels, piping and process equipment handling abrasive slurries, aggressive chemicals and hot fluids
- Coating for primary and secondary containment structures including trenches and sumps in aggressive environments
- Heat exchangers and tube sheets
- Clarifiers, thickeners, flotation cells for minerals processing
- Separators and deaerators

Color
Light gray, dark gray

Finish
Gloss

Dry Film Thickness (DFT)
2 - 3 coats at 10 - 12 mils each
3 - 4 coats at 10 - 12 mils each for high temperature or severe chemical service

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.

Concrete or Concrete Masonry Units (CMU)
Concrete must be cured 28 days at 75°F (24°C) and 50% relative humidity or equivalent. Prepare surfaces in accordance with SSPC-SP 13/NACE 6. Required surface profile is CSP 3-5. Voids in concrete surfaces may require filling. Mortar joints should be cured a minimum of 15 days. Prime with RR&C Concrete Epoxy Primer.

Previously Painted Surfaces
Consult with your Sherwin-Williams representative.

MIXING & THINNING

Ratio
3.3A:1B by volume, 5A:1B by weight

Mixing
Power mix Part A and Part B separately. For brush, roller or single leg spray application, combine Part A with Part B and power mix.

Thinning
Spray: Up to 6.5 oz/gal (5%) with Sherwin-Williams 54 reducer
Brush: Up to 12.8 oz/gal (10%) with Sherwin-Williams 54 reducer
Roller: Up to 12.8 oz/gal (10%) with Sherwin-Williams 54 reducer

Pot Life
30 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

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
Tip Size: 0.027 to 0.029-inch, reversible type
Part A Fluid Line: 1/2-inch ID
Part B Fluid Line: 3/8-inch ID
Spray Line: 1/2-inch ID x 50 feet maximum
Whip: 1/4-inch to 3/8-inch ID
Whip Length: 20 feet maximum
Output Pressure: 3,300 - 5,600 psi
Pump Size: 56:1 or greater
Static Mixer: 2 x 1/2-inch ID x 12 inches (24-inch total length) behind mixing valve
Part A Temperature: 130°F - 135°F (54°C - 57°C)
Part B Temperature: 90°F - 95°F (32°C - 35°C)

Airless Spray Single Leg or Hot Pot
Pump Size: 56:1 (minimum)
Output: 5600 - 7000 psi with filter removed
Hose: 50 feet x 3/8-inch ID (minimum)
Whip: 10 feet maximum x 1/4-inch to 3/8-inch ID
Tip Size: 0.027 inch to 0.029 inch

Brush & Roller
Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or re-rolling. For best results, tie in within 10 minutes at 75°F (24°C).

Brush
Medium bristle brush

Roller
Short-nap synthetic roller cover with phenolic core

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CURE SCHEDULE & RECOAT WINDOW

SUBSTRATE TEMPERATURE	MINIMUM RECOAT	MAXIMUM RECOAT	RETURN TO SERVICE (IMMERSION)
50°F (10°C)	8 hours	24 hours	14 days
77°F (25°C)	3 hours	12 hours	7 days
140°F (60°C)	30 minutes	1 hour	4 hours

Return-to-service will vary with chemical exposure. Consult with your Sherwin-Williams representative for guidance.

PACKAGING, ESTIMATING & HANDLING

ITEM#	PRODUCT	PACKAGING
LCEHTLG-QTCS-SW	Liquid Ceramic Epoxy High Temp, Light Gray Case includes tools - Part A Resin, Light Gray - Part B Hardener	4 x 2.3 lbs (1 kg) Kit 19 fl oz (568 mL) 6.4 fl oz (189 mL)
LCEHTLG-1GLKT-SW	Liquid Ceramic Epoxy High Temp, Light Gray - Part A Resin, Light Gray - Part B Hardener	1 gallon 0.77 gal (2.9 L) 0.24 gal (0.87 L)
LCEHTLG-4GLKT-SW	Liquid Ceramic Epoxy High Temp, Light Gray - Part A Resin, Light Gray - Part B Hardener	4 gallons 3.1 gal (12 L) 0.94 gal (3.6 L)
LCEHTDG-1GLKT-SW	Liquid Ceramic Epoxy High Temp, Dark Gray - Part A Resin, Dark Gray - Part B Hardener	1 gallon 0.77 gal (2.9 L) 0.24 gal (0.87 L
LCEHTDG-4GLKT-SW	Liquid Ceramic Epoxy High Temp, Dark Gray - Part A Resin, Dark Gray - Part B Hardener	4 gallons 3.1 gal (12 L) 0.94 gal (3.6 L)

Theoretical Coverage Rate

160 square feet per gallon at 10 mils DFT
133 square feet per gallon at 12 mils DFT
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
Dry adhesion ASTM D4541	Blasted steel 1 coat	>2,500 psi (17 MPa)
Wet adhesion ASTM D4541 5 days 158°F (70°C) water	Blasted steel 1 coat	>2,500 psi (17 MPa)
Abrasion resistance ASTM D4060	Blasted steel 1 coat	17 mg loss per 1000 cycles, CS17 wheel 1000 g load 0.1 mil loss per 1000 cycles
Compressive strength ASTM C109		10,000 - 13,000 psi (69 - 90 MPa)
Hardness ASTM D2240	Blasted steel 1 coat	84 Shore D

SERVICE TEMPERATURE

SERVICE	MAXIMUM TEMPERATURE
Dry, continuous	450°F (232°C)
Dry, intermittent	500°F (260°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.

Rev. 05/2026