



# PERMA-GLAZE SERIES G435

## PRODUCT PROFILE

**GENERIC DESCRIPTION** Modified Polyamine Epoxy

**COMMON USAGE** A versatile, thick film, 100% solids, abrasion-resistant lining specifically designed for domestic and industrial wastewater immersion and fume environments. Series 435 provides low permeation to H<sub>2</sub>S gas, protects against MIC and provides chemical resistance to severe wastewater environments. Contains micro-fiber reinforcement for improved film integrity.

**COLORS** 5020 Gray, 5023 Beige. **Note:** Epoxies chalk with extended exposure to sunlight.

**FINISH** Gloss

## COATING SYSTEM

**SURFACER/FILLER/PATCHER** Series 215, 217, 218.

**PRIMERS** **Steel:** Self-priming or Series L69, L69F, N69, N69F, V69, V69F.  
**Concrete:** Self-priming or Series L69, L69F, N69, N69F, V69, V69F, 201.  
**Note:** Series 435 must be applied to Series L69, L69F, N69, N69F, V69, V69F within 7 days. Scarify the surface with fine abrasive before topcoating if exceeding this maximum recoat window.

**INTERMEDIATE** Series 434 or 436 (optional)

**Note:** To minimize pinhole formation in the topcoat, it is recommended that concrete substrates be fully resurfaced and/or primed prior to topcoat application.

## SURFACE PREPARATION

Prepare surfaces by method suitable for exposure and service. Refer to the appropriate primer data sheet for specific recommendations.

**STEEL** SSPC-SP5/NACE 1 White Metal Blast Cleaning with a 3.0 mil minimum angular anchor profile.

**CONCRETE** Allow new cast-in-place concrete to cure a minimum of 28 days at 75°F (24°C). Verify concrete dryness in accordance with ASTM F 1869 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride" (moisture vapor transmission should not exceed three pounds per 1,000 square feet in a 24 hour period), F 2170 "Standard Test Method for Determining Relative Humidity in Concrete using in situ Probes" (relative humidity should not exceed 80%), or D 4263 "Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method" (no moisture present). Prepare concrete surfaces in accordance with NACE No. 6/SSPC-SP13 Joint Surface Preparation Standards and ICRI Technical Guidelines. Abrasive blast, shot-blast, water jet or mechanically abrade concrete surfaces to remove laitance, curing compounds, hardeners, sealers and other contaminants and to provide a minimum ICRI-CSP 5 surface profile. Large cracks, voids and other surface imperfections should be filled with a recommended filler or surfacer.

**OTHER SUBSTRATES** Contact your Tnemec representative or Tnemec Technical Services.

**ALL SURFACES** Must be clean, dry and free of oil, grease and other contaminants.

## TECHNICAL DATA

**VOLUME SOLIDS** 100% (mixed)

**RECOMMENDED DFT** **Steel:** 15.0 to 40.0 mils (380 to 1015 microns) in one or two coats.  
**Concrete:** 30.0 to 40.0 mils (760 to 1015 microns) in one or two coats.  
**Hi-Build Option:** 40.0 to 125.0 mils (1015 to 3175 microns) in one or two coats.  
**Glaze Coat Option (over Series 434 or 436):** 15.0 to 20.0 mils (380 to 510 microns).  
**Note:** Number of coats and thickness requirements will vary with substrate, application method and exposure. Contact your Tnemec representative.

CURING TIME	Temperature	To Touch	Dry Through	To Place in Service	Max. Recoat
	75°F (24°C)	3 hours	14 hours	2 days	7 days
	55°F (13°C)	7 hours	30 hours	3 days	7 days

**Note:** If more than 7 days have elapsed between coats, the Series 435 coated surface must be mechanically abraded before topcoating. Curing time will vary with surface temperature, air movement, humidity and film thickness. **Note:** Use "To Touch" cure information for minimum recoat times if succeeding coats are spray-applied and "Dry Through" if succeeding topcoats are applied by roller or brush.

**VOLATILE ORGANIC COMPOUNDS** EPA Method 24  
**Unthinned:** 0.32 lbs/gallon (38 grams/litre)

**HAPS** 0.1 lbs/gal solids

**THEORETICAL COVERAGE** 1,604 mil sq ft/gal (39.4 m<sup>2</sup>/L at 25 microns). See APPLICATION for coverage rates.

**NUMBER OF COMPONENTS** Two: Part A (Epoxy) and Part B (Amine)

**MIXING RATIO** By volume: One (Part A) to one (Part B)

PACKAGING	PART A (partial fill)	PART B (partial fill)	When Mixed
Large Kit †	5 gallon pail	5 gallon pail	8 gallons (30.28 L)
Medium Kit	3 gallon pail	6 gallon pail	5 gallons (15.14 L)
Small Kit	1 gallon can	1 gallon can	1 gallon (3.79 L)

† Plural Component application only.

**NET WEIGHT PER GALLON** 10.85 ± 0.25 lbs (4.92 ± .11 kg) (mixed)

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**STORAGE TEMPERATURE** Minimum 40°F (4°C) Maximum 110°F (43°C)  
 For optimum handling and application characteristics, both material components should be stored or conditioned between 70°F and 80°F (21°C and 27°C) 48 hours prior to use.

**TEMPERATURE RESISTANCE** (Dry) Continuous 275°F (135°C) Intermittent 300°F (149°C)

**SHelf LIFE** 12 months at recommended storage temperature.

**FLASH POINT - SETA** Part A: >230°F (110°C) Part B: 184°F (84°C)

**HEALTH & SAFETY** This product contains chemical ingredients which are considered hazardous. Read container label warning and Safety Data Sheet for important health and safety information prior to the use of this product.  
**Keep out of the reach of children.**

## APPLICATION

**COVERAGE RATES** Before commencing, obtain and thoroughly read the Series 435 Surface Preparation and Application Guide.

	Conventional Build (Spray, Brush or Roller)			Hi-Build (Spray Only)		
	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m <sup>2</sup> /Gal)	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m <sup>2</sup> /Gal)
Minimum	15.0 (380)	15.0 (380)	107 (10.0)	40.0 (1015)	40.0 (1015)	40 (3.7)
Maximum	40.0 (1015)	40.0 (1015)	40 (3.7)	125.0 (3175)	125.0 (3175)	13 (1.2)

**Note:** Recommended DFT will depend on substrate condition and system design. Refer to Recommended DFT section on page 1. Allow for overspray and surface irregularities. Film thickness is rounded to the nearest 0.5 mil or 5 microns. Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance.

**MIXING** Mix the entire contents of Part A and Part B separately. Scrape all of the Part A into the Part B using a flexible spatula. Use a variable speed drill with a PS Jiffy blade and mix the blended components for a minimum of two minutes. During the mixing process, scrape the sides and bottom of the container to ensure all of Parts A and B are blended together. Apply the mixed material within pot life limits after agitation. **Note:** A large volume of material will set up quickly if not applied or reduced in volume. **Caution: Do not reseal mixed material. An explosion hazard may be created.** Mixing ratio is one to one by volume.

**THINNING** **DO NOT THIN**

**POT LIFE** 25 to 30 minutes at 70°F (21°C) 15 to 20 minutes at 80°F (27°C)  
 Material temperatures above 80°F (27°C) will significantly reduce the spray and pot life.

**SPRAY LIFE** 20 to 25 minutes at 75°F (24°C)  
 Flush the pump and lines immediately after spraying.

**APPLICATION EQUIPMENT** **Airless Spray**

Pump Size	Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
45:1, 56:1, X50, 68:1 or X60	0.021"-0.025" (533-635 microns)	3400-4000 psi (234-276 bar)	3/8" to 1/2" (9.5 to 12.7 mm)	N/R

**Note:** Material needs to be gravity fed through a material hopper. Material will not feed through a suction tube.  
**Roller:** Use high quality 3/8" to 1/2" synthetic woven nap roller covers.  
**Brush:** Recommended for small areas only. Use high quality synthetic or nylon bristle brushes.  
**Plural Component:** Please contact your Tnemec representative or Tnemec Technical Service for information.

**SURFACE TEMPERATURE** Minimum of 50°F (10°C), optimum 65°F to 80°F (18°C to 27°C), maximum of 130°F (54°C). The substrate temperature should be at least 5°F (3°C) above the dew point.

**MATERIAL TEMPERATURE** For optimum handling and application characteristics, both material components should be stored or conditioned between 70°F and 80°F (21°C and 27°C) 48 hours prior to use. Temperature will affect the workability. Cool temperatures increase viscosity and decrease workability. Warm temperatures will decrease viscosity and shorten the spray and pot life.

**HOLIDAY TESTING** If required by project specifications, High Voltage Discontinuity (spark) testing shall be performed using a Tinker & Razor AP/W High Voltage Holiday Tester. Contact Tnemec Technical Service for voltage recommendations.

**CLEANUP** Flush and clean all equipment immediately after use with Tnemec's No. 4 Thinner or MEK.

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