



LAVACRETE SERIES 489

PRODUCT PROFILE

GENERIC DESCRIPTION Epoxy Vinyl Ester Polymer Concrete

COMMON USAGE Series 489 is a durable polymer concrete which exhibits fast curing and minimal shrinkage. Ideal for the rehabilitation of severely eroded concrete or for the corrosion-proofing of new concrete where superior chemical resistance is required throughout the complete topping system. Series 489 is ideal for pump and pad rebuilds in areas of strong acid and caustic exposure. Use to cast sumps and trenches off-site for time and labor savings.

COLORS 904 Medium Gray **Note:** Batch-to-batch color variation can be expected.

FINISH Flat (as poured). **Note:** A semi-gloss finish can be achieved by troweling the surface.

COATING SYSTEM

PRIMERS Series 1402

SURFACE PREPARATION

CONCRETE 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.

ALL SURFACES Must be clean and free of oil, grease and other contaminants. Always take precautions to prohibit the surface from becoming contaminated prior to product application.

TECHNICAL DATA

VOLUME SOLIDS 100% (mixed)

RECOMMENDED DFT 3/8" to 10" (1.0 - 25 cm) in a single pour.

CURING TIME

Temperature	Light Traffic/To Handle	Return to Service	Maximum Chemical Resistance
90°F (32°C)	1-2 hours	12-24 hours	24 hours
75°F (24°C)	2-4 hours	24 hours	24 hours
50°F (10°C)	8-10 hours	48 hours	72 hours

Curing times are based upon 3/8-inch of material, thicker castings and pours may result in longer set times. **Note:** Certain immersion service times may require additional cure time, contact Tnemec Technical Services for additional information.

VOLATILE ORGANIC COMPOUNDS THEORETICAL COVERAGE

0.02 lbs/gallon (1.9 grams/litre)

Coverage rates based on Casting/Topping Application:
 110 sq ft (10.2 m²) at 3/8" per kit
 83 sq ft (7.7 m²) at 1/2" per kit
 41 sq ft (3.8 m²) at 1" per kit

See APPLICATION for additional coverage rates.

PACKAGING

	Part A (Partially Filled)	Part B (Partially Filled)	Part C	Yield (mixed)
Large Kit	5 gallon pail (partial fill)	Pint bottle	5 - 70 lb bags	21.4 gallons (81.0 L)
Small Kit	1 gallon can	4 ounce bottle	1-70 lb bag	4.28 gallons (16.2 L)

Note: To create a grouting material refer to the mixing section for additional information.

STORAGE TEMPERATURE TEMPERATURE RESISTANCE SHELF LIFE

Minimum 50°F (10°C) Maximum 75°F (24°C)
 (Dry) Continuous 300°F (93°C)

Part A: 3 months at 35°F to 49°F (2°C to 9°C), 2 months at 50°F to 79°F (10°C to 26°C), 1 month at 80°F to 90°F (27°C to 32°C). Do not store at temperature below 35°F (2°C) or above 90°F (32°C).
 DUE TO THE REACTIVE NATURE OF THE VINYL ESTER RESINS AND THE CORRESPONDING LIMITED SHELF LIFE, EXPEDITIOUS USE OF THIS PRODUCT IS SUGGESTED, SINCE JOBSITE STORAGE CONDITIONS ARE BEYOND TNEMEC'S CONTROL, THIS PRODUCT IS NON-RETURNABLE.
 Part B: 12 months at recommended storage temperature.

FLASH POINT - SETA HEALTH & SAFETY

Part A: 87°F (31°C) Part B: 133°F (56°C)

Paint products contain 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

Casting/Topping Application

	Cubic Feet (Cubic Meters)
Large Kit	3.46 (.09)
Small Kit	0.69 (.02)

LAVACRETE | SERIES 489

WORKING TIME 20 to 30 minutes at 77°F (27°C) 45 to 50 minutes 50°F (10°C)
Note: Working time decreases as temperatures increase. Material should be transferred to substrate and placed **immediately** after mixing.

MIXING Mix the contents of Series 489 Part A and Part B separately in their original containers prior to combining. Add the Series 489 Part B into the pre-mixed Part A and power mix the material approximately one to two minutes before placing material in a drum mixer or adding aggregate.

Pour entire contents of catalyzed liquid into the mixer tub, making sure to scrape as much resin out of the container as possible. Start the mixing unit on low speed (15-20 rpms) and immediately begin adding Series 489 Part C into the mixer. Allow the first bag to be fully mixed before adding additional bags.

For additional mixing instructions please reference the charts below:

CASTING/TOPPING (Large Kit as supplied):

Part A	Part B	Part C
5 gallon pail (partially filled)	1 gallon can	5 - 70 lb bags

CASTING/TOPPING (Small Kit as supplied):

Part A	Part B	Part C
1 gallon can	Quart can	1 - 70 lb bag

THINNING APPLICATION Do not thin or attempt to retemper material.

Topping Application: Projects 200 sq ft (18.6 m²) or less may be trowel applied. Projects exceeding 200 sq ft (18.6 m²) should have mixed material placed in appropriately sized and spaced drops between pre-set guide rails or metal screeds that have been set to the specified depth. The fluid material should be pulled along using a screed board in a sawing and compacting motion. Trowels may be used to assist in packing and the small movement of material. Finishing should begin quickly using a high grade steel trowel, wetted with No. 2 Thinner to assist with smoothing. If material is too resin rich or sticky, sand may be broadcast over the surface during finishing.

CASTING Application: If Series 489 is to be cast into forms, all forms should be properly built, anchored and caulked for weep spots. Forms should be liberally waxed with release agents or lined with heavy gauge plastic secured to the internal sides. Once the forms are set, proceed with mixing the material per the mixing instructions above. Immediately move mixed polymer concrete to the form and pour into a funnel or head-box. Pour into annular space from one side as this allows for air to escape at the opposite end of the pour. Tamping rods, chains and vibrating equipment should be used to assist in moving and packing the material to limit voids in the polymer concrete once cured. **Important:** Do not cast over 10-inches (25 cm) in depth, contact Tnemec Technical Services for additional information.

APPLICATION EQUIPMENT Hand troweling can be accomplished on small projects using steel concrete finishing trowels, broad knives, rubber floats, wooden floats or plastic floats. Plastic bottles for misting the smoothing liquids onto the trowels or on the polymer concrete surface may also be needed.

SURFACE TEMPERATURE Minimum substrate and ambient application temperature 50°F (10°C) and rising. Do not apply if expected to fall below this temperature within 24 hours of application.

MATERIAL TEMPERATURE For optimum application, handling and performance, the material temperature during application should be between 60°F and 90°F (15°C and 32°C). Temperature will affect the workability. Cool temperatures increase viscosity and decrease workability. Warm temperatures will decrease viscosity and shorten pot life.

CLEANUP Flush and clean all equipment immediately after use with 44.4809 or MEK and plastic scrub brushes on the mixing blades and mixing drum. Sand and the discarded Part C bags can be added to the mixer to help scour the material. Finish with soap and water.

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