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

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

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
0.02 lbs/gallon (1.9 grams/litre)

THEORETICAL COVERAGE

Coverage rates based on Casting/Topping Application:
110 sq ft (10.2 m²) at 3/8” per kit
85 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

<table>
<thead>
<tr>
<th>Part A (Partially Filled)</th>
<th>Part B (Partially Filled)</th>
<th>Part C</th>
<th>Yield (mixed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Kit</td>
<td>5 gallon pail</td>
<td>Pint bottle</td>
<td>5 - 70 lb bags</td>
</tr>
<tr>
<td>Small Kit</td>
<td>1 gallon can</td>
<td>4 ounce bottle</td>
<td>1-70 lb bag</td>
</tr>
</tbody>
</table>

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

STORAGE TEMPERATURE
Minimum 50°F (10°C) Maximum 75°F (24°C)

TEMPERATURE RESISTANCE
(Dry) Continuous 300°F (150°C)

SHELF LIFE
Part A: 3 months at 85°F (29°C), 6 months at 75°F (24°C), 1 year at 68°F (20°C), 2 years at 60°F (15°C), 3 years at 50°F (10°C), 5 years at 41°F (5°C), 7 years at 32°F (0°C), 10 years at 24°F (-4°C), 20 years at 14°F (-10°C), 50 years at 3°F (-16°C), 100 years at -5°F (-21°C)

FLASH POINT - SETA
Part A: 85°F (29°C) Part B: 135°F (57°C)

HEALTH & SAFETY
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.
Before commencing, obtain and thoroughly read the LavaCrete Surface Preparation and Application Guide.

## Casting/Topping Application

### Coverage Rates

<table>
<thead>
<tr>
<th>Cubic Feet (Cubic Meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Kit</td>
</tr>
<tr>
<td>Small Kit</td>
</tr>
</tbody>
</table>

### Working Time

| Note: Working time decreases as temperatures increase. Material should be transferred to substrate and placed immediately after mixing. | 20 to 30 minutes at 77°F (25°C) | 45 to 50 minutes 50°F (10°C) |

### 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):

<table>
<thead>
<tr>
<th>Part A</th>
<th>Part B</th>
<th>Part C</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 gallon pail (partially filled)</td>
<td>1 gallon can</td>
<td>5 - 70 lb bags</td>
</tr>
</tbody>
</table>

### Casting/Topping (Small Kit as supplied):

<table>
<thead>
<tr>
<th>Part A</th>
<th>Part B</th>
<th>Part C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 gallon can</td>
<td>Quart can</td>
<td>1 - 70 lb bag</td>
</tr>
</tbody>
</table>

### Thining

Do not thin or attempt to retemper material.

### Application Equipment

- **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 on 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 squeegee 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.

### 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.