

## Product Description

**VIBROPRUF® #11** is a single-component, non-metallic, non-shrink cementitious grout material that requires only the addition of water. **VIBROPRUF® #11** is formulated to provide an excellent property set in all relative categories including flow, strength and setting time and conforms to the test methods of ASTM C-1107, USACE CRD C-621 & C-588. **VIBROPRUF® #11** is designed to reach high-compressive strengths suitable for use at column bases and bearing plates, for anchoring dowels, rebar and tie rods, and for setting beds for structural precast concrete elements.

## Installation

Before using this product, please refer to the Safety Data Sheet for additional information. Proper handling precautions MUST be followed. The conditions of use, handling, and application of this product and information (whether verbal or written), including any suggested formulations and recommendations, are beyond Lambert Corporation's control. Therefore, it is imperative that testing be performed to determine satisfaction and suitability for intended use and health, safety, and environmental issues. The following information is meant as a guideline of best industry practices. While Lambert Corporation does suggest adherence to these guidelines, unforeseeable variables and/or developed successful installer practices may cause variation in methods and/or results. Transportation, storage, means of utilization, and methods of application are not the responsibility of, nor within the scope of control of Lambert Corporation, and any question regarding the appropriate application of these products must be addressed with Lambert Corporation representatives prior to use. Field visits by Lambert Corporation personnel are for the purpose of making technical recommendations only, and not for supervising or providing quality control on the jobsite.

## Surface Preparation

Remove all unsound concrete and roughen the surface, if necessary, to a minimum 1/4-inch (6.4-mm). Concrete substrates should be cured properly and structurally sound. Remove all laitance, oil, grease, curing compounds, and other contaminants that may negatively affect the bonding capability of the **VIBROPRUF® #11**. Concrete substrate should be saturated surface-dry (SSD), free of all standing water, prior to application. Where exposed rebar warrants use of a surface applied bonding agent / corrosion-resistant rebar primer, use Lambert Corporation's EPIWELD® 90 CI. Refer to relative technical data sheets for complete application instructions.

## Mixing and Placement

Product and appropriate water amount must be mixed via mechanical means; manual agitation is not acceptable. A paddle type mixer or a revolving concrete mixer can be used. Use a container that will facilitate continuous placement. Place water into mixer before dry mortar. **VIBROPRUF® #11** will require approximately 3.5-quarts (3.3-liters) potable water for plastic consistency, approximately 4-quarts (3.8-liters) potable water for flowable consistency, or approximately 4.5-quarts (4.25-liters) potable water for fluid consistency per 50-lbs (22.7-kg) bag based on project requirements to achieve correct mixture. Blend for approximately 3- to 5-minutes before placing material.

## Application / Placement

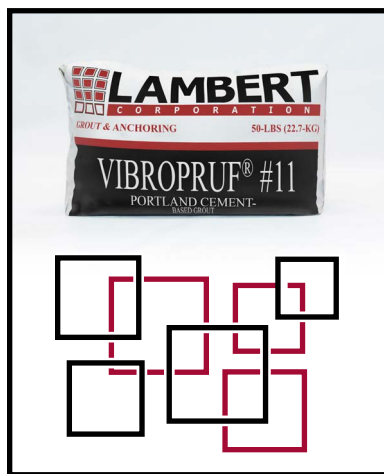
Apply the mixed material onto the prepared saturated surface-dry (SSD) substrate. Ensure proper consolidation of the mortar and compaction around reinforcing steel (see Surface Preparation section regarding use of Lambert Corporation's EPIWELD® 90 CI where exposed reinforcing steel is present). Minimum application thickness is 1/4-inch (6.4-mm). Always place grout from only one side of the equipment, utilizing an appropriate 'groutbox' or similar device and system for a continuous pour to avoid air pockets. Discard any product that becomes unworkable. Make sure that the material fills the entire space being grouted and that it remains in contact with plate throughout the grouting process. Before removing grout forms or excess grout, verify that **VIBROPRUF® #11** offers resistance to penetration using a pointed mason's trowel or similar equipment. For dry packing **VIBROPRUF® #11**, mechanically mix grout to "plastic" consistency. Allow to set five minutes; then forcefully pack spaces to be dry-packed. Cure all exposed grout with an industry-approved curing procedure such as Lambert Corporation approved membrane curing compound compliant with ASTM C 309 or ASTM C 1315.

## Limitations

**VIBROPRUF® #11** is cement based. Follow ACI recommended practices. Do not add cement, plasticizer or accelerator. Avoid placement when temperatures are, or will be below 45°F (7.2°C) within 24 hours. If it is placed with excess water or at low temperature, both the compressive strength and expansion properties may be adversely affected. For applications greater than 3-inches (7.6-cm) in depth, use 25 – 50-lbs (11.4 – 22.7-kg) of 3/8-inch (10-mm) washed, graded, rounded, low absorption, high-density aggregate per 50-lb (22.7-kg) bag. Do not retemper after initial mixing.

## Technical Information

The following technical information was obtained using water to non-extended **VIBROPRUF® #11** ratios as are listed within the chart at 72°F (22.2°C). **VIBROPRUF® #11** is approved under FDOT Section 934, and successfully meets or exceeds the testing within ASTM C-1107, U.S. Army Corp of Engineers CRD C-621, and CRD C-588.

	<p>Packaging:</p> <ul style="list-style-type: none"> <li>50-lbs (22.7-kg) Bag</li> <li>50-lbs (22.7-kg) Pail</li> <li>3000-lbs (1360.8-kg) Super Sack</li> </ul>
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		Plastic	Flowable	Fluid
<b>Water Requirements (quarts)</b>		3.5	4.0	4.5
<b>Set Time (minutes) - ASTM C-191</b>	Initial	110	210	285
	Final	260	330	390
<b>Compressive Strength (psi) - ASTM C109</b>	24-hours	5320	5070	4375
	3-days	6970	6660	6165
	7-days	7865	8340	8020
	28-days	10055	10210	10415
<b>Flow Table Analysis (%) - ASTM C230</b>		110	132	N/A
<b>Flow Cone Analysis (seconds) - CRD C-611</b>		N/A	N/A	16
<b>Expansion - CRD C-227</b>	3-days	+0.04	+0.02	+0.01
	14-days	+0.04	+0.03	+0.01
	28-days	+0.05	+0.03	+0.01
<b>Tensile Strength - ASTM C307 (psi)</b>		7-days 700		
<b>Flexural Strength - ASTM C580 (psi)</b>		7-days 1,325		
<b>Chloride Content - FM 5-516 (lbs/yd<sup>3</sup>)</b>		28-days 0.07		
<b>Surface Resistivity - FM 5-578 (KOhm-cm)</b>		28-days 11.4		
<b>Slant Shear Bond Strength - FM 5-587 (psi)</b>		7-days 1,805		
<b>Expansion and Bleeding Percentage - ASTM C940 (%)</b>	Expansion - 3-hours	0.0%		
	Bleeding - 3-hours	0.0%		
<b>Hardened Height Change - ASTM C1090 (%)</b>	1-day	0.0%		
	3-days	0.0%		
	14-days	0.0%		
	28-days	0.0%		
<b>Pull-Out Test / Max Load (lbs) - ASTM E-488</b>	7-days - #4 Rebar	14300		
	7-days - #6 Rebar	35965		
	7-days - #8 Rebar	64000		
	14-days - #4 Rebar	13765		
	14-days - #6 Rebar	33565		
	14-days - #8 Rebar	60490		
	28-days - #4 Rebar	13615		
	28-days - #8 Rebar	44530		
	28-days - #8 Rebar	72200		

### Coverage

One 50-lbs (22.7-kg) bag of **VIBROPRUF® #11** will yield 0.45-ft<sup>3</sup> (0.013-m<sup>3</sup>) of mortar or cover 5.4-ft<sup>2</sup> @ 1-inch (0.5-m<sup>2</sup> @ 25-mm) thick.

### Clean-Up

Product can be cleaned up by sweeping, paying attention to minimizing the creation of excess dust. Use water to clean tools and equipment immediately following application. Finished/cured product must be removed with mechanical means.

### First Aid

Cement powder or freshly mixed concrete may cause skin injury. Avoid contact with skin and wash exposed skin areas promptly with soap and water. If any cement powder or mixture gets into eyes, rinse immediately and repeatedly with water and get prompt medical attention. Avoid overexposure to the airborne dust. If inhalation occurs, remove to fresh air area. If any discomfort or breathing issues occur, seek immediate medical attention. Refer to product Safety Data Sheet for further information.

### U.S. State of California Proposition 65

This product contains material listed by the State of California as known, when treated improperly, to cause cancer, birth defects or other reproductive harm.

### VOC Content

0 -g/L or 0-lbs/gal less exempt content

**KEEP OUT OF REACH OF CHILDREN. FOR INDUSTRIAL USE ONLY.**