

# L-16 SELF-LEVEL™

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Supersedes all previous publications



## Product Description

LAMBCO® L-16 SELF-LEVEL™ is an advanced cementitious self-leveling floor system designed for leveling and smoothing concrete. It is a portland cement blend that produces a pourable and pumpable compound when mixed with clean potable water. LAMBCO® L-16 SELF-LEVEL™ will seek its own level producing a hard flat surface. It can be placed over properly prepared broomed or roughened concrete and wood substrates at thicknesses from 1/16-inch to 2-inches (1.6-50.8mm). A primer coat of PRIMER L-16™ concrete bonding agent is required for all substrates to ensure proper adhesion. L-16 SELF-LEVEL™ is cement based and compatible with common floor covering adhesives.

LAMBCO® L-16 SELF-LEVEL™ is used for eliminating high and low spots or leveling off uneven, rough floors. Primarily used as an underlayment for surfaces to be covered with carpeting, vinyl, asphalt, ceramic tile, wood flooring, and many other compatible coverings. Usage also includes interior light traffic type surfaces.

## Installation

Before using this product, please refer to the Material 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.

There are four key steps to the successful installation of L-16 SELF-LEVEL

- 1) Proper surface preparation
- 2) Uniform primer application
- 3) Proper liquid/powder ratio
- 4) Continuous placement

**ALWAYS INSTALL TEST AREAS TO DETERMINE THE SUITABILITY OF THE PRODUCT FOR THE INTENDED USE PRIOR TO A FULL SCALE APPLICATION.**

### Surface Preparation

Improper surface preparation can result in less than acceptable L-16 SELF-LEVEL™ performance. It is very easy to blame adhesion problems that occur, on the product that is used when poor surface preparation is really where the fault lies.

### Broomed or Rough Concrete Surfaces

To ensure proper adhesion and maximum durability, the concrete surface must be sound, thoroughly cleaned of all cure/sealing compounds, dirt, dust, oil, wax, old paint, adhesives, and loose concrete. Deep holes, joints and cavities must be filled with Lambert's premium patching products prior to placing the L-16 SELF-LEVEL™. Depending on surface to be treated, the following steps should be taken.

Concrete surfaces must be at least 30 days old to allow for proper hydration and release of mineral salts. Never apply L-16 SELF-LEVEL™ where mineral salts (efflorescence) are present. The salts break down the bond of cement products. These salt areas need to be sandblasted or acid etched to produce an acceptable sound and open substrate.

Degrease any areas that are soaked with oils or greases. Areas that have acrylic resin concrete cure/seals, waxes, paints, or any contaminants need to be properly removed. Wash all surfaces with a tri-sodium phosphate solution and rinse with clean water. All contaminated concrete surfaces must be properly prepped by one of the following methods: shot blast, sand blast or acid etching prior to applying PRIMER L-16™. This should provide a medium porous type surface for penetration of PRIMER L-16™.

Correct acid etching procedure is as follows: Mix one part by volume muriatic or phosphoric acid into 10 parts water. Apply acid with plastic sprinkling container to a pre-dampened surface. After application immediately brush; thoroughly working the surface. Wait 10 minutes or until foaming stops, then thoroughly rinse with clean water. If a hard-trowelled polished concrete exists (such as warehouse or garage floors) a stronger acid solution may be required. Where strong acid solutions are used, it is imperative that surface be rinsed thoroughly with a 10% AMMONIA and water wash to ensure proper neutralization. Properly etched concrete produces a sandpaper finish that has the "teeth" to form a successful bond. If this is not achieved, repeat etching process. Proper protective clothing, such as goggles, rubber gloves and boots are recommended when handling acids.

### Slick Concrete Surfaces

Super slick concrete surfaces such as hard-trowelled concrete, terrazzo, etc. should be sandblasted, shot-blasted, or otherwise roughened to aid in achieving adequate mechanical bond. An epoxy adhesive Lambert's pourable premium epoxy should be considered over slick, hard and very dense concrete surfaces. A test application should be performed to verify compatibility.

### Wood Floors

Wood floors should be rigid, clean, and have a tensile strength of 200 PSI (1.38MPa) maximum. Floors with deflection in excess of "L/360" should be braced or suitably stiffened prior to installation. Sanding will remove most of surface contaminants. Fill all joints with wood glue and tape the edges with a thin two-way industrial tape. Nail down any loose wood. Apply a thin galvanized, diamond mesh metal lath nailed or stapled on 6-inch (15.24cm) centers to provide a mechanical bond.

### Application – Surface Priming

Stir PRIMER L-16™ well prior to use. Make sure no settling has occurred. PRIMER L-16™ should be used "as is", DO NOT DILUTE. If concrete or wood substrate is very porous, pre-dampening with water will prevent rapid water absorption from PRIMER L-16™ solution.

### Packaging:

50-lb (22.7kg)  
Bags

Yields 25ft<sup>2</sup>  
(2.3m<sup>2</sup>) at 1/4-in  
(6.35mm)  
thickness

RESURFACE REPAIR  
HORIZONTAL

L-16 SELF-LEVEL™

MASTER FORMAT: 03 01 50  
03 54 16



**RESURFACE REPAIR HORIZONTAL**

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Apply PRIMER L-16™ uniformly with a soft push broom to form a continuous thin film over the entire surface to be bonded. Allow to penetrate and dry to a tacky state. Remove any puddles of PRIMER L-16™ prior to placing L-16 SELF-LEVEL™. Porous areas may require two applications.

Difficult non-porous, super slick substrates require Lambert's pourable premium epoxy adhesive instead of PRIMER™ L-16. The epoxy must be tacky at time of LAMBCO® L-16 SELF-LEVEL™ application. Contact Lambert Corporation for compatible epoxies and installation instructions.

Floors that are not properly primed will not stick and have pinholes in the surface. Because they entrap air, do not use paint rollers or brushes when applying primer. The object of priming is twofold: to create an adhesive or glue line and to seal the substrate to prevent air release from the subfloor rising and forming bubbles and pinholes on the surface of the LAMBCO® L-16 SELF-LEVEL™ compound being applied.

**Mixing**

Add L-16™ powder to the water in the mixing container. Add 5 (five) quarts (4.7L) of clean potable water to the mixer. DO NOT OVER WATER. OVER WATERING WILL CAUSE BLEEDING. Then, while mixing, add the powder. Mix for 3 to 5 minutes until the material is fluid and free of lumps. If the sides of the mixer develop powder build-up, scrape sides and continue mixing until powder and lumps break up in the mix. If area to be covered is small, a 1/4-inch (6.35mm) drill and a mixing paddle with a 5-gallon (18.9L) pail are sufficient. The 1/2-inch (12.7mm) drill must be a variable speed drill to control the shear and mixing speed. If the area is large, a concrete pump machine is necessary. For applications over 2-inches (5.1cm) thick, add 20 pounds (9.1kg) of 1/8-inch (3.2 mm) maximum rounded pea gravel to each bag. Mix L-16 SELF-LEVEL™ with water first, and then add aggregate. If aggregate is wet, reduce water to avoid over watering mix.

**Merge Time**

Material should be placed continuously in 15-20 minutes. Use of a concrete rake or spreader is recommended in certain applications if material cannot be merged within this time frame.

**Continuous Placement**

Pour or pump the material onto the substrate. Spread LAMBCO® L-16 SELF-LEVEL™ with a spreader or screed. Then smooth material with a smoother. Material should level out in the first 5-8 minutes after applying to the substrate. With a pump application, work the hose in equal spacing 6-inch (15.2cm) streams. Sufficient material should be used to adequately cover all high points. The entire thickness must be achieved in one application. Avoid ridges between batches. If high spots or splashes occur, these can be pared off with the edge of a trowel after initial set. DO NOT ATTEMPT TO FLOAT THE SETTING SURFACE.

**Curing and Sealing**

LAMBCO® L-16 SELF-LEVEL™ is self-curing under normal conditions; however, it must be protected with polyethylene sheeting from conditions that will cause rapid drying such as wind and high temperature.

**Limitations**

Ambient temperature while pouring and curing needs to be within the ranges of 40-90°F (4.4-32.2°C). DO NOT APPLY when the floor temperature is below the dew point and the relative humidity is above 90%. Material is not to be over-watered. Substrates must be clean and properly prepared.

Floors with deflection in excess of "L/360" should be braced or suitably stiffened prior to installation of L-16 SELF-LEVEL™ material.

It is recommended that featheredges be avoided and saw cutting or chipping to a minimum depth of 1/4-inch (6.35mm) be done.

**Technical Data**

Compressive Strength		2" cubes ASTM C-109	Bond Strength (ASTM C-881)		
1 Day		2800 PSI (19.3 MPa)	14 Days	14.13 in <sup>2</sup> (91.2cm <sup>2</sup> )	3115 PSI (21 MPa)
3 Days		3100 PSI (21.4 MPa)	Note: 100% of bond rupture was observed "dummy" section of specimen and not at point of bond interface.		
7 Days		3300 PSI (22.8 MPa)			
28 Days		4500 PS (31.0 MPa)			
Flexural Strength		(ASTM C-78)	Percentage of Avg. Length Change (ASTM C-78)		
7 Days		740 PSI (5.1 MPa)	Air Storage		Water Storage
28 Days		880 PSI (6.1 MPa)	1 Day	(-) 0.00%	(+) 0.00%
			7 Days	(-) 0.00%	(+) 0.00%
			14 Days	(-) 0.03%	(+) 0.00%
			28 Days	(-) 0.04%	(+) 0.01%
			Subsequent Maximum Readings:		
				(-) 0.15%	(+) 0.15%

**Coverage**

- LAMBCO® L-16 SELF-LEVEL™ - 25 square feet (2.3m<sup>2</sup>) at 1/4-inch (6.35mm) per 50 lb (22.7 kg) bag
- PRIMER L-16™ - Apply 400-600 ft<sup>2</sup> per gallon (9.8-14.7m<sup>2</sup>/L), depending on the bonding surface and porosity. See product specification sheet for the full coverage details of PRIMER L-16™.

**Clean-Up**

PRIMER L-16™ - In case of spillage, flush area with large amounts of water, place into appropriate container, and dispose of in accordance with applicable local regulations. Uncured PRIMER L-16™ can be removed with water. Cured PRIMER L-16™ can be liquefied with lacquer thinner.

**First Aid**

LAMBCO® L-16 SELF-LEVEL™ - Cement powder or freshly mixed concrete may cause skin injury. Avoid contact with skin and wash exposed skin areas promptly with water. If any cement powder or mixture gets into eyes, rinse immediately and repeatedly with water and get prompt medical attention. LAMBCO® L-16 SELF-LEVEL™ contains some silica sand that can cause Silicosis. Avoid overexposure to the airborne dust. Practice good housekeeping; protect food and drink.

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