



LIFE PAINT

PRODUCT SPECIFICATIONS



EPOXIES

LD3770 NOVOLAC EPOXY

Description

LD3770 is a 100% Solids, multi-functional Novolac epoxy system. It is designed for strong chemical and solvent resistance and constant temperature exposure of greater than 225°F. The LD3770 can withstand a constant immersion of 70% Sulfuric Acid for 90+ days before failure and 50% Sodium Hydroxide immersion for 30 days. It is available pigmented or as a clear coat.

Uses

Some commonly used areas for LD3770 are containment areas, manufacturing plants, mechanical rooms, warehouses, tank linings, where a high level of chemical and solvent resistance is required, commercial kitchens, waste treatment plants, and high-temperature areas of food and beverage processing plants. It can be used as a clear coat over decorative color quartz or mixed with aggregate for use as a mortar for overlays or repairs for concrete.

Advantages

- 100% Solids
- Strong Chemical Resistance
- Low Odor
- Superior Adhesion
- High Heat Resistance
- High Strength
- High-Build

Coverage

Coverage will vary depending on condition of surface and desired thickness.

As a Coating:

100-300 sf per gallon

For Epoxy Mortar:

1 gallon of epoxy mixed with 5 gallons of sand will yield approximately 3 to 4 gallons of mortar.

Packaging

1 1/2 gallon kits

15 gallon kits

Colors

Clear (slightly amber), Gray, White, and Black

Inspection

Concrete must be clean, dry, and free of grease, paint, oil, dust, curing agents, or any foreign material that will prevent proper

adhesion. The concrete should be at least 2500 psi and feel like 30-grit sandpaper. The concrete should be porous and be able to absorb water. A minimum of 28 days cured is required on all concrete. Relative humidity in the concrete floor slab should be below 80% (per ASTM F-2170).

Before starting flooring work, test existing concrete slab to make sure there is no efflorescence or high levels of alkalinity. Alkalinity refers to a high pH reading which means the floor is not neutral. A high alkaline environment can cause salts to creep up through the cement called efflorescence. These salts have a tendency to prevent or destroy the bonding of coatings to the concrete. The most common form of testing is the use of a wide-range pH paper or tape. Make sure the floors pH reading ranges between 5-9 to ensure adhesion. The testing of concrete for alkalinity can show the amount of alkalinity only at the time the test is ran, and cannot be used to predict long-term conditions.

Calcium chloride tests should be conducted to determine if the concrete is sufficiently dry for an epoxy flooring installation. The calcium chloride tests should be conducted in accordance with the latest edition of ASTM F 1869, Standard Test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride. When running a calcium chloride test, it is important to remove any grease, oil, curing agents, etc. so accurate readings can be obtained. A rate of 4.5lbs/1000 ft²/24hr period or less is an acceptable amount of vapor pressure for an epoxy flooring installation. If the reading ranges from 4.5lbs to 15lbs, a moisture barrier system such as our LD1200 Vapor Seal can be installed to reduce the emissions.

Failing to adhere to these strict guidelines can result in product delamination, discoloration, blistering, or all together failure of the coating system. Testing is the responsibility of the applicator. Life Paint bears no responsibility for failures due to any of the above conditions.

Surface Preparation

Over Concrete Surfaces: Shotblasting is the preferred method for preparing the concrete. In some cases you may prepare by acid etching, floor scrubbing with a nylogrit brush and waterblasting to achieve a clean and uniform surface that feels like 50 grit sandpaper. If acid etching is done, be sure to properly etch and then adequately neutralize by scrubbing and rinsing several times followed by power

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washing. Prepare the surface so that the product will soak in and properly bond.

Over existing Epoxy: Sand the surface with a floor buffer and 50 grit sand paper, remove debris and wipe with denatured alcohol just before new application.

Mixing

As a Coating: Premix each component separately. Mix 2 parts A with 1 part B, by volume, into a clean container. Mix thoroughly with a low speed (400-600 rpm) drill motor for 3-4 minutes. Make sure to scrape the sides and bottom of the container during mixing. The product may be thinned with acetone in which case it must be applied thinly enough to allow solvent to escape (minimum 300 sf per gallon). After mixing is completed, remove from container within 5 minutes as epoxy will begin to generate heat. Spread immediately onto the floor, as product is spread out you will have longer working time (10-15 minutes at 70°F).

For an Epoxy Mortar: Mix 2 to 5 parts of a washed and kiln dried aggregate, by volume, to 1 part of mixed LD 3770 and mix until uniform in consistency.

Application

Primer: Prime the surface using LD1200, or LD12Vapor Seal epoxies (Read individual product information sheets). The LD3770 may also be used as a primer when thinned 10-20% with acetone. Primer coat should be applied thinly and worked into the surface to help seal avoid pin holes.

As a Coating: Apply LD3770 within 24 hours after the primer coat. Immediately after mixing, spread a strip of the batch onto the surface along the edges where it will be "cut in" using a brush. Pour the remaining material near the "cut in" area and spread evenly using a trowel or squeegee and back roll using a 1/4" nap non-shedding roller. A notched trowel or squeegee will help regulate the thickness and a porcupine roller will help to release trapped air and minimize bubbles. Depending on the look, thickness, chemical and abrasion resistance desired, 1 to 2 coats may be applied. A non-skid surface can be achieved by broadcasting and/or back rolling a washed and kiln dried aggregate into the coating.

For an epoxy mortar: Prime the surface using LD1200, or LD12 Vapor Seal epoxies (Read individual product information sheets). While tacky, apply the prepared mortar using a trowel. If waiting longer, make sure to broadcast silica sand into wet primer coat (1lb/2sf) to ensure intercoat adhesion. Make sure to sweep or blow off excess sand before application of the mortar coat.

Limitations

- Do not apply at temperatures below 50°F or above 95°F.
- After mixing completely (3-4 minutes remove from mixing container an apply to floor)

- Do not apply over concrete with Moisture Vapor Emissions above 4.5lbs/1000 ft²/24hr period (see LD12Vapor Seal specification)
- For interior use only unless protected by a UV resistant coating.
- 4" Concrete must be cured for a minimum of 28 days.
- Solvents added to thin such as acetone will make product combustible or flammable in which case be aware of sparks or open flame.
- If solvent is added, the products must be applied thinly to allow the solvent to escape or proper curing will to occur.

Clean Up

Uncured material can be removed with a solvent. Cured material can only be removed mechanically.

TEST RESULTS

DRY TIME	5 HRS @ 77°
PENCIL HARDNESS	3H
IMPACT RESISTANCE	
DIRECT/REVERSE	35/12 IN-LB
ABRASION RESISTANCE	0.03
1000 CYCLE, WT LOSS GRAMS	

CHEMICAL RESISTANCE

SULFURIC ACID		
10%	>90 DAYS	
30%	>90 DAYS	
50%	>90 DAYS	
70%	>90 DAYS	
HYDROCHLORIC		
10%	24 HOURS	
SODIUM HYDROXIDE		
50%	30 DAYS	
PHOSPHORIC ACID		
10%	24 HOURS	
30%	24 HOURS	
AMMONIA		
30%	30 DAYS	
ETHANOL, 100%	3 HOURS	
METHANOL	3 HOURS	
CELLOSOLVE	24 HOURS	
ACETONE	24 HOURS	
MEK	<3 HOURS	
TRICHLOROETHYLENE	3 DAYS	
TOLUENE	24 HOURS	
JP-4 JET FUEL	>24 HOURS	
LACTID ACID 10%	7 DAYS	
ACETIC ACID 10%	< 24 HOURS	