



# SURFACE PREPARATION INSTRUCTIONS

## **DEFINITION OF TERMS**

The terms listed will be used frequently throughout this article and listed in boldface for ease of reference. They describe, in detail, the methods, procedures and meanings that *LifeLast, Inc.* adheres to. Please read them carefully.

### **DEGREASE**

The process of degreasing a substrate involves the removal of oil or grease-like organic or non-organic materials that could impair bonding of the coating to the substrate. Degreasing a substrate involves the use of a solvent or other **cleaning** agents such as ammonia, bleach, hydrochloric acid, citric acid, lye, or any other material that will dissolve or react with contaminant to remove it from the area. Common **degreasers** are acetone, methyl ethyl ketone, xylene, toluene, ammonia, glycol ethers, and hydrochloric acid. If the material that is used as the **degreaser** leaves a residue (such as hydrochloric acid or acetic acid or one of the citrus based **cleaners**) the residue must be removed before the coating is applied. Caution should be exercised to verify compatibility between all **cleaning** agents and **degreasing** agents used (i.e. - do not use bleach with ammonia).

### **CLEAN**

**Cleaning** the surface of the substrate is defined as the removal of all contaminants. This is typically done with ammonia or a solvent such as acetone. Dust removal can be done with the use of a vacuum system that has a suction power of 80 psi or more. Contaminants to be **cleaned** or removed would include dust, dirt, residue from degreasing, waxes, oils, etc. The condition of the surface after **cleaning** is contaminant free. There should be no residues, oils, or dusts. Caution should be exercised to verify compatibility between all **cleaning** and degreasing agents used.

### **PROFILE**

A **profile** is the creation of a texture on the surface of the substrate to be coated. The texture of **profile** is created by blasting the surface with a solid or liquid media or grinding the surface with a sanding disc.

The blasting media that are preferred are as follows:

1. Steel Grit
2. Alumina
3. Garnet
4. Black Beauty
5. Green Diamond
6. Steel shot
7. Silica sand
8. Soda blasting (does not create a **profile**)
9. Soft media blasting (does not create a **profile**)

The surface preparation methods for creating a **profile** that are preferred are as follows:  
(in order of preference)

1. aggregate blasting (not including silica sand)
2. shot blasting
3. abrasive wheel grinding (16 grit and larger)
4. roto peening
5. silica sand blasting
6. soft media blasting (on concrete only)

## **LAITANCE**

**Laitance** is the weak silicious material that is found on the surface of some concrete. The **laitance** is fine in texture and is the result of troweling. Repetitive troweling brings the fine sands of the concrete to the surface. The fine sands create a smooth texture but are weak in tensile strength. The removal of the **laitance** ensures bonding strengths that would be the maximum for that particular concrete. In some cases, bond strengths of 50-75 psi are suitable, thus the removal of the **laitance** is not necessary. If bond strengths of 150 psi are desired, one of the two options are: 1) the removal of the **laitance** is not required but the use of *LifeLast Primall-EP* over a **clean** surface is, or 2) the removal of the **laitance** but no priming would suffice. If bond strengths in excess of 300 psi are required, then the removal of the **laitance** and the use of *Primall-EP* is required.

DEVIATIONS FROM THE RECOMMENDED SURFACE PREPARATION PRACTICES WILL VOID ANY WARRANTIES MADE BY **LIFE LAST, INC.** CONCERNING PRODUCT BONDING UNLESS THE DEVIATIONS ARE PRE-APPROVED BY A **LIFE LAST, INC.** TECHNICAL REPRESENTATIVE.

## **WOOD**

## CLEANING AND DECONTAMINATION

Wood that contains oils, fats or grease should be removed. This can be accomplished by sanding or removal of the complete piece of wood. Dust and debris can be removed via vacuum or air blown.

## ABRASIVE BLASTING

All hardwoods, most importantly those that have been used, should be abrasive blasted to provide a surface that is clean and free of any loose materials. Wet blasting is acceptable if the moisture is dried and does not hinder the coating process. Dry blasting techniques are preferred, but care should be taken not to remove any more material than is necessary. Sharp edges should be rounded by wire brushing or sanding. An anchor pattern similar to coarse sand paper is the type of surface to achieve.

The surface preparation methods for creating a **profile** that are preferred are as follows: (in order of preference)

1. aggregate blasting (not including silica sand)
2. shot blasting
3. abrasive wheel grinding ( 16 grit and larger)
4. roto peening
5. silica sand blasting
6. soft media blasting

## FINAL CLEANING

After all substrates are prepared, surfaces adjacent to the work area shall be cleaned of dirt, blasting residue, and other debris to prevent wind-blown contamination of the prepared substrate or freshly applied coatings.

Just prior to primer or coating application, surfaces to be coated are to be power vacuumed to remove all dust, dirt, blasting residue, and debris. Transitions into adjacent areas not to be coated shall be neatly taped off or protected. Wood surfaces may be slightly damp but must be dust-free prior to and during application of the primer.

If you have any questions about the above procedures please consult a ***LifeLast, Inc.*** technician at the phone number on the bottom of this page.

## APPLICATION OF PRIMALL-EP

The reasons for priming wood are :

1. priming wood seals the wood and reduces pinholing and gassing that is a result of the expansion of air in the wood;
2. priming wood increases the strength of the wood and as a result reduces the possibility of future failure;
3. priming wood aids the bond of *LifeLast* urethanes to wood that is not or may not be completely dry.

The ratio of Primall-EP is a 1:1:1 ratio. This helps to seal the wood to reduce pinholing. If the primer is to be spray applied, a 1:1:2 can be used and two application should be applied. Please refer to Primall-EP Application Instructions for application details.

### **APPLICATION OF LIFELAST, INC. URETHANE COATING**

The application of the *LifeLast* urethanes coating should be in compliance with the recommendations found their respective application instruction sheets.