

# LIMESTRONG BUILD™

HIGH PERFORMANCE POZZOLAN + LIME

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## SUBSTRATE-SPECIFIC APPLICATION GUIDELINES

# Hempcrete Construction

WHETHER CAST IN PLACE or laid up in block form, the functional and sought-after characteristics of hempcrete as a building material—strength, breathability, sustainability—is beautifully complemented by a lime plaster render.

### PREPARATION <sup>[XR1]</sup>

The hempcrete surface will need to be sound. Repair and fill any large voids or cracks. Remove loose particles and dust from the surface. If a release agent was used on the forms, any traces **MUST** be removed, either by sand-blasting or a thorough scrubbing or power-washing.

### SCRATCH COAT

Dampen the hempcrete surface. Depending on climate and atmospheric conditions, you may need to dampen the wall several times in the hours leading up to the application, and then again right before application.

**MIX RATIO**<sup>[XR2]</sup>. Mix the scratch coat at a volume ratio of 1.0 part LSB Binder to 1.0 (up to 1.5) parts sand<sup>[XR3]</sup>.

**THICKNESS**. The scratch coat should be 1/4 to 3/8 of-an-inch thick from the outside face. There should be no sign of the hempcrete substrate coming through the scratch coat.

**APPLICATION METHOD**<sup>[XR1]</sup>. Plaster can either be applied using a hawk and trowel (acceptable) or using a texture/stucco sprayer (best).

**SURFACE FINISH**. Finish the scratch coat with a plaster scarifier<sup>[XR4]</sup> for maximum key for the leveling coat. The key should be 1/4-inch deep.

**CURING**. Ensure proper curing<sup>[XR1]</sup> for at least 72 hours (or longer per weather/climate conditions)—protecting/screening and misting as necessary.

### LEVELING (BROWN) COAT

Always pre-wet<sup>[XR1]</sup> the scratch coat prior to leveling coat application.

**MIX RATIO**. Mix the leveling coat at a volume ratio of 1.0 part LSB Binder to 2.0 (up to 2.5) parts sand.

**THICKNESS**. The leveling coat should be 3/8 to 1/2 of-an-inch thick. The leveling coat is where all of the shape for the finished plaster surface is achieved—there should be no attempt to fill or flatten with the thin finish coat.

**APPLICATION METHOD**. Spray or trowel applied.



Poured in place Hempcrete wall.

### CROSS REFERENCES [XR]

**[XR1]** Please read the LSB Publication: **Lime Plaster Application Guide** for a comprehensive overview of prepping, applying, and curing lime plaster.

**[XR2]** Please read the LSB Instruction Guide: **Mixing Limestrong Build** for a comprehensive overview of equipment, set-up, and mixing best practices.

**[XR3]** The sand you use is critical to a successful lime plaster render. Please read the LSB Publication: **Sourcing Sand** for guidelines on choosing the right sand.

**[XR4]** See LSB Publication: **Plaster Tools and Equipment**, figure 06.

**SURFACE FINISH.** Finish the leveling coat with a wood or sponge float. The finished surface should be even and uniform with a sandy surface just rough enough to receive the finish coat.

**CURING.** Moist cure minimum 72 hours. 5 to 7 days is ideal for maximum strength.

## FINISH COAT

Always pre-wet the leveling coat prior to finish coat application.

**LSB FINISH PLASTERS.** Use one of the **Limestrong Build Finish** plasters (3 ready-to-mix products) to create a variety of finishes, from coarse to smooth. Using Limestrong Build Finish plasters also facilitates use of our Limestrong Color System to achieve accurate and consistent color batch to batch<sup>[XR5]</sup>. The following finish plaster types are available:

LSB **COARSE FINISH**—for interior or exterior use as a finish coat over lime plaster base coats only. Not for use over drywall. Max application thickness of 1/4". Use when a deeper, rough-textured finish is desired.

LSB **FINE FINISH**—for interior or exterior use as a finish coat over lime plaster base coats only. Not for use over drywall. Max application thickness of 1/8". Use when a slightly-textured to smooth finish is desired.

LSB **INTERIOR FINISH**—for interior use only. Can be applied directly to properly prepared, primed drywall and to lime plaster base coats. Typically applied in two thin coats when used over drywall. Provides slightly-textured to smooth finish, depending on the finish technique.

**APPLICATION METHOD.** For best results, trowel apply, or apply with a sponge float.

**FINISH.** There are many different textural effects that can be rendered in the finish coat<sup>[XR6]</sup>. Take the time, working on practice panels, to achieve the look you want. Make sure it is something you can accomplish on a large scale.

**CURING.** Moist cure the finish coat for a minimum of 72 hours. 5 to 7 days is ideal for maximum strength.

## SAFE USE PRECAUTIONS<sup>[XR7]</sup>



Limestrong Build™ plasters contain hydrated (slaked) lime, which (because of a high pH) is somewhat caustic. Breathing the powder dust can also cause respiratory irritation. BE SMART. Protect yourself. In all situations, if irritation develops, seek medical attention. Please read the LSB Publication: **Safe Use Precautions and Treatments** for information on protecting and treating skin, eyes, and breathing function.

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### CROSS REFERENCES [XR]

[XR5] See LSB Publication: **Mixing Limestrong Build**—Instructions for Mixing Limestrong Build Finish.

[XR6] See LSB Publication: **Lime Plaster Application Guide**—Surface Textures.

[XR7] See LSB Publications: **Safe Use Precautions and Treatments**; Limestrong Build **Safety Data Sheet** (SDS).