

# ARDEX LT-65 LITE-TECH™

## Lightweight Flooring Technology

### DESCRIPTION

When the need arises to re-top an existing concrete slab, consideration must be given to how much dead load will be added to the structure. Normal weight concrete adds 12-13 lb./sq.ft. at 1" thick, while gypsum fills and Portland cement-based underlayments add 9-10 lb. Traditional lightweight fill materials have substantially lower densities, but lack the integrity to serve as a substrate to receive a new leveling course.

ARDEX LT-65 Lite-Tech is a lightweight, fast-setting, Portland cement-based system for filling indoor concrete prior to the installation of a leveling course. The ARDEX LT-65 Lite-Tech system can be installed from a minimum of 3/4" to any thickness, and will not shrink or spall. Designed to add only 5 1/2 lb./sq. ft. at 1" thick, ARDEX LT-65 Lite-Tech dries and hardens quickly, developing sufficient strength in just 1 day to be smoothed with ARDEX underlayments or toppings and to have new floor covering installed.

### RANGE OF APPLICATION

ARDEX LT-65 Lite-Tech is designed for use over concrete substrates as a lightweight fill to receive a smoothing layer of an Ardex underlayment or topping. ARDEX K-15 Self-Leveling Underlayment Concrete is used as the smoothing course prior to the installation of finish flooring, while ARDEX SD-T Self-Drying, Self-Leveling Concrete Topping can serve as a finished wear surface for foot traffic. Use ARDEX LT-65 Lite-Tech for renovation, as well as new construction projects, in deep fill areas where design constraints limit the amount of weight that can be added to the floor.

**Note:** ARDEX LT-65 Lite-Tech should not be used in areas of constant water exposure nor in areas where pre-existing moisture conditions may jeopardize the performance of the fill and finish flooring.

**Always install an adequate number of properly located test areas, including the smoothing course and finishes, to determine the suitability of the system for its intended use and traffic. Always contact and rely upon the finish manufacturer for specific application instructions and product guidelines.**

### SUBFLOOR PREPARATION

All concrete subfloors must be solid, thoroughly cleaned, free of oil, wax, grease, asphalt, paint, latex compounds, curing and sealing compounds, and any contaminant that could act as a bond breaker. Mechanically clean the surface by shotblasting, scarifying or similar. Overwatered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical methods. Acid etching, solvents and sweeping compounds are not acceptable means of cleaning the substrate.

Subfloors must be dry and properly primed for a successful installation. The substrate temperature must be a minimum of 50°F for the installation of all Ardex Engineered Cements. For further information, please refer to the ARDEX Substrate Preparation brochure.

### RECOMMENDED TOOLS

ARDEX T-1 Mixing Paddle, ARDEX T-10 Mixing Drum; ARDEX M-5.0 Measuring Bucket; a 5 gal. measuring bucket; 1/2" heavy-duty drill (min. 1200 rpm, 7.5 amps); soccer shoes with non-metallic, rounded cleats; a wood or metallic screed; and a sanding machine with 30 grit sand paper.

### MATERIAL REQUIREMENTS

ARDEX P-51 Primer for priming the prepared concrete substrate and for priming the surface of the lightweight fill prior to placing the smoothing course.

ARDEX K-500 Self-Leveling Concrete Topping (One 55 lb. bag will yield approximately 1 cu. ft. of mixed topping.)

Expanded Polystyrene Beads (EPS); size: "B-bead"; density: 1.0 lb./cu. ft. (20 qt. of beads or .66 cu. ft. required for each bag of K-500.)

ARDEX K-15 Self-Leveling Underlayment Concrete or ARDEX SD-T Self-Drying, Self-Leveling Concrete Topping for smoothing the surface prior to the installation of finish flooring or sealer, as specified. See the appropriate technical brochure for specific installation instructions for the product to be used.

### PRIMING

**Standard Concrete:** Prime standard absorbent concrete substrates with ARDEX P-51 Primer diluted 1:1 with water. Apply evenly with a soft push broom. Do not use paint rollers, mops or spray equipment. Do not leave any bare spots. Brush off puddles and excess primer. Allow to dry to a clear, thin film (min. 3 hours, max. 24 hours).

**Highly Absorbent Concrete and LT-65 Lite-Tech installations to be topped with ARDEX SD-T:** Make an initial application of ARDEX P-51 mixed with 3 parts water using a soft push broom. Do not leave any bare spots. Remove all puddles and excess primer. Allow to dry thoroughly (minimum 3 hours) before proceeding with the second application of primer as described above.

**Non-absorbent concrete:** Very smooth, highly power-troweled concrete may have a non-absorbent surface. Such surfaces must be mechanically prepared to achieve a rough, porous surface prior to priming with P-51 Primer. Do not use ARDEX P-82 Ultra Prime for LT-65 Lite-Tech installations. **Note:** Low substrate temperatures and/or high ambient humidity require a longer drying time for ARDEX P-51. Do not install ARDEX LT-65 Lite-Tech before primer has dried thoroughly.

## MANUAL INSTALLATION

ARDEX K-500 is mixed 1 bag at a time. For each bag of ARDEX K-500 powder, add 5.0 quarts (4.75 liters) of water. Put the water in the mixing drum first, then add one bag of ARDEX K-500 while mixing with an ARDEX T-1 Mixing Paddle and a 1/2" heavy-duty drill (min. 1200 rpm). Mix thoroughly for approximately 1 minute to obtain a lump-free mix. **DO NOT OVERWATER!**

After initial mixing is complete, stop the drill and add 5 gal. (20 qt.) of size "B" expanded polystyrene beads to the mix. Begin re-mixing and continue for 1½ more minutes to ensure that the materials are blended uniformly.

ARDEX K-500 remains workable for 5 - 10 minutes at 70°F. Pour the liquid mix onto the prepared floor and begin screeding using a wood or aluminum screed, as you would with normal concrete, bringing the cement paste to the surface to encapsulate the beads. Note: the screed rails must be installed ¼ - ½" low to accommodate the installation of the smoothing layer of ARDEX K-15 or ARDEX SD-T.

Continue mixing, placing and screeding the fill as you would concrete. It is recommended that several mixing barrels and mixers be used simultaneously to keep the process flowing smoothly. The fill will be ready to receive light foot traffic after 2-3 hours.

## PREPARATION FOR SMOOTHING COURSE

The ARDEX LT-65 Lite-Tech base is not intended to be used as a finished surface. This layer must be topped with a minimum of ¼" of ARDEX K-15 prior to the installation of finish floor covering, or ½" of ARDEX SD-T if a wear surface is desired. To prepare the surface to receive the smoothing layer, it may first be necessary to remove any loose EPS beads from the surface.

Using a sanding machine with 30 grit sandpaper, lightly sand the entire surface of the ARDEX LT-65 Lite-Tech base to remove any EPS beads that are not well bonded. Removal of these beads will produce a more solid surface to receive the primer and smoothing course. Once sanding is completed, vacuum the surface thoroughly to remove all loose materials.

## THICKNESS OF INSTALLATION

The ARDEX LT-65 Lite-Tech system can be installed from 3/4" to virtually any thickness in one operation. Remember to leave the topping thickness at least ¼ - ½" below the finished elevation to account for the smoothing course.

## SMOOTHING COURSE

After allowing the ARDEX LT-65 Lite-Tech base surface to dry (12-16 hours), prime with ARDEX P-51 Primer following the guidelines for normal concrete surfaces as recommended in the ARDEX K-15 or ARDEX SD-T technical brochures. (Remember: ARDEX SD-T always requires double priming.)

**NOTE:** The ARDEX LT-65 Lite-Tech system is cementitious. Observe the basic rules of concrete work. Do not install below 50°F surface temperature. Install quickly if floor is warm, and follow the hot/cold weather instructions available from the ARDEX Technical Service Department. Never mix with cement or additives unless approved by ARDEX. **DO NOT OVERWATER!**

**PACKAGING:** 55 lb. / 25 kg bags.

**STORAGE:** Store in a cool, dry area. Do not expose to sun.

**SHELF LIFE:** One year.

## TECHNICAL DATA

<b>Coverage:</b> A 55 lb. bag mixed with 5 gal. of EPS yields approx. 1 cu. ft. of fill.
<b>Working Time:</b> 5 - 10 minutes at 70°F.
<b>Initial Set, ASTM C191:</b> Approx. 15 minutes at 70°F.
<b>Final Set, ASTM C191:</b> Approx. 60 minutes at 70°F.
<b>Compressive Strength, ASTM C109/mod:</b> 4100/6100 psi after 28 days for finished surface
<b>Flammability, ASTM E84:</b>
Flame Spread 0
Fuel Contribution 0
Smoke Development 0
All data based on a mixing ratio of 4 parts of cement powder 1 part water p.b.v.

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