



FAST SL

ENGINEERED FAST SETTING, SELF-LEVELING OVERLAY TECHNICAL DATA & APPLICATION INSTRUCTION

PRODUCT DESCRIPTION

Kingdom Products FAST SL is a high performance, quick setting, self-leveling, cementitious topping optimized for polishing, staining, dyeing, epoxies and urethanes and other suitable coatings. **FAST SL** can also be used as an underlayment for leveling floors before applying floor coverings such as tile, carpeting, linoleum and hardwood. **FAST SL** quickly levels and maintains workability for 20 minutes and produces a strong surface and tenacious bond to properly prepared substrates. **FAST SL** can be applied from 1/4" to 2" neat in a single lift and up to 5" properly extended with pea gravel. **FAST SL** is ready for light foot traffic in 2-3 hours, is ready for polishing within 48-72 hours and will accept an organic coatings or floor coverings in 4-6 hours.

BENEFITS

- Use Interior or Exterior
- Low maintenance
- Quick turnaround time
- Can be stained & sealed
- Suitable for areas with constant water exposure
- Installs from 1/4" to 2" neat and up to 5" properly extended (pea gravel)
- Maintains healing properties up to 20 minutes
- Use For Decorative Flooring & Polishing applications - highly polishable

RECOMMENDED APPLICATIONS

- Hotel Lobbies and Schools
- Mall Corridors and Hallways
- Retail and Commercial locations
- Parking Structures
- Anywhere a unique and creative floor is desired
- Overlay repaired or discolored concrete
- Industrial warehouse floors subject to foot traffic and light vehicular traffic
- Loading docks

TECHNICAL INFORMATION

Working Time.....15 min
 Healing Time.....20 min
 Drying Time.....2-4 hours
 Light Foot Traffic..... 4-6 hours
 Wheel Traffic.....48 hours
 Application Temp.....50°F - 85°F
 Wet Appearance.....Gray/Brown
 Dry Appearance.....Light/Natural Gray
 Concrete Adhesion.....Excellent
 Freeze-Thaw Resistance.....Excellent

Compressive Strength ASTM C-109

4 Hours..... 2,898 psi (19.98 mpa)
 24 hours.....3,633 psi (25.04 mpa)
 7 days..... 5,140 psi (35.43 mpa)
 28 Days.....6,357 psi (43.82 mpa)

Flexural Strength ASTM c348

28 Days..... > 1,150psi (7.9 mpa)

Tensile Strength ASTM C-190

28 Days.....> 570 psi (4 mpa)

***Please note that low air and/or concrete temperatures and/or relative humidity may extend drying times. Follow recommended coverage rates for best results.*

APPROXIMATE COVERAGE RATES

Varies by thickness - One 52 lb bag will cover approximately:
 30 sq ft at 1/4" • 22.5 sq ft @ 3/8" • 15 sq ft @ 1/2"

PACKAGING

FAST SL is stocked and sold in 52 lb bags (48 per pallet) and is available in Natural Gray.

STORAGE & SHELF LIFE

Do not subject **Kingdom Products FAST SL** to moisture prior to use. Keep product in a cool dry location, free from direct sunlight in a tightly sealed container. Avoid storing directly on top of a concrete slab. Place a barrier between the **FAST SL** mix bags and the concrete floor (i.e. plastic, pallet, etc). Shelf life is SIX MONTHS from the date of manufacture provided unopened product is stored under the proper conditions, free of moisture, direct sunlight, excessive heat and freezing temperatures. To extend shelf life, transfer any leftover material to a plastic pail with a gasketed lid.

All substrates must be fully cured (28+ days) and structurally sound. Thoroughly clean the surface of any contaminants that could interfere with the bond of the **FAST SL** including dust, dirt, debris, paint, tar, asphalt, wax, oil, grease, sealer, curing compounds and adhesive residue. Mechanically profile the surface by shot blasting, sandblasting, scarifying or another approved method. Surface profile must be ICRI (International Concrete Repair Institute) CSP2 to CSP5. Acid etching the substrate is not a recommended method of surface preparation. Ensure that the substrate and ambient temperatures are between 50° and 95° before application. **Temperatures must be maintained within this range for at least 72 hours after installation.** All existing expansion, isolation, construction and control joints as well as any moving cracks **MUST BE HONORED.** For interior and exterior applications, always double prime the prepared substrate with Kingdom Products' UPA (Universal Primer Activator) with a roller and brush into surface, before application of **FAST SL.**

MIXING

Mixing: Pour the required amount of cool, clean potable water into a clean mixing container. Use of cold water will extend working time. Keep bagged product at the coolest temperature possible to extend working time. Warm product and warm water will cause product to set too quickly, cutting working time dramatically. Add **FAST SL** powder while slowly stirring. **Mix at a ratio of 1.5 gallons of water per 52 lb bag of FAST SL.** The mixing ratio must remain consistent. **Do not** overwater the material. Keep mixing pail clean.

Barrel Mixing: Using the appropriate mixing ratio above, mix with a low-speed drill (at about 650 rpm) with an "egg-beater" mixing paddle. Mix to a homogenous, lump-free consistency for about 3 minutes. Do not overmix. Overmixing or moving the mixer up & down during the mixing process could trap air, which could shorten the pot life and cause pin-holing during the application and curing.

Pump Mixing: **FAST SL** can be mechanically mixed (using the mixing ratio above) with a continuous mixer and pump or a batch mixer and pump. Use a mesh screen sock at the end of the hose to catch any foreign material that can enter the hopper of the mixer. Apply to a small test area to ensure successful installation.

Integral Color: Integral color may be used at the discretion of the owner/installer. However, extreme caution must be exercised to ensure that the type and amount of color does not alter and/or decrease the performance of the **FAST SL.** A test pour should be conducted to ensure that performance characteristics (such as set time, flow, water ratio, ease of finishing and curing) are not significantly altered.

Note: *Water marks from installation tools may become more prominent when pigmenting material. Surface should be cleaned with a smoother to help avoid pigment float.*

APPLICATION

Read surface preparation instructions thoroughly before beginning application process. Set the width of the pour at a distance that is ideal for maintaining a continuous flow and wet edge throughout placement. Pour or pump **FAST SL** onto the properly prepared and primed concrete floor in a ribbon pattern and spread it out with a gauge rake. After achieving the desired depth, smooth the product surface with a smoother or spiked roller to obtain an even surface. To avoid air-entrapment, do not overwork the material. Use a porcupine or spiked roller to blend the material between pours. **Do not allow more than 5 minutes to elapse between subsequent pours into the wet edge.**

FAST SL has a flowtime of about 15 minutes at 73°F and can be applied from 1/4" to 2" in a single application. Please note that the temperature and humidity will affect the working, flow and set times. Apply enough material to adequately cover all high spots. For installations of 2 - 5", extend the material with washed, well-graded 1/8" - 1/2" pea gravel (up to 50% by weight or 26 lbs of gravel per 52lb bag of **FAST SL**). Use an intermittent fine mist to cure the **FAST SL** for the first hour after final set (with additional misting as needed.)

Staining: Allow coating to dry completely before staining, approximately 2-3 days curing time (depending upon air flow).

Polishing: Allow applied material to cure for at least 24 hours before polishing. For optimum results, polish between 48 & 72 hours after placement, in ideal environmental conditions. **FAST SL** forms a protective film to allow the material to hydrate properly. Removing this film too early in the curing process can contribute to surface micro-cracking. On initial application apply Kingdom Products Lithium Densifier between the metal and resin stages of the polishing process and allow the densifier to penetrate for 30 minutes. Typically, **FAST SL** can be stained sealed or coated 24 hours after application (depending upon air flow). Follow the recommendation of the stain, sealer or coating manufacturer and as always, we recommend that you do a sample to achieve desired results and to verify that the moisture content meets the specs of the stain, sealer or coating manufacturer. Always perform a meaningfully sized mock-up that represents the expectations of the architect or general contractor.

Curing and sealing:

Protect the application from excessive heat or windy conditions during the curing process. Protect for up to 24 hours after final set. **FAST SL** is not recommended for areas where slopes for water drainage are needed or where salt and de-icing materials are used. Avoid walking on the surface for at least 2-3 hours after installation depending upon temperature and humidity conditions. Protect from traffic, dirt and dust from other trades until the final floor sealer has been installed and cured. Do not expose **FAST SL** to rolling dynamic loads such as forklifts or scissor lifts for at least 48 hours after installation. Apply a protective coating of sealer or densifier over **FAST SL** after 24 hours. Deeper applications and cooler temperatures may require longer waiting periods before application of subsequent treatments. Follow the recommendation of the stain, sealer or coating manufacturer. Test all surface treatments on a representative sample area before application, to ensure proper application techniques as well as desired results.

Wash hands and tools with soap & water before material hardens. Cured material must be removed mechanically.

PRECAUTIONS AND LIMITATIONS

- **FAST SL** needs a properly prepared CURED substrate!
- Do not apply over dust, dirt, debris.
- Do not apply over a previously sealed surface until all of the sealer has been removed.
- Do not over water or overwork this product!
- Avoid using in temperatures below 40°F or above 90°F .
- **FAST SL** will reflect moving cracks and control joints. All joints must be honored prior to application.
- The proper application of this product is the sole responsibility of the end user. Supervision and quality control are the sole responsibility of the end user. Refer to MSDS/SDS and Technical Data Sheets for specific data related to VOC safety handling procedures. Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. Any claim shall be deemed waived unless made in writing to *Kingdom Products* within 15 days of the date it was or reasonably could or should have been discovered.

SPECIAL NOTES

Please consult Material Safety Data Sheet (MSDS) and read Warranty information prior to use. **FOR PROFESSIONAL USE ONLY!** Always install a test area or job site mock up for owner approval of acceptable color, texture, finish adhesion & any other critical requirements prior to proceeding with the installation. Verify that the most current versions of product technical data sheets and installation guidelines are being utilized.