

## PRODUCT DATA

### PRODUCT DESCRIPTION

Smooth is a liquid rich, free-flowing, seamless floor that offers a sleek, edgy, clean surface for high-profile environments.

### USES, APPLICATIONS

Smooth is specifically designed for public areas that will see heavy foot traffic. Smooth is ideal for applications such as: retail, hospitality, casinos, showrooms, lobbies, restaurants, night clubs, commercial and public spaces.

### SUBSTRATE

Smooth, with the appropriate primer, is suitable for application over concrete. It is not recommended on asphalt, brick, quarry tile, mastic or painted surfaces. These must first be removed by mechanical means to expose the substrate prior to priming and overlayment.

### THICKNESS OPTIONS

Smooth can be applied at a total thickness of either 1mm or 2mm.

#### 2mm

The 2mm version offers a smooth, ergonomic surface that is more comfortable than a typical hard epoxy surface. This system delivers a very smooth finish. Due to the self-levelling nature and smooth finish, the substrate must be extremely flat and level.

#### 1mm

The 1mm option offers the same design options as the thicker version but will follow the contours of the substrate. While lower in cost, the thinner system does not offer the same ergonomic and sound dampening properties as the 2mm.

### COLOUR

Smooth is available as a solid colour (Mono), or a blend of two colours (Duo). Contact your local representative for colour options and design assistance.

### PACKAGING

Smooth is packaged in 10L kits for easy handling. Each kit consists of:

- 1 x LE Smooth Base (Part B)
- 1 x LE Smooth Activator (Part A)
- 1 x Stonclad UT Liquid Pigment Pack

### PHYSICAL CHARACTERISTICS

Tensile Strength (ASTM D-638)	5.5 MPa
Hardness (ASTM D-2240, Shore A Durometer)	95-100
Scratch Resistance (F-1679/Soft Scrub)	17% reduction after 100 cycles
Impact Resistance (D-2794)	>5 Nm
Indentation Resistance (F-1914)	32% Indentation 0% Residual Indentation 28% Indentation 0% Residual Indentation (High Gloss)
Static Load Limit (F-970)	>1.7 MPa
VOC Content (ASTM D-2369, Method E)	Self-Leveller 1g/l
Noise Reduction (2mm version only) (ASTM E 90-09/E 413-10)	IIC 34dB - 35dB STC 49dB - 50dB
(ASTM E 492-09/E 989-06)	
Cure Rate	24 hours (@ 25°C)

Note: The above physical properties were measured in accordance with the referenced standards. Samples of the actual floor system, including binder and filler, were used as test specimens.

Note: Due to the smooth nature of this product, Smooth is only recommended in dry environments. If Smooth is to be used in wet environments, a texture should be added for additional slip resistance.

### COVERAGE

Mono (2mm) - Approximately 5m<sup>2</sup> per kit at a nominal 2mm system thickness

Mono (1mm) - Approximately 10m<sup>2</sup> per kit at a nominal 1mm thickness

Duo (2mm) - Approximately 10m<sup>2</sup> per kit at a nominal 2mm thickness

Duo (1mm) - Approximately 20m<sup>2</sup> per kit at a nominal 1mm thickness

### SYSTEM OPTIONS

#### Primer

To fill substrate voids and detect the possibility of "outgassing", the use of SL Primer is essential. If blowholes are detected in the primer, they could be skimmed level with Dural 30/35NS Quickset.

#### Patching, Levelling Mortar and Cementitious Underlayments

Stonhard offers a full line of mortars to flatten and level your substrate. These mortars are also excellent for hiding imperfections in the substrate that might reflect or show through, especially for the 1mm version of Smooth. For more information, please contact StonCor Africa Technical Service Department.

### Cove Base

To provide for an integral seal at the joint between the floor and the wall, Dural 618/22 sealed with either Stonkote HT4 or Stonkote GS4 should be specified. When choosing the colour of the cove base, please follow the following guidelines:

**Smooth Mono** - The cove base can be made to match the colour of the floor. However, due to the angle at which light reflects off the cove, it is common for the cove base to appear slightly different than the floor. Use of a contrasting colour that complements the floor can eliminate this situation.

**Smooth Duo** - Due to the variation in colour inherent in the Smooth Duo system, it is impossible to match the cove colour to that of the floor. Even when the colour is close, it can look different due to the angle of light reflecting from it as well as the natural variation in tone of the Smooth Duo itself. Therefore, it is highly recommended that cove colour selected is a contrasting colour that complements the floor.

**Note:** With sufficient movement of the substrate, even a floor treated with a crack bridging membrane may show cracks. It is important to make sure that your substrate is properly designed so as not to deflect under the loads in the area. It is also important to have proper design of the substrate including, but not limited to the correct number and placement of expansion joints throughout the area. The crack bridging membrane system does not replace the need for expansion and isolation joints in the substrate. These should always be honoured with the appropriate joint detail.

### SEALER COAT

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One of the below sealer coats must be applied to complete the system:

#### Gloss

Stonseal 731 is a two-component, solvent-based aliphatic polyurethane that cures to a tough weather-resistant, high gloss finish.

#### Matte

Stonseal CF7 is a two-component, high performance, water-based, aliphatic polyurethane coating that combines excellent wear resistance, UV resistance and cleanability with a clear, flat appearance. 2 Coats required.

### SUBSTRATE PREPARATION

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Proper preparation is critical to ensure an adequate bond and system performance. The substrate must be dry and free of all wax, grease, oils, fats, soil, loose or foreign materials and laitance. Laitance and unbonded cement particles must be removed by mechanical methods, i.e. abrasive blasting or grinding. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent (Carboclean 250 or Carboclean 252) and rinsing with clean water. The surface must show open pores throughout with main aggregate in concrete exposed and have a sandpaper texture. Substrate moisture content prior to coating should be below 5% and substrate tensile strength above 1.5 MPa. For recommendations or additional information regarding substrate preparation, refer to Surface Preparation data sheet or contact StonCor Africa Technical Service Department.

### PRIMING AND PATCHING

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Mix SL Primer Parts A and B for 90 seconds in a 25 litre pail using a 600 rpm high torque mixer, fitted with a spiral impeller. Add Part C and mix for a further 90 seconds, ensuring no lumps exist. Do not mix by hand. Apply 2 coats of SL Primer wet-on-wet to achieve 3.3m<sup>2</sup>/litre using a rubber squeegee. Remove all ponded resin and squeegee lines before allowing the primer to cure. Do not backroll the primer. If blowholes are detected in the primer, they should be skimmed level with Dural 30/35NS. Allow the SL Primer to cure for 4 to 6 hours at 25°C, ensuring that Liquid Elements Smooth is applied within 16 hours of priming the substrate.

### MIXING AND APPLICATION

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#### Mono

Using a 600 rpm high torque mixer fitted with a spiral impeller, mix the pigment pack and Part B component for 30 seconds to achieve a uniform colour. After 30 seconds, add the entire contents of the Part A and mix for a further 90 seconds. Do not mix by hand.

Once mixed, pour the entire contents onto the floor and evenly apply the material using a pin rake. Wearing spiked shoes, spike the material with spiked rollers for a period not exceeding 10 minutes to increase the flow, level the material, and de-aerate the product. Allow to cure for 16 hours at 25°C.

#### Duo

Mix both colours following the same procedure used for the Mono. Once both colours have been mixed, pour the different colours on the floor in beads alongside one another. Using a pin rake, spread and blend the material evenly across the floor. Do not spike roll the product. The spike roller will pick up material from the one colour and transfer it to the other which will result in "spike roller" marks across the floor.

A flat soft rubber squeegee can also be used to blend the colours together. It is important not to apply too much pressure when using the rubber squeegee as this might remove too much product from the area worked, which will result in inconsistent thicknesses. The squeegee should glide across the surface of the wet material. The more the product is worked, the less contrast there will be between the two different colours. Allow to cure for 16 hours at 25°C.

The finish and pattern obtained in the Duo option can change from floor to floor and is entirely dependent on the way the product is applied. A trial reference sample should be installed by the applicator prior to start of contract to verify correct coverages, workmanship, colour and finish.

#### Sealer Coat

Before applying the chosen sealer coat, lightly sand the surface with 100 to 120 grit sandpaper and wipe clean with solvent. Do not use any solvents containing alcohol, as alcohol can react with not fully cured polyurethanes. Apply sealer coat in accordance with the relevant product data sheet.

### ENVIRONMENTAL CONTROLS

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Due to the decorative and free-flowing nature of the Smooth system, it is critical that the immediate area be free of dust and debris as this will negatively affect the appearance of the finished floor. Special care must be taken to clean the area well and mask it off sufficiently to protect it from

contamination resulting from other trades, leaks, wind, etc. No other trades may be present in the floor space during the installation and the area must remain free of traffic until the final layer is fully cured.

It is also very important that the space be conditioned to prevent issues resulting from high humidity and/or high or low temperatures. For best results, the Smooth should be installed once the building is buttoned up, HVAC is operational, and finished lighting has been installed.

Smooth should only be installed when the slab and air temperatures are both between 16°C to 30°C and the relative humidity is below 80%.

You may experience installation difficulties when applying Smooth in high humidity conditions. Under these conditions, the working time of the material is greatly reduced as the excessive moisture present in the atmosphere accelerates the cure. To slow down the cure rate, limit the amount of moisture coming in contact with the material. Increase the open time by pouring only a portion of the material onto the floor, while leaving the rest in the bucket until it is ready to be applied. This limits the amount of material exposed to the air at one time. The cure rate of these urethane materials is not accelerated when sitting in the bucket. NEVER mix multiple mixes at once; only mix one mix at a time! Low humidity will affect this product. When humidity is low, it can take more than 4 hours to cure. The product may stay slightly soft for up to 12 hours. This will not affect the overall performance of the finished system. As the material cures, the physical properties will develop their full potential.

## STORAGE CONDITIONS

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Store all components of Smooth between 16°C and 32°C in a dry area. Avoid excessive heat and do not freeze. The shelf life is 1 year in the original, unopened container.

## RECOMMENDATIONS

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- DO NOT attempt to install the material if the temperature of the Smooth components is above 30°C. Higher

temperatures will cause the material to harden more quickly than desired. Conversely, if the temperature of the components is 16°C or lower, Smooth will be stiff and hard to apply. Do not use water or steam in the vicinity of the application. Moisture can seriously affect the working time and other properties.

- Application equipment must be cleaned immediately after use with scouring pads and warm, soapy water, or mineral spirits.
- Avoid contact with all liquid Parts A and B as they may cause skin and/or eye irritation.
- The use of safety glasses and impervious gloves is required during mixing and application.
- To prevent scratches, felt pads are recommended under chair and table legs.

## NOTES

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- Procedures for maintenance of the flooring system during operations are described in the “Floor Cleaning Guideline”.
- Safety data sheets for Smooth are available upon request.
- A staff of technical service engineers is available to assist with installation or to answer questions related to Liquid Element’s products.
- Request for technical literature or service can be made through local sales representatives and offices, or corporate offices located worldwide.
- The appearance of all floor, wall and lining systems will change over time due to normal wear, abrasion, traffic and cleaning. Generally, high gloss coatings can increase in gloss level under normal operating conditions.
- Surface texture of resinous flooring systems can change over time as a result of wear and surface contaminants. Surfaces should be cleaned regularly and deep cleaned periodically to ensure no contaminant build-up occurs. Surfaces should be periodically inspected to ensure they are performing as expected and may require traction-enhancing maintenance to ensure they continue to meet expectations for the particular area and conditions of use.