

### ALSAN RS 233/263 LO Self-Leveling Mortar Application Guide

#### ALSAN RS 233/263 LO Self-Leveling Mortar Waterproofing & Surfacing Systems

ALSAN RS 233/263 LO Self-Leveling Mortar is a trowel applied resin-mortar used as a thick coating system for interior and exterior waterproofing and surfacing applications. ALSAN RS Self-Leveling Mortar may be applied directly over cantilever balconies, open deck structures and slab on grade substrates or in combination with ALSAN RS reinforced membrane for waterproofing and surfacing applications over conditioned or occupied space.

#### General Flashing Guidelines

ALSAN RS reinforced perimeter, penetration and transition flashings recommended for all ALSAN RS 233/263 LO Self-Leveling Mortar applications. ALSAN RS reinforced flashings are installed before ALSAN RS Self-Leveling Mortar waterproofing or traffic surfacing components following standard guidelines, practice and details for ALSAN RS reinforced membrane systems.

Refer to SOPREMA ALSAN RS detail drawings for specific information and flashing requirements for common flashing conditions.

#### ALSAN RS 233/263 LO Self-Leveling Mortar Application

ALSAN RS Self-Leveling Mortar may be applied direct to deck over acceptable prepared and primed substrates or ALSAN RS fleece reinforced membrane.

Surface Preparation: Where ALSAN RS Self-Leveling Mortar will be applied over ALSAN RS reinforced flashings or membrane, edges and laps should be pretreated with ALSAN RS Self-Leveling Mortar applied in spackle fashion to smooth the transition over these locations. If not pre-treated as indicated, lap line and fleece edges may telegraph through the ALSAN RS Self-Leveling Mortar layer.

Mix: Thoroughly mix the entire drum of ALSAN RS 210/240 LO Resin for 2-3 minutes before mixing with ALSAN RS 223 Mixing Powder. Transfer the RS 210/240 LO resin component to a clean, dry container large enough to accommodate the combined resin and powder components leaving adequate room for mixing.

Using a slow-speed (200 to 400 rpm) mechanical mixer with spiral agitator, slowly add the entire bag of ALSAN RS 223 Mixing Powder to the ALSAN RS 210/240 LO resin component while stirring; continue mixing for 2-5 minutes or until achieving a smooth lump-free mortar consistency. The mixing ratio is 1 to 2.3 resin to filler respectively. Catalyze only the amount of material that can be placed within 10-15 minutes. Thoroughly mix catalyst into resin-mortar for 2-3 minutes, assuring to incorporate any dry material along the side and bottom of the mixing container. Remix uncatalyzed resin-mortar before each use, and prior to pouring off into a second container if batch mixing.

NOTE: ALSAN RS Catalyst Powder addition is based on weight of the resin component (not the mixed mortar) and temperature.

Apply: Plan and tape-out the area of work in a checkerboard fashion using fiber reinforced masking tape. After mixing, apply mortar to clean, prepared and primed substrate at the required consumption using a steel v-notch trowel or rake as follows:

Normal application:	Stub roller or 1/2 in x 7/16 in deep v-notch trowel or take with blunted tips
Steep slope applications:	3/8 in or 1/2 in v-notch trowel or rake as required
All applications:	spiked nylon roller

Mortar should be uniformly spread across substrate and rolled with a pin roller as required to knock-down any high spots before the mortar begins to gel. Before mortar cures, remove all masking tape.

### Mortar Installation



**Step 1:**  
Pour mortar onto prepared & primed substrate.



**Step 2:**  
Spread mortar using a notched trowel.



**Step 3:**  
Pin roll mortar to knock down bubbles and even out application.

Approximate Coverage per 33kg workpack			
Substrate	kg/ft <sup>2</sup> (kg/m <sup>2</sup> )	ft <sup>2</sup> (m <sup>2</sup> )	mils (mm)
smooth	0.42 (4.5)	80 (7.4)	88 (2.2)

**Cure:** Allow ALSAN RS Self-Leveling Mortar to fully cure before applying the next ALSAN RS component. Changing project conditions should be monitored throughout the day to adjust catalyst ratios and cure time. At membrane tie-ins, clean cured ALSAN RS Self-Leveling Mortar with ALSAN RS Cleaner before application of next ALSAN RS component or surfacing.

### Steep Slope Applications

ALSAN RS 233/263 LO Self-Leveling Mortar is produced ready for application at low slopes, but may be applied at any desired slope by adjusting the resin viscosity with ALSAN RS Liquid Thixo.

For slopes exceeding 1-1/2 : 12, ALSAN RS 233/263 LO Self-Leveling Mortar should be pre-mixed with ALSAN RS Liquid Thixo at up to 2% addition by weight. The amount of thixotropic additive needed will vary by slope and temperature. Addition of ALSAN RS Liquid Thixo should be done following the below guidelines:

Thoroughly mix the entire pre-mixed drum of ALSAN RS 233/263 LO Self-Leveling Mortar for 2-3 minutes before each use, and prior to pouring off resin into a second container if batch mixing, using a slow-speed mechanical mixer with spiral agitator or stirring stick taking care not to aerate. Add the required amount of ALSAN RS Liquid Thixo into the ALSAN RS Self-Leveling Mortar and mix for 2-3 minutes.

- Test the amount of ALSAN RS Liquid Thixo required by mixing small batches before mixing entire units of product.
- Start adding ALSAN RS Liquid Thixo at 1% addition.
- Mortar mixed with ALSAN RS Liquid Thixo must be allowed to stand 20 to 30 minutes before use. Adjust the amount of ALSAN RS Liquid Thixo as needed until the desired viscosity is reached.
- Approximately (1) TBSP = 20g or 2% of ALSAN RS Liquid Thixo.

**Note:** Storage and working times are not affected by addition of ALSAN RS Liquid Thixo per kg of ALSAN RS resin.

### Broadcast Aggregate

Approved quartz silica may be into ALSAN RS 233/263 LO Self-Leveling Mortar to create slip-resistant surfacing. All surfacing aggregates shall be washed, kiln-dried, dust-free, suitable for broadcast, angular grain, and sized as recommended by SOPREMA.

When required as part of the traffic surfacing, broadcast #1 (0.7 - 1.2mm) kiln-dried quartz aggregate into the applied wet ALSAN RS Self-Leveling Mortar to excess for full coverage at an approximate consumption of:

- 140 lbs/100 ft<sup>2</sup> (7.0 kg/m<sup>2</sup>).

Aggregate should be cast upward, allowing it to fall vertically downward into the mortar resin to avoid creating “waves” in the resin. Where required on vertical surfaces, cast aggregate into the wet resin with a perpendicular hand motion. Vertical and horizontal surfaces should be cast separately, applying vertical surfaces first followed by deck areas using appropriate protection and masking.



Note: Broadcast aggregate must be properly sealed with ALSAN RS Finish. Prior to applying finish seal coat, remove excess aggregate from surface by broom, vacuum or oil-free blower. See ALSAN RS Finish Application Guidelines for information regarding application of ALSAN RS Finish and surfacing components.

### **ALSAN RS Self-Leveling Mortar Touch-Up**

When ALSAN RS Self-Leveling Mortar will be applied without broadcast aggregate, i.e., another ALSAN RS surfacing component will be applied over the mortar; the mortar layer can be touched up and correct to create a smooth blemish free surface.

Imperfections telegraph through surfacing & finish, and therefore must be corrected before proceeding. Minor imperfections in ALSAN RS Self-Leveling Mortar or ALSAN RS membrane can be ground down before applying surfacing or finish. Using care with a diamond cup wheel hand held grinder, lightly grind the top surface of any imperfections using care not to damage the in-place membrane. If the membrane has been damaged or compromised, repair the membrane as needed and feather edges by grinding.

Inspect the applied and cured ALSAN RS Self-Leveling Mortar looking for line, lumps and other blemishes. Remove any protrusions using a sander or hand-held cup grinder as needed, using care not to damage the membrane.

Where required, additional ALSAN RS Self-Leveling Mortar may be applied over the in-place mortar and then can be feathered in with the same grinding/sanding procedure. This surface preparation is recommended on applications using ALSAN RS Textured Finish or ALSAN RS Finish with broadcast aggregates.

### **Application Quality Control**

Typically ALSAN RS Self-Leveling Mortar consumption and thickness is gaged by monitoring surface profile, distances and kg's of resin applied.

#### Membrane Bond Testing:

Determinations of bond strength and moisture content should be performed periodically by the contractor throughout the course of work.

Bond strength and adhesion can be monitored at the job site using an adhesion tester. Perform tests on completely cured sample membrane applied adjacent to work at start-up, and intervals as required throughout the project assuring specified adhesion with a minimum of three tests per 5000 ft<sup>2</sup> (465 m<sup>2</sup>). In the event the tensile bond strengths are lower than the minimum specified, additional substrate preparation is required. Repeat testing to verify suitability of substrate preparation. Contractor shall immediately notify the SOPREMA in the event tensile bond test results are below recommended criteria.