

ALSAN RS Repair Mortar Guide

General

Typically, all substrates require some measure of leveling, patching and repair. Before application of any ALSAN RS membrane or surfacing components all substrate deficiencies must be corrected. The substrate should be sounded and visually inspected to identify all spalls, voids, cavities, blisters, blow holes, and depressions on vertical or horizontal surfaces requiring attention.

ALSAN RS Repair Mortar

ALSAN RS “repair mortar” is reference to ALSAN RS Paste or ALSAN RS 233/263 LO Self-Leveling Mortar used alone or combined with kiln-dried quartz silica. Unlike polymer modified cement-based repair materials that require several days to cure, ALSAN RS repair mortars offer fast-set times (45 minutes or less) allowing the ALSAN RS application to continue without interruption.

SOPREMA recommends all substrate leveling, patching, repairs be completed using ALSAN RS repair mortar. Unless otherwise noted, all substrate filling, leveling, patching and repairs should be done using trowel applied ALSAN RS Repair Mortar as follows:

ALSAN RS Paste or ALSAN RS 233/263 LO Self-Leveling Mortar	Non-traffic bearing horizontal & vertical substrates
ALSAN RS 233/263 LO Self-Leveling Mortar Only	ALL traffic bearing substrates.

When required, mix ALSAN RS Paste or ALSAN RS 233/263 LO Self-Leveling Mortar with clean dry #1 (0.7 - 1.2 mm) angular grain, washed, dust-free kiln-dried quartz silica at the following weight ratios:

ALSAN RS Component	Ratio Resin to Quartz
ALSAN RS Paste	1:1
ALSAN RS 233/263 LO Self-Leveling Mortar	1:0.75

NOTE: Vertical applications, formed cants and transitions may require addition of ALSAN RS Liquid Thixo to increase repair mortar viscosity.

Mix: Thoroughly mix the entire drum of ALSAN RS Paste or ALSAN RS 233/263 LO Self-Leveling Mortar for 2-3 minutes before mixing with kiln-dried quartz filler. Transfer the RS resin component to a clean, dry container large enough to accommodate the combined resin and quartz components leaving adequate room for mixing. Using a slow-speed mechanical mixer with spiral agitator, slowly add the kiln-dried quartz to ALSAN RS resin component while stirring; continue mixing for 2 minutes or more until achieving a smooth lump-free mortar consistency. 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 un-catalyzed resin-mortar before each use, and prior to pouring off into a second container if batch mixing.

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

Apply: After mixing, apply catalyzed ALSAN RS repair mortar to clean, prepared and primed substrate as required. ALSAN RS resin-mortar should be placed in lifts no greater than the maximum thicknesses indicated and as follow:

	Maximum depth per lift	Approximate Coverage		
		kg/mm ²	kg/ft ³	per unit ft ² (m ²)
ALSAN RS Paste	1/8 in (3mm)	0.11	32.6	+/-136 (12.7)
ALSAN RS Paste + quartz	3/8 in (10mm)	0.14	42.2	+/-214 (19.9)
ALSAN RS 233/263 LO Self-Leveling Mortar	3/8 in (10mm)	0.16	47.8	+/-206 (19.2)
ALSAN RS 233/263 LO Self-Leveling Mortar + quartz	3/4 in (20mm)	0.15	45.7	+/-385 (35.8)

For leveling and smoothing applications, spread and plane the repair mortar with a flat blade squeegee and trowel to achieve a flat surface. For patching and repairs, fill cavities with repair mortar and trowel to achieve a flat surface.

If additional lifts are required, broadcast top surface of the ALSAN RS Repair Mortar with clean dry #1 (0.7 - 1.2 mm) kiln-dried quartz aggregate at approximately 25% coverage while wet. Place next lift once the applied ALSAN RS repair mortar has cured.

Cure: Allow ALSAN RS Repair 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.

Vertical & Steep Slope Applications

ALSAN RS Repair Mortar may require addition of ALSAN RS Liquid Thixo to increase viscosity to allow application on steep slopes or vertical substrates. For slopes exceeding 1-1/2:12, add ALSAN RS Liquid Thixo as required to form a slump-free mortar. 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 Repair 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 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
- Resin Mortar mixed with ALSAN RS Liquid Thixo must be allowed to stand 20 to 30-minutes before checking viscosity or 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 per kg of ALSAN RS resin

Note: Storage and working times are not affected by addition of ALSAN RS Liquid Thixo mixed with uncatalyzed resin.

ALSAN RS Repair Mortar Touch-Up

When required, ALSAN RS repair mortar can be touched up and correct to create a smooth blemish free surface. Inspect the applied and cured ALSAN RS Repair Mortar looking for lines, lumps, bumps and other blemishes. Remove any protrusions using a sander or hand-held cup grinder as needed. Where required, additional ALSAN RS repair mortar may be applied over the in-place mortar which can be feathered in with the same grinding/sanding procedure.

Rapid-Hydrating or Polymer Modified Patching Materials & Cements

If required, rapid-hydrating or polymer modified patching materials and cements may also be used for substrate leveling, patching and repair. SOPREMA recommends performing an adhesion test with any proposed products prior to application in the field, in order to determine if a suitable bond can be achieved.

Recommendations regarding substrate moisture content also apply to patching, leveling and repair materials. When using rapid-hydrating, polymer modified or epoxy based patching materials and cements, determinations of bond strength and moisture content must be performed throughout the course of work, and are the responsibility of the applicator.

In general, cements will required a 28 day minimum cure, while rapid-hydrating or polymer modified patching materials normally will require 3 to 7 days minimum for off-gassing and curing. Curing times may vary depending upon the type of product used, temperature and relative humidity. With proper hydration and favorable weather conditions, acceptable moisture content can be achieved with cure periods for common patching materials as follows:

<u>Patching Material</u>	<u>Cure Period</u>
• Concrete (standard weight)	28 day min.
• Polymer modified	7 day min.
• Epoxy based	1 day min.

If not properly cured, membrane blistering or delamination over the repair area may occur. To avoid the possibility of blistering, delamination and curing delays, SOPREMA recommends using ALSAN RS Repair Mortars for all substrate repairs wherever possible.

After placement and adequate cure, the patch or infill material must be mechanically ground, bead blasted or scarified to remove the laitance (the weak surface which occurs during the placement and setting process). Please refer to the individual manufacturer recommendations in the proper application and use of proposed products.