

ALSAN RS Substrate Preparation Guidelines

Substrate Preparation

General

Prior to application of any ALSAN RS products or materials, the substrate shall be prepared as recommended by SOPREMA and/or required for the intended application.

All substrates must be clean, dry and free from gross irregularities, loose, unsound or foreign material such as dirt, ice, snow, water, grease, oil, release agents, lacquers, or any other condition that would be detrimental to adhesion of ALSAN RS system components to the substrate. Most surfaces will require mechanical abrasion in the form of scarifying, shot-blasting or grinding to achieve a suitable substrate.



Shot Blast

Inspect all substrates and correct defects before application of ALSAN RS materials.

Unless otherwise noted, all substrates shall comply with the following:

- Substrates shall have a maximum moisture content of 75% relative humidity (RH) tested in accordance with ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs unless otherwise approved.
- Substrates shall be prepared as required to provide the ALSAN RS system to substrate with minimum bond strength of 116 psi (0.8 N/mm²) for roofing applications or 220 psi (1.5 N/mm²) for traffic bearing systems tested in accordance with ASTM D4541 Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
- Substrates shall be free of surface voids greater than 1/16 in (1.5 mm) wide x 1/16 in (1.5 mm) deep and otherwise be corrected as required in accordance with acceptable methods.



Cup Grind



Scarification

Note: SOPREMA recommends confirming substrate preparation and bond strength with field adhesion testing in accordance with ASTM D4541 for all substrates before proceeding with application of ALSAN RS components. Determinations of substrate moisture content and bond strength should be performed periodically by the contractor throughout the course of work.

Concrete, Masonry & Brick

Concrete, masonry and brick substrates must be abrasively cleaned (scarify, shot-blast or grind) in accordance with ASTM D4259 Standard Practice for Abrading Concrete to provide a sound, clean, laitance-free open abraded surface as follows:

- Concrete substrates shall comply with requirements of ACI 301/ACI 308 with minimum 3,500 psi (25 N/mm²) compressive strength for acceptable ALSAN RS Primers or cured sufficiently to achieve minimum 2,500 psi (17 N/mm²) compressive strength for acceptable moisture mitigation primers on new concrete and be mechanically prepared to ICRI Concrete Surface Profile CSP 3, CSP 4 or CSP 5; CSP 3 being the preferred profile.
- Masonry & brick substrates shall be structurally sound built of hard kiln dried brick, concrete block, precast tilt-up or cast-in-place concrete construction mechanically prepared to ICRI Concrete Surface Profile CSP 2, CSP 3 or CSP 4; CSP 3 being the preferred profile.
- Areas of spalls, voids, bug holes and other deterioration on vertical or horizontal surfaces shall be repaired as required in accordance with acceptable methods.

Note: ALSAN RS components must not be applied over spalling concrete, soft or scaling brick or block, faulty mortar joints, or walls with structural damage, cracks, and/or other deficiencies. Hollow tile walls or other materials allowing moisture infiltration from the backside are not suitable to receive ALSAN RS components unless properly waterproofed to prevent moisture infiltration from above or behind.

Structural Concrete

Properly designed and installed structural concrete decks with 4 in (100 mm) minimum thickness are recommended. New construction poured in place concrete decks should provide bottom side drying. When steel form decking is used and will remain in place, only products with factory punched vent slots or tabs should be used, as decks installed over non-vented metal decks or pans may allow for trap moisture in the deck assembly.

Light Weight Structural & Aerated Concrete

Typically, lightweight structural concrete has a minimum density of 50 lb/ft³ (800kg/m³), but weighs less than standard concrete due to use of lower density aggregates. New concrete production often uses natural aggregates of volcanic origin (pumice, tuff, scoria), or processed aggregates like expanded slag, shale or clay. In some cases synthetic aggregates and/or recycled materials may also be used.

High-performance aerated structural concrete, in addition to using lightweight aggregates, typically involves “enhancing” the concrete to improve performance in a severe or specialized environment. This type of lightweight structural concrete is produced by introducing tiny air pockets into the concrete mixture through a chemical reaction using hydrogen peroxide or aluminum powder.

As there are numerous possible combinations of aggregates, admixtures, and processes for “lightweight structural concrete” and “aerated structural concrete” resulting in varied compressive strengths and physical properties, each pour must be evaluated individually to determine suitability as a substrate for any ALSAN RS system on a job-by-job basis.

CONCRETE/MASONRY SURFACE PREPARATION



CSP 3



CSP 4



CSP 5

Generally speaking, ALSAN RS roofing, waterproofing and certain traffic bearing waterproofing applications may be considered over structural lightweight or aerated concrete that is 100 lb./ft³ (1,600 kg/m³) density or higher and with compressive strength 3,000 psi (25 N/mm²) or greater. If both criteria are met, an adhesion test is recommended to confirm cohesive integrity of the lightweight concrete and suitability for application of the ALSAN RS system.

Testing and acceptance of all substrates, including structural lightweight concrete, is the applicators responsibility. However, for any application over lightweight concrete SOPREMA’s warranty would be limited to bond of ALSAN RS to the lightweight structural concrete, but not imply acceptability or warrant integrity of the lightweight structural concrete deck itself.

NOTE: Where application of ALSAN RS systems will proceed over an acceptable lightweight structural concrete, the substrate must be prepared in accordance with the recommendations for structural concrete. Also, in all applications over structural lightweight concrete, an appropriate moisture mitigation primer must be used due to the potential for latent moisture contained in the lightweight aggregates.

Light Weight Insulating Concrete (LWIC)

Typically, lightweight insulating and cellular concrete have densities of between 22-38 lb/ft³ (352 – 609 kg/m³), using perlite or vermiculite as a filler. Also, in older buildings cinder (a by-product of coal or coke combustion) concrete was often used for sloped fill and/or insulation. Both lightweight insulating concrete and cinder concrete are NOT acceptable as a substrate for direct application of ALSAN RS systems.

Consult SOPREMA technical support for recommendations for an acceptable SBS base ply as a substrate for ALSAN RS roofing and waterproofing system when LWIC is encountered.

Green Concrete Applications

SOPREMA does not recommend ALSAN RS systems be applied over green concrete, wet concrete or substrates where latent moisture is suspect. When such applications are necessary due to project conditions or scheduling, assuming the substrate has a means to completely hydrate and dry laterally or downward, an acceptable moisture mitigation primer may be used.

When using an acceptable moisture mitigation primer, the structural concrete substrate must have minimum 7 day cure, reach a minimum 2,500 psi (17 N/mm²) compressive strength, and be mechanically prepared (i.e. shot blast or scarified) to a concrete surface profile (CSP) 3 – 5 per the International Concrete Repair Institute (ICRI) Guideline No. 301-2R-2013.

The final prepared concrete substrate must be clean, abraded, free of moisture-sensitive patching and leveling materials, adhesives, coatings, curing compounds, concrete sealers, efflorescence, dust, grease, oils and any other materials or contaminants that can act as bond breakers.

Split Slab Construction

SOPREMA does not recommend ALSAN RS systems be applied over “split slab” construction due to potential for trapped moisture within the existing assembly and potential issues that can result. Latent moisture in substrates (especially in split slab construction) can lead to a host of problems including blistering, delamination, condensation, mold and structural damage. The best solution for split slab construction is to remove the overburden and existing membrane, assure a dry substrate and apply new waterproofing direct to the structural slab.

Consult SOPREMA technical support for options and recommendations for all projects where split slab construction is encountered or suspected.

Metals

Clean and prepare all metal to near-white metal in accordance with SSPC – SP3 (power tool clean) to a point maximum 1/8 in (3 mm) beyond the termination of ALSAN RS components and wipe with ALSAN RS Cleaner to remove oils, debris or contaminants.

SOPREMA recommends confirming metal substrate preparation and bond strength with field adhesion testing in accordance with ASTM D4541 Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.

Typically ferrous metals (carbon steel, cast iron), aluminum and copper are ready to receive ALSAN RS Metal Primer following the above preparation.

Stainless steel varies by alloy and grade, but generally all have low carbon content with smoother surfaces than carbon steel which can adversely affect ALSAN RS component adhesion. Following the above preparations, some stainless steel may require use of an acceptable 2-component epoxy primer to achieve adequate adhesion.

For galvanized and zinc rich metals, the surface applied passivator must be completely removed by mechanical abrasion prior to applying ALSAN RS components. This can be confirmed by applying a coat of copper sulfate solution to the prepared and cleaned galvanized/zinc metal. A properly prepared surface will turn black indicating the passivator has been removed. If the surface does not turn black, additional abrasive cleaning will be required.

All overlaps or butt joints in break-metal components, flashing or sheet metal must be covered with minimum 1 in (25 mm) wide bond breaker tape followed with minimum 6 in (150 mm) wide strips of ALSAN RS Flash reinforced membrane centered over joint. Anchors or nails required through flashing components should be held back 1-1/2 in minimum from perimeter edges of ALSAN RS membrane. See SOPREMA ALSAN RS typical drawings for treatment and detailing of specific conditions.

SOPREMA recommends priming all metals with ALSAN RS Metal Primer to promote adequate adhesion. For ferrous metals, any exposed metal beyond the edge of ALSAN RS materials should be coated with an appropriate rust-inhibitive paint.

Rigid Plastics (PVC & ABS)

Rigid plastics should be lightly abraded and wiped with ALSAN RS Cleaner. Extend preparation maximum 1/8 in (3 mm) beyond the specified termination of the ALSAN RS materials.

Wood Plank, Timber & Sheathing

Hygroscopic building materials such as wood plank, timber or plywood sheathing will normally have higher moisture content (in the range of 8% to 12%) as they adsorb or desorb moisture to reach equilibrium moisture content with the surrounding air. ALSAN RS components should not be applied to damp or wet sheathing materials, but may be applied to materials with higher moisture contents as indicated above, provided the exposed surface is clean and dry. Determinations of moisture content and the resulting bond strength should be performed periodically to confirm acceptability. If poor adhesion or blistering occurs, substrate will require additional drying time before proceeding.

Plywood sheathing should be structural panels performance-rated pursuant to National Institute of Standards and Technology (NIST) voluntary product standard PS-1-95; identified by American Plywood Association (APA) grade designations.

For deck substrates, sheathing should be ¾ in (19 mm) minimum thickness APA A-C, Group 1, Exterior or Exposure 1, 48 in (1220 mm) x 96 in (2440 mm) tongue & groove panels single layer or 15/32" minimum thickness 2-layer with staggered joints.

Always install panels with "best" side up, edges supported by blocking or structural framing, fastened using only non-corrosive screw fasteners with heads installed flush with sheathing applied at 6 in (15 cm) minimum o.c. along panel edges and 12 in (30 cm) o.c. over intermediate supports and/or additional fastening as required by jurisdictional codes.

For ALSAN RS applications direct to wood, the following is required:

- Prime all wood substrates with an appropriate ALSAN RS primer, and then fill joint gaps, holes and cracks with ALSAN RS Paste or ALSAN RS Self-Leveling Mortar. ALSAN RS Self-Leveling Mortar must be used for applications where an ALSAN RS pedestrian waterproofing and surfacing system will be applied direct to plywood.
- All joints in wood or sheathing must be covered with minimum 1 in (2.5 cm) wide bond breaker tape followed with minimum 6 in (15 cm) wide strips of ALSAN RS Flash reinforced membrane centered over joint. Knot holes, cracks or other surface deficiencies should be patched with ALSAN RS Flash reinforced membrane as required.

Note: OSB (oriented strand board) is NOT acceptable for use with ALSAN RS.

Roof Cover Boards and Sheathing

For direct application over acceptable roof cover boards and/or sheathing the following is required:

- Prime sheathing/cover boards with an appropriate ALSAN RS Primer, then fill joint gaps, holes and cracks with ALSAN RS Paste or ALSAN RS Self-Leveling Mortar.
- All joints in sheathing/cover boards must be covered with minimum 4 in (100 mm) wide strips of ALSAN RS Flash reinforced membrane centered over joint.

Contact SOPREMA for acceptable cover boards required over rigid foam board insulation.

Framed Wall Construction

Frame walls are not acceptable to receive ALSAN RS flashings unless suitable solid backing for the flashing is provided. As minimum sheet metal, plywood or cement backer board should be used as wall sheathing. Walls sheathed with gypsum wall board or other paper-faced gypsum based products are not acceptable as a substrate for ALSAN RS components. Suitable stops should be provided at the top of the flashing in curtain wall construction, to ensure a watertight seal for flashings.

Asphalt Built-Up Roofing

ALSAN RS membranes can be used for reroof overlays, flashings, and tie-ins of asphalt built-up roofing. Remove all dust, dirt and debris from the surface of the built-up roof (BUR) membrane as required. For gravel surfaced BUR membranes, gravel should be removed by spudding and power vacuuming. BUR membranes with gravel surfacing removed generally require a leveling coat of ALSAN RS resin-mortar, an acceptable roof recovery board and/or base sheet overlay. In recovery applications, all blisters, ridges and deficiencies must be cut and patched ALSAN RS resin-mortar or an acceptable base sheet overlay to provide a reasonably level substrate. Following the necessary substrate preparations, the entire substrate must be primed with an appropriate ALSAN RS Primer.

Granulated Surface SBS & APP Modified Bitumen Membranes

ALSAN RS can be used for reroof overlays, flashings and tie-ins of sanded and/or granulated SBS and APP modified bitumen roofing. Remove all loose granules, dust, dirt and debris from the surface of the membrane as required. In recovery applications, all blisters, ridges or deficiencies must be cut and patched ALSAN RS resin-mortar or an acceptable base sheet overlay to provide a reasonably level substrate. Following the necessary substrate preparations, an appropriate ALSAN RS Primer is recommended for all applications and over any exposed asphalt.

Smooth Surface APP Modified Bitumen or Emulsion Coated Membranes

ALSAN RS components should NOT be applied directly to smooth surface APP modified bitumen or emulsion coated membranes. When ALSAN RS membranes will be used in these applications for reroof overlays, flashings, and tie-ins special substrate preparations are required. In recovery applications, all blisters, ridges and deficiencies must be cut and patched ALSAN RS resin-mortar or an acceptable base sheet overlay to provide a reasonably level substrate. Following the necessary substrate preparations, an appropriate ALSAN RS Primer is recommended for all applications and required over any exposed asphalt.

Smooth Surface APP

Smooth surface APP modified bitumen membranes require an acceptable roof recovery board and/or base sheet overlay prior to applying ALSAN RS components or membrane. For flashing tie-ins, an acceptable granulated target sheet can be applied over the in-place smooth APP membrane. For direct recovery where an overlay is not used, the smooth APP membrane must be heated and broadcast with #1 (0.7 - 1.2 mm) quartz aggregate to full cover. Using a torch or hot-air welder, sufficiently soften the top surface of the in-place membrane and embed aggregate into the softened asphalt. After the asphalt has cooled, remove all loose granules, dust and dirt from the surface of the membrane by broom, blower and/or and power vacuuming.

Emulsion Coated Membranes

Emulsion coated membranes require an acceptable properly secured roof recovery board and/or base sheet overlay prior to applying ALSAN RS components. For direct recovery where an overlay is not used, the emulsion coating must be heated and broadcast with #1 (0.7 - 1.2 mm) quartz silica to full cover. Using a torch or hot-air welder, liquefy the top surface of the in-place membrane and embed silica aggregate into the liquid asphalt. After the asphalt has cooled, remove all loose granules, dust and dirt from the surface of the membrane by broom, blower and/or and power vacuuming.

Coal Tar Pitch BUR & Coal Tar Modified Bitumen Membranes

Coal tar pitch is known for its fuming, low melt point, and cold flow characteristics. SOPREMA does not believe coal tar pitch will provide a reliable stable substrate and therefore does not recommend application of any ALSAN RS components directly to coal tar pitch or a coal tar pitch based built-up roof membrane. ALSAN RS components and membranes are however chemically compatible with coal tar, and may be applied to substrates that contain coal tar pitch staining and/or residue remaining after proper removal and scarification. Following the necessary substrate preparations, an appropriate ALSAN RS Primer is recommended for all applications and required over any exposed coal tar pitch residue.

Single Ply Membranes

ALSAN RS membranes can be used for reroof overlays, flashings, and tie-ins on SOPREMA SENTINEL and other acceptable single-ply roofing. Remove all dust, dirt and debris from the surface of the single ply membrane as required. Unless otherwise noted, all acceptable single ply substrates shall be prepared as follows:

- Scrub single ply membrane surface to receive application of ALSAN RS components using a heavy duty solvent resistant synthetic fiber scouring pad thoroughly wetted with ALSAN RS Cleaner.
- Using a clean rag, wipe the single ply membrane surface removing any excess ALSAN RS Cleaner.
- Allow ALSAN RS Cleaner 15-20 minutes to completely flash-off prior to applying ALSAN RS components.

Note: ALSAN RS membranes should NOT be used with EPDM (ethylene propylene diene monomer synthetic rubber or TPO (thermoplastic polyolefin) membranes. Some single ply membranes may require additional preparation or use of an appropriate ALSAN RS Primer when required or recommended by SOPREMA.

Glass & Glazing

SOPREMA does not recommend bonding ALSAN RS membrane to glass or glazing substrates. Typically a limited bond can be obtained to most glass surfaces pre-cleaned with acetone to remove all surface contaminants. Any tie-in or attachment to glass or glazing is considered a non-warrantable condition.

Other Substrates

Remove all contaminants as required. Contact SOPREMA for acceptable preparation and treatment of substrates not specifically indicated above.

General Substrate Repairs

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.

SOPREMA recommends all substrate leveling, patching, repairs be completed using ALSAN RS Paste or ALSAN RS 233/263 LO Mortar. For certain applications, ALSAN RS Paste and ALSAN RS 233/263 LO Mortar can be combined with kiln-dried quartz silica to form ALSAN RS resin-mortars. ALSAN RS repair materials provide fast-set times (45 minutes or less) allowing the ALSAN RS application to continue without interruption, unlike polymer modified cement-based materials that require several days to cure.

Unless otherwise noted, all substrate filling, leveling, patching and repairs should be done using trowel applied ALSAN RS Paste, ALSAN RS 233/263 LO Mortar or respective ALSAN RS resin-mortar as follows:

Traffic bearing substrates:

Use only ALSAN RS 233/263 LO Mortar or ALSAN RS 233/263 LO repair mortar.

Non-traffic bearing substrates:

Use ALSAN RS Paste or ALSAN RS 233/263 LO mortar or ALSAN RS resin-mortar.

Apply ALSAN RS Paste, ALSAN RS 233/263 LO Mortar or respective resin-mortar over fully cured ALSAN RS Primer as follows:

- Substrate should be dry and free of any dust or loose particles.
- Apply catalyzed ALSAN RS Paste, ALSAN RS 233/263 LO Mortar or respective resin-mortar using appropriate pressure and smoothing trowel required to work material into voids and cavities or over the substrate for complete coverage and adhesion.

- Apply ALSAN RS Paste, ALSAN RS 233/263 LO Mortar or respective resin-mortar placed in lifts no greater than the maximum thicknesses recommended.
- If additional lifts are required, while wet broadcast top surface of the ALSAN RS Paste, ALSAN RS 233/263 LO Mortar or respective resin-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 Paste, ALSAN RS 233/263 LO Mortar or respective resin-mortar has cured.

Bond Breakers/Bond Breaker Tape

Certain conditions require use of an acceptable bond breaker beneath the ALSAN RS membrane to accommodate movement. Typically in these applications, two or three plies of ALSAN RS membrane are required over the bond breaker. The bond breaker tape should be premium high performance crepe paper masking tape designed to perform well in most industrial painting situations. Numerous products are available, including the following products previously tested and found acceptable:

- Scotch Masking Tape #2020 (high adhesion)
- Scotch-Blue Painter's Tape for Multi-Surfaces #2090 (14-day adhesion)
- Scotch Performance Masking Tape 231/231A
- 3M General Purpose Masking Tape 234

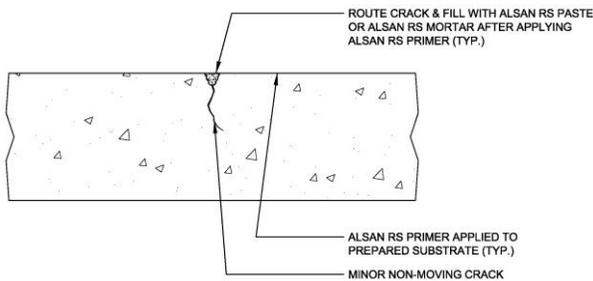
NOTE: Common duct tape should not be used as a bond breaker/bond breaker tape in conjunction with ALSAN RS membranes.

Substrate Cracks & Joints

Before applying ALSAN RS membrane or surfacing all substrate cracks and cold joints on horizontal and vertical substrates must be properly addressed. Fill cracks, voids and joints using an appropriate ALSAN RS material as recommended in General Substrate Repairs for traffic bearing and non-traffic bearing substrates. Unless otherwise noted, all substrate cracks and cold joints should be treated as follows:

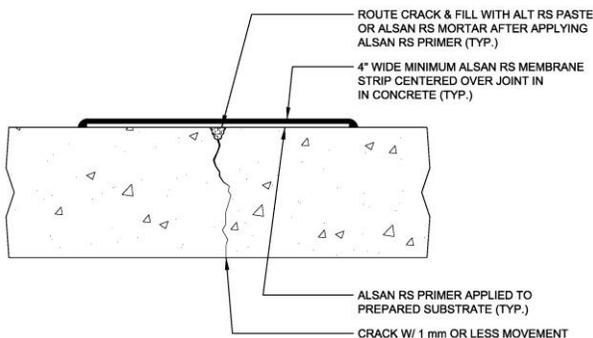
NON-MOVING/STATIC CRACKS 1/32 in (1mm or less):

Determine that the crack is non-moving. Remove any existing filler and clean out the crack by brushing and oil-free compressed air. Fill crack with ALSAN RS Paste, ALSAN RS 233/263 LO Mortar or respective ALSAN RS resin-mortar as required.



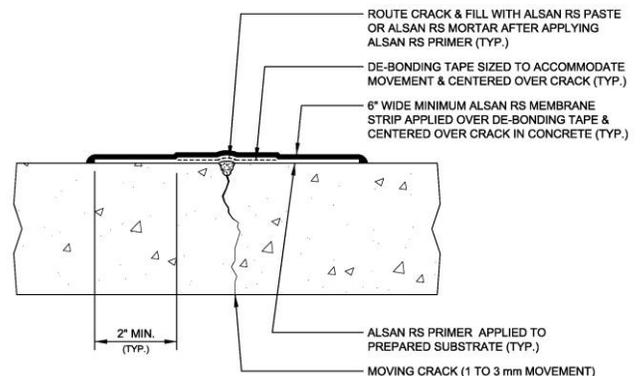
MOVING/DYNAMIC CRACKS 1/32 (1 mm or less):

Determine that crack is moving. Remove any existing filler and clean out crack by brushing and oil-free compressed air. Fill crack with ALSAN RS Paste, ALSAN RS 233/263 LO Mortar or respective ALSAN RS resin-mortar as required, allow to cure, then apply minimum 4 in (100 mm) wide strip of ALSAN RS Flash fleece reinforced membrane centered over crack.



MOVING/DYNAMIC CRACKS 1/32 - 1/8 in (1 - 3 mm):

Determine that the crack is moving. Remove any existing filler and clean out the crack by brushing and oil-free compressed air. Fill the crack with ALSAN RS Paste, ALSAN RS 233/263 LO Mortar or respective ALSAN RS resin-mortar as required and allow it to cure. Then apply an acceptable bond breaker tape 5 times in width greater than the maximum anticipated expansion and cover with ALSAN RS Flash fleece reinforced membrane centered over the crack or joint. The ALSAN RS membrane cover strip should be sized to provide 2 in (50 mm) minimum cover beyond all side of the bond breaker tape but no less than 6 in (150 mm) minimum width.



MOVING/DYNAMIC CRACKS 1/8 in (3 mm or more):

Moving cracks greater than 1/8 in (3 mm) must be treated as an expansion joint. Remove any existing filler then route and clean out crack as required to form an appropriate expansion cavity. Fill the expansion cavity with an appropriately sized backer rod, ALSAN RS Paste, ALSAN RS 233/263 LO Mortar or respective ALSAN RS resin-mortar as required and allow it to cure. Then apply an acceptable bond breaker tape 5 times in width greater than the maximum anticipated expansion and cover with ALSAN RS Flash fleece reinforced membrane centered over the crack or joint. The ALSAN RS membrane cover strip should be sized to provide 2 in (50 mm) minimum cover beyond all side of the bond breaker tape but no less than 6 in (15cm) minimum width.

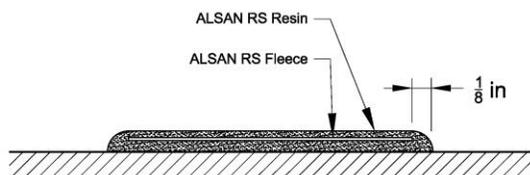
NOTE: IF A CRACK CANNOT BE DETERMINED TO BE NON-MOVING, IT SHOULD BE TREATED AS A MOVING/DYNAMIC CRACK OR EXPANSION JOINT. See SOPREMA ALSAN RS typical drawings for treatment and detailing of specific conditions.

ALSAN RS Membrane Crack/Joint Cover Strips

Using an ALSAN RS detail roller apply an even base layer of ALSAN RS resin, working the ALSAN RS Fleece reinforcement into the wet resin while removing trapped air and assuring full saturation of the fleece. Apply an even topcoat of ALSAN RS resin to achieve uniform coverage and finished membrane thickness as follows:

Base Coat: Minimum of 0.21 kg/ft² (2.3 kg/m²)

Top Coat: Minimum of 0.01 kg/ft² (1.0 kg/m²)



End Laps:

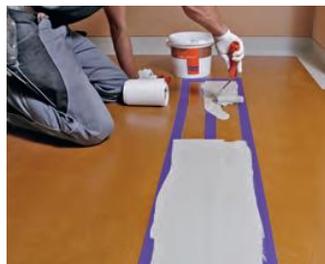
Maintain a minimum 4 in (100 mm) overlap at all end laps of membrane stripping.

Membrane Cover Strip Installation



Step 1:

Apply bond breaker tape and masking if required.



Step 2:

Apply ALSAN RS resin basecoat.



Step 3:

Embed ALSAN RS Fleece in resin basecoat.



Step 4:

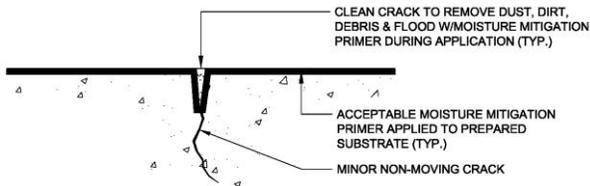
Apply ALSAN RS resin topcoat.

Substrate Cracks & Joints with Moisture Mitigation Applications

Concrete and masonry substrates with moisture issues must be treated with an acceptable moisture mitigation primer prior to application of ALSAN RS components. When using moisture mitigation primers, special treatment for cracks and cold joints on horizontal and vertical substrates is also required as follows:

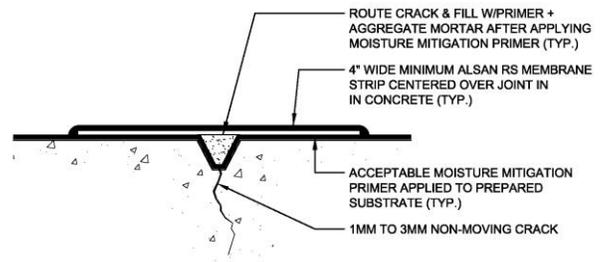
NON-MOVING/STATIC CRACKS 1/32 in (1mm or less):

Determine that crack is non-moving. Remove any existing filler and clean out crack by brushing and oil-free compressed air. Flood the crack with moisture mitigation primer and allow it to cure. Where required, fill residual crack with ALSAN RS Paste, ALSAN RS 233/263 LO Mortar or respective ALSAN RS resin-mortar as required.



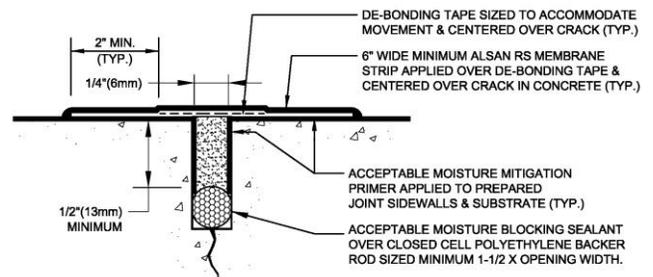
NON-MOVING/STATIC CRACKS 1/8 in (up to 3 mm):

Remove any existing filler then route and clean out crack as required. Apply moisture mitigation primer over the substrate and routed crack joint and allow it to cure. Then fill the routed crack using a moisture mitigation primer combined with kiln-dried quartz silica to form a resin-mortars, allow to cure, then apply minimum 4 in (100 mm) wide strip of ALSAN RS Flash fleece reinforced membrane centered over crack.



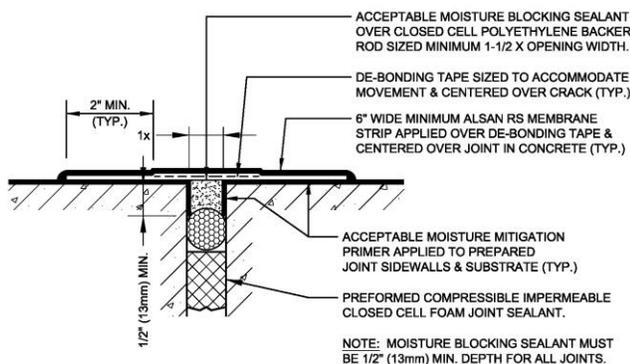
MOVING/DYNAMIC CRACKS up to 1/16 in (1.5 mm):

Moving cracks up to 1.5 mm must be chased and filled. Remove any existing filler then cut a crack chase 1/4 in (6 mm) wide x 1/2 in (13 mm) deep minimum. Prime the substrate and side of the crack chase with moisture mitigation primer. After allowing the primer to cure, fill the chase cavity with an appropriately sized closed cell polyethylene backer rod followed by an acceptable blocking sealant. After allowing the sealant to fully cure, apply an ALSAN RS Flash fleece reinforced membrane strip centered over the crack or joint. The ALSAN RS membrane cover strip should be sized to provided 2 in (50 mm) minimum cover beyond all side of the crack chase but no less than 6 in (150 mm) minimum width.



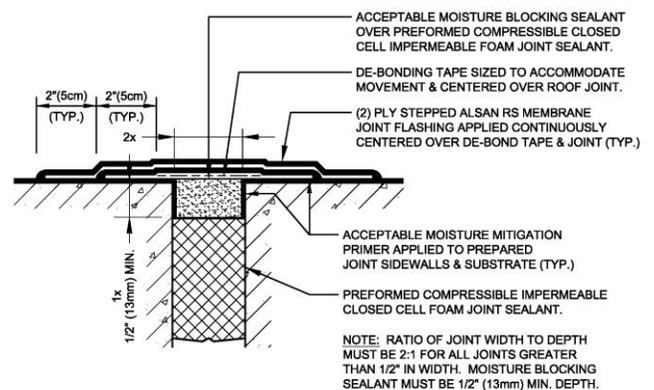
MOVING/DYNAMIC CRACKS & EXPANSION JOINTS 1/16 - 1/2 in (1.5 mm – 13 mm) width:

Moving cracks greater than 1/16 in (1.5 mm) must be treated as an expansion joint. For cracks up to 1/2 in (13 mm) width, remove any existing filler then cut a crack chase 1/2 in (13 mm) maximum wide x 1/2 in (13 mm) minimum deep. Prime the substrate and side of the crack chase with moisture mitigation primer. After allowing the primer to cure, fill the chase cavity with an appropriately sized closed cell polyethylene backer rod followed by an acceptable moisture blocking sealant. After allowing the sealant to fully cure, apply an acceptable bond breaker tape 5 times in width greater than the maximum anticipated expansion and cover with ALSAN RS Flash fleece reinforced membrane centered over the crack or joint. The ALSAN RS membrane cover strip should be sized to provided 2 in (50 mm) minimum cover beyond all side of the bond breaker tape but no less than 6 in (150 mm) minimum width.



EXPANSION JOINTS 1/2 - 2 in (13 – 50 mm) width:

For expansion joints up to 2 in (50 mm) width, remove any existing filler and prepare the joint cavity as required. Prime the substrate and side of the joint recess with moisture mitigation primer. After allowing the primer to cure, fill the joint cavity with impermeable preformed compressible closed cell foam joint filler followed by an acceptable moisture blocking sealant. After allowing the sealant to fully cure, apply an acceptable bond breaker tape 5 times in width greater than the maximum anticipated expansion and cover with two plies of ALSAN RS Flash fleece reinforced membrane centered over the joint. The ALSAN RS membrane cover strip should be stepped and sized to provided 4 in (100 mm) minimum cover beyond all side of the bond breaker tape but no less than 10 in (250 mm) minimum width.



Note: See SOPREMA ALSAN RS typical drawings for treatment and detailing of specific conditions.