

To: Sales & Technical Team
Date: January 2022
Re: **ALSAN® RS Primer Technical Advisory**

What Primer Should Be Used on Your Next ALSAN® RS Project?

The importance of primer selection is often overlooked, but it is something that should be carefully considered for all upcoming ALSAN® RS projects. Primers are substrate pretreatments used to promote and improve adhesion of ALSAN RS components. Though primers are not required in some applications, using primer almost always makes for a better project. The following is a quick reference at-a-glance pertaining to general primer selection guidelines:

ALSAN RS Primers At-A-Glance	
ALSAN® RS222	Recommended for all ALSAN RS 230 & ALSAN RS 260 LO roofing and waterproofing applications with or without exposed asphalt applied on approved substrates including concrete, masonry, wood, rigid plastics, and most cover boards. The exceptions would be extremely dense concrete and metals. ALSAN RS 222 Primer is always required on any raw, bare, or exposed asphalt. ALSAN RS 222 Primer is also recommended with ALSAN RS membranes applied direct to wood panels and sheathing.
AQUAFIN Vaportight Coat SG2/3/4	Recommended for all ALSAN TRAFIK RS, ALSAN RS 230, & ALSAN RS 260 LO exposed direct-to-deck waterproofing, trafficked waterproofing & surfacing, and protective coatings where potential concrete substrate contaminants, porosity, high alkali pH, moisture and latent moisture are of concern.
ALSAN® RS276	Used with ALSAN TRAFIK RS, ALSAN RS 230 & ALSAN RS 260 LO trafficked waterproofing & surfacing, and protective coatings used in high-shear applications or roofing and waterproofing applied direct to clean and dry concrete substrates where contaminants, porosity, and latent moisture are not present or of concern.
ALSAN® RS LO	Used with low-odor roofing or waterproofing applications incorporating ALSAN RS 260 LO membrane and flashings. ALSAN RS LO Primer may be applied to approved substrates including concrete, masonry, wood, rigid plastics, most cover boards, and certain metals where required.
ALSAN® RS Metal Primer	ALSAN RS Metal Primer is required with ALSAN TRAFIK RS, ALSAN RS 230, & ALSAN RS 260 LO at all metal penetrations, transitions, and tie-ins.

Regardless of application, SOPREMA recommends confirming primer selection and bond strength with field adhesion testing in accordance with ASTM D4541 for all substrates before proceeding with any work.

Decoding and Understanding ALSAN® RS Primer Options

SOPREMA offers several primers for use with ALSAN RS systems. These primers and associated uses are discussed in further detail as follows:

ALSAN® RS222	<p>ALSAN RS 222 Primer is semi-flexible and asphalt stain blocking. ALSAN RS 222 Primer can be used for most roofing and waterproofing applications, adhering to a variety of approved substrates including concrete, masonry, wood, rigid plastics, and most cover boards. The exceptions would be extremely dense concrete and metals. ALSAN RS 222 Primer is required on any raw, bare, or exposed asphalt.</p> <p>Though not required on sanded and granulated SBS membrane base and cap sheets, using ALSAN RS 222 Primer on these assembly will be beneficial where project budgets or competitive pricing are not an issue. ALSAN RS 222 Primer is less viscous than ALSAN RS Flash and Field resins and will more readily penetrate and fill voids in granular surfacing, reduce potential for blistering, and offer superior overall adhesion.</p>
ALSAN® RS276	<p>ALSAN RS 276 Primer is a medium viscosity rigid primer. ALSAN RS 276 Primer is principally used for direct to substrate applications over clean and fully cured concrete for ALSAN RS roofing and waterproofing applications as well as ALSAN TRAFIK RS waterproofing & surfacing and protective coating applications. ALSAN RS 276 Primer is acceptable for use over approved substrates including extremely dense and most other structural concrete, masonry, wood, and cement-based cover boards. The exceptions would light weight structural concrete (LWC), metals, asphalt-based roofing materials or residue, and other resilient substrates.</p> <p>Although ALSAN RS 276 Primer may be used on the above-mentioned flashing substrates in conjunction with SOPREMA SBS and PVC membrane roofing assemblies. However, ALSAN RS 222 Primer is recommended and preferred for most applications incorporating ALSAN RS flashing with SBS and PVC roofing and waterproofing applications.</p>
ALSAN® RS LO	<p>ALSAN RS LO Primer is a two-component low-odor epoxy primer. ALSAN RS LO Primer can be used for most roofing and waterproofing applications, adhering to a variety of approved substrates including concrete, masonry, wood, rigid plastics, asphalt, most cover boards, and some metals.</p> <p>ALSAN RS LO Primer is typically used in conjunction with ALSAN RS 260 LO membranes on low-odor applications. ALSAN RS LO Primer may also be used on a case-by-case basis with certain metals, i.e., stainless steel, where ALSAN RS Metal Primer does not provide adequate adhesion.</p>

<p>ALSAN® RS Metal Primer</p>	<p>ALSAN RS Metal Primer is a one-component acrylic primer. ALSAN RS Metal Primer is required with all types of metal to improve adhesion and provide proper tie-in of ALSAN RS membrane and flashings. These tie-in conditions include metal roof panels, drain bowls, posts, pipes, conduits, angles, columns, edge metal terminations, and other penetrations.</p> <p>All metals should be mechanically prepared and abraded following The Society for Protective Coatings formerly the Steel Structures Painting Council (SSPC) standard SP3 Power Tool Cleaning. Certain metals with patina, oxidation, or passivator may require more aggressive or special preparation. Galvanized and zinc rich metals are typically passivated or coated with oil. Stainless steel is typically smooth, dense and contains chromium which forms a thin oxide passivator layer. The passivator must be completely removed by mechanical abrasion for ALSAN RS Metal Primer to obtain sufficient long-term bond. Passivator removal can be confirmed by applying a coat of copper sulfate solution to the prepared metal surface. 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.</p> <p>Zinc rich, stainless-steel, or other metal alloys may require use of an alternative primer or acceptable pre-primer. Metals such as Terne, RHEINZINK, and stainless-steel have been successfully primed with ALSAN RS LO Primer where ALSAN RS Metal Primer did not provide sufficient adhesion. Regardless of metal type or primer, SOPREMA recommends confirming metal substrate preparation and primer bond strength with field adhesion testing in accordance with ASTM D4541 Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.</p> <p>Finally, priming helps protect prepared metals from oxidation, rust back, rust bloom, and flash rust when not immediately covered with ALSAN RS membrane. Although use of ALSAN RS Metal Primer will help inhibit oxidation, in extreme environments or where rusting is an issue, a rust inhibitive metal primer may be used as a pre-primer where required.</p>
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<p>AQUAFIN Vaportight Coat Primers</p>	<p>AQUAFIN Vaportight Coat SG2, SG3, & SG4 are all two-component epoxy primers. These primers are primarily used for moisture mitigation on direct to concrete and masonry applications where moisture and/or latent moisture is an issue or concern. This would include new or green concrete, old concrete where leaks have been occurring, and split slabs. especially for assemblies applied with traffic surfacing or where finished membrane aesthetics are of key importance.</p> <p>AQUAFIN Vaportight Coat primers are used for moisture vapor transmission control, alkalinity protection, and in some cases to provide barrier seal over oil and chemical contaminated slabs. AQUAFIN Vaportight Coat Primers are preferred for all ALSAN RS and ALSAN TRAFIK RS waterproofing assemblies incorporating ALSAN RS surfacing and finish components.</p>
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<p>AQUAFIN Vaportight Coat Primers (cont.)</p>	<p>Generally, AQUAFIN Vaportight Coat SG3 Primer is selected for most applications. However, AQUAFIN Vaportight Coat primer selection must be qualified with appropriate substrate evaluation and testing. The general guidelines for AQUAFIN Vaportight Coat primer selection are as follows:</p> <p>AQUAFIN Primer Selection Guidelines:</p> <p><u>AQUAFIN Vaportight Coat SG2</u> Typically required with oil and other chemically contaminated slabs. Primer must be fully broadcast with sanded and requires 12-hour minimum cure. SG2 primer seals slabs preventing capillary infiltration of contaminants, provides alkali pH resistant, and blocks moisture vapor transmission. Substrate and ambient temperatures must be between 45°F (8°C) and 95°F (35°C). SG2 primer must be immediately (within 2 minutes) broadcast to rejection with clean, kiln-dried #20 - 50 silica sand (ASTM E11 No. 18 - 35 sieve size [0.5 - 1.0mm dia.]) typically at a rate of approximately 30 - 50 lb/100 ft² (1.5 kg/m²).</p> <p><u>AQUAFIN Vaportight Coat SG3</u> Typically used for alkali pH resistance and blocking moisture vapor transmission. Primer requires <u>12-hour</u> minimum cure and should NOT be sanded. Substrate and ambient temperatures must be between 45°F (8°C) and 95°F (35°C).</p> <p><u>AQUAFIN Vaportight Coat SG4</u> A faster curing version of AQUAFIN Vaportight Coat SG3 Primer, also used for alkali pH resistance and blocking moisture vapor transmission. Primer requires <u>3.5-hour</u> minimum cure and should NOT be sanded. Substrate and ambient temperatures must be between 40°F and 85°F (5°C to 30°C).</p> <p>General Requirements & considerations:</p> <p>For SOPREMA warranty consideration AQUAFIN Vaportight Coat primers must be purchased through SOPREMA and registered with AQUAFIN prior to starting any work or application.</p> <p>Concrete slabs testing for contaminants (i.e. hydrocarbons, other organic compounds, un-reacted water-soluble silicates, chlorides, ASR, Sulfurous compounds, etc.) using Ion Chromatography and IR Spectroscopy to determine AQUAFIN Vaportight Coat primer selection and suitability is recommended but may also be required in certain applications.</p> <p>Contaminated slabs containing low to medium concentrations of hydrocarbons must be treated with degreasing and/or microbial agents as recommended or required by AQUAFIN prior to primer application.</p> <p>In some cases, slabs contaminated with high concentrations of hydrocarbons, other organic compounds, un-reacted water-soluble silicates, chlorides, ASR, Sulfurous compounds, etc. may require new mortar separation screed to be applied.</p>
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<p>AQUAFIN Vaportight Coat Primers (cont.)</p>	<p>Cracks, open and/or moving joints require special detailing, treatment, and sealing.</p> <p>Unless otherwise specified by AQUAFIN in writing, SOPREMA requires AQUAFIN Vaportight Coat primers be applied pinhole free at minimum consumption of 1.0 Gal/100 ft² for AQUAFIN Vaportight Coat SG3/SG4 and 1.0 Gal/75 ft² AQUAFIN Vaportight Coat SG2.</p> <p>ALSAN RS components should be applied overtop the applied AQUAFIN Vaportight Coat primer within 24-hours of the primer application.</p> <p>Substrate Requirements Concrete must be designed for and provide 3,500 psi (25 N/mm²) minimum final cured compressive strength.</p> <p>All concrete surfaces must be mechanically abraded to ICRI Concrete Surface Profile CSP 3, CSP 4 or CSP 5; <u>CSP 3</u> being the preferred profile.</p> <p>Prepared substrate must support minimum bond strength of 116 psi (0.8 N/mm²) for roofing and non-traffic bearing waterproofing applications or 220 psi (1.5 N/mm²) for traffic bearing waterproofing applications tested in accordance with ASTM D4541 Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.</p> <p>Primer may be applied to concrete slabs that are properly mechanically prepared, clean, free of standing water, up to 100% RH, minimum 5 days old or have reached a minimum 2,500 psi (17 MPa) compressive strength.</p>
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