

ALT R230 Membrane Waterproofing & Pedestrian Surfacing Specification



Technical Data Sheet

PART 1 GENERAL

System:	Fully reinforced waterproofing membrane with resin-mortar wearing layer, slip-resistant surfacing and aesthetic finish system for walkways, balconies, terraces, plaza and other heavy duty traffic areas over occupied spaces or where reinforced waterproofing is required, and all other ancillary work including but not limited to installation of drain, penetration and perimeter flashings, sealants and metal work as specified.
Weather Restrictions:	Do not apply membrane or other system components during or with the threat of inclement weather. Application of cold liquid-applied system components may proceed while air temperature is between 37° F (3° C) and 95° F (35° C) for ALT primers, mortars and finishes or 23° F (-5° C) and 95° F (35° C) for ALT R230 membrane, providing the substrate is a minimum of 5 degrees above the dew point temperature, clean and dry.
Waterproofing Warranty:	Waterproofing Warranty: Provide 20-year standard manufacturer's warranty under provisions of this section.
Surfacing Warranty:	Surfacing Warranty: Provide 1, 5, 10 or 12-year material warranty under provisions of this section based on the surfacing option selected.

PART 2 PRODUCTS

Waterproofing Membrane:	Cold liquid-applied reinforced membrane with non-woven reinforcing fabric, for a finished dry film membrane thickness of .080 inch nominal; integral color as selected by owner from manufacturer's standard palette of colors; conforming to ASTM C 836. Subject to compliance with requirements, provide ALT R230 resin for use in an adhered membrane waterproofing system.
Wearing layer & Surfacing:	Cold liquid-applied resin-mortar wearing layer with slip-resistant surfacing and abrasion resistant topcoat as selected by owner from manufacturer's standard components and palette of colors. Subject to compliance with requirements, provide ALT RS337 Mortar in combination with acceptable broadcast aggregate, ALT Finish 288, ALT Finish 220 Clear and/or ALT R268 Textured Coating (see option 1 through 4 below) as required and/or recommended by the Membrane Manufacturer.
Flashing:	Cold liquid-applied membrane with a non-woven reinforcing fabric, for a finished dry film membrane thickness of .080 inch nominal; integral color as selected by owner from manufacturer's standard palette of colors; conforming to ASTM C 836. Subject to compliance with requirements, provide ALT R230 Thixo resin for use in an adhered flashing membrane system.
Accessories:	Provide resin primers, additives, surfacing topcoats, and accessory products as required or recommended by the Membrane Manufacturer.

PART 3 EXECUTION

Preparation:	All substrates must be 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 the primer and/or resin to the substrate. All traffic bearing surfaces require scarifying, sandblasting or grinding to achieve a suitable substrate.
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<p>Preparation: (cont.)</p>	<p>Substrate shall have maximum moisture content of six (6) percent or 75% relative humidity, and be prepared as required to provide adhesion of the membrane to substrate with minimum bond strength of 116 psi (0.8 N/mm²) for flashing applications or 219 psi (1.5 N/mm²) for traffic bearing waterproofing applications. Determinations of bond strength and moisture content shall be performed periodically by the Contractor throughout the course of work.</p>
<p>Primer:</p>	<p>Prime all substrates as recommended or required by Membrane Manufacturer. Primer is required on asphalt, masonry, concrete, wood and metals. For other substrates, contact the Membrane Manufacturer for recommendations.</p> <p><u>Asphalt/Concrete/Wood:</u> Apply two-component ALT Primer with a lambswool roller. Minimum consumption: 0.037 kg/ft² (0.4 kg/m²) Cure Time: Minimum of 45 minutes.</p> <p><u>Metal:</u> Apply single-component ALT Metal Primer with a lambswool roller. Minimum consumption: 0.016 - 0.02 kg/ft² (0.17 – 0.2 kg/m²) Minimum Cure Times: 1-hour minimum @ 86° F (30° C) 2-hours minimum @ 68° F (20° C) 3-hours minimum @ 50° F (10° C) 4-hours minimum @ 38° F (3° C)</p> <p><i>*Note: Consumption and yield of primer will vary depending upon smoothness and absorbency of the substrate.</i></p>
<p>Flashing:</p>	<p>Apply an even base layer of ALT R230 Thixo resin, work ALT Fleece reinforcement into the wet resin saturating from the bottom up removing trapped air using a lambswool roller. Apply supplemental ALT R230 resin directly over the fleece as required to complete saturation and allow to cure until solid.</p> <p>Base Coat: Minimum consumption of 0.21 kg/ft² (2.3 kg/m²) Top Coat: Minimum consumption of 0.09 kg/ft² (1.0 kg/m²)</p> <p>Laps/Seams: Maintain a minimum 2-inch (5 cm) overlap at all side laps of adjacent fleece rows and 4-inch (10 cm) overlaps at butt laps, tie-ins and flashings (reinforcing and resin).</p> <p>Curing: ALT R230 membrane is rainproof after approximately 30-minutes, and can be walked-on or top coated in approximately 45-minutes.</p>
<p>Main Deck Waterproofing:</p>	<p>Apply an even base layer of ALT R230 resin, work ALT Fleece reinforcement into the wet resin saturating from the bottom up removing trapped air using a lambswool roller. Apply supplemental ALT R230 resin directly over the fleece as required to complete saturation and allow to cure until solid.</p> <p>Base Coat: Minimum consumption of 0.21 kg/ft² (2.3 kg/m²) Top Coat: Minimum consumption of 0.09 kg/ft² (1.0 kg/m²)</p> <p>Laps/Seams: Maintain a minimum 2-inch (5 cm) overlap at all side laps of adjacent fleece rows and 4-inch (10 cm) overlaps at butt laps, tie-ins and flashings (reinforcing and resin).</p> <p>Curing: ALT R230 membrane is rainproof after approximately 30-minutes, and can be walked-on or top coated in approximately 45-minutes.</p>

<p>Mortar Wearing Layer:</p>	<p>Apply an even layer of ALT RS337 Mortar using a ½ x 13/32-inch (13 x 10.5mm) V-notch or flat square edge trowel.</p> <p>Wearing Coat: Minimum consumption of 0.37 kg/ft² (4.0 kg/m²)</p> <p>Curing: ALT RS337 Mortar is rainproof after approximately 30-minutes, and can be walked-on and top-coated in approximately 1-hour.</p>
<p>Surfacing Option 1: (1-year warranty) ALT Finish 288 + ALT Micro-Chips</p>	<p>Surfacing option 1 is for private residential applications only, and is not recommended for wet areas or where slip-resistant surfaces are required. This surfacing option uses broadcast acrylic color-chips to create a readily cleanable light-duty wearing surface. A combination of a pigmented finish and colored chips may be used to create a variety of aesthetic treatments.</p> <p><u>Finish:</u> Apply proprietary aesthetic surface topcoat. Apply an even topcoat of ALT Finish 288 pigmented resin using a lambswool roller at a minimum consumption of 0.046 kg/ft² (0.50 kg/m²). Indirectly broadcast ALT Micro Chips into wet resin using a hopper spray gun. ALT recommends a light broadcast of aluminum oxide or plastic spheres over finished surface to provide slip-resistance as desired or required.</p> <p>ALT Micro-Chips: Available in black, grey or white. A minimum combination of two colors is recommended.</p> <p>Curing: ALT Finish 288 is rainproof after approximately 30-minutes, and can be walked-on in approximately 1-hours. ALT Finish should be applied within 12-hours of the Alt RS337 Mortar application.</p>
<p>Surfacing Option 2: (5-year warranty) ALT RS337+ALT RS291</p>	<p>Surfacing option 2 uses a combination ALT RS291 Textured Finish to create a slip-resistant general-duty wearing surface. Apply an even layer of ALT RS291 Textured Finish using a roller. The Resin should be spread evenly onto the surface at a uniform depth using a roller or notched squeegee. After spreading the resin, use an ALT approved roller pre-wet with ALT RS291 Textured Finish resin roll resin in one direction, then roll in the cross direction to obtain a uniform finish.</p> <p>Wearing Coat: Minimum consumption of 0.17 kg/ft² (1.8 kg/m²)</p> <p>Curing: ALT RS291 Textured Finish is rainproof after approximately 20-minutes and can be walked-on in approximately 45-minutes.</p>
<p>Surfacing Option 3: (5-year warranty) ALT Finish + Aggregate + ALT Finish topcoat</p>	<p>Surfacing option 3 uses medium grain aggregates to create a more readily cleaned standard-duty slip-resistant wearing surface. A combination of colored aggregates or a pigmented finish may be used to create a variety of aesthetic treatments. Apply an even topcoat of ALT Finish 288 pigmented finish using a lambswool roller. Broadcast quartz aggregate into the wet resin to excess for full coverage.</p> <p>Aggregate Bedding Layer: Minimum consumption of 0.056 kg/ft² (0.60 kg/m²). Quartz Aggregate: Approximate consumption of 0.46 kg/ft² (5.0 kg/m²) or 1.0 lbs/ft² Medium Aggregate Sizes: Colored Quartz: 0.3 – 0.8mm* *Use ALT Finish 220 Clear. Crystal Quartz: 0.4 - 0.8mm</p> <p><u>Finish:</u> Apply proprietary aesthetic surface topcoat. Apply an even topcoat of ALT Finish 288 pigmented or ALT Finish 220 Clear using a hard rubber squeegee and lambswool roller at a minimum consumption of 0.046 kg/ft² (0.50 kg/m²). Prior to applying finish, remove excess aggregate from surface by broom, vacuum or oil-free blower.</p> <p>Curing: ALT Finish is rainproof after approximately 30-minutes, and can be walked-on in approximately 2-hours. ALT Finish should be applied within 12-hours of the ALT RS337 Mortar application.</p>

<p>Surfacing Option 4: (10-year warranty) ALT RS337+Aggregate+ ALT Finish Topcoat</p>	<p>Surfacing option 4 uses coarse grain aggregates to create a highly slip-resistant general-duty wearing surface. A combination of colored aggregates or a pigmented finish may be used to create a variety of aesthetic treatments. With surfacing option 3, the surfacing aggregate is broadcast to excess for full coverage directly into the ALT RS337 Mortar while wet.</p> <p>Quartz Aggregate: Approximate consumption of 0.46 kg/ft² (5.0 kg/m²) or 1.0 lbs/ft²</p> <p>Coarse Aggregate Sizes: Colored Quartz: 0.7 – 1.2mm * *Use ALT Finish 220 Clear. Crystal Quartz: 0.7 – 1.2mm Basalt: 0.5 - 1.2mm</p> <p>Curing: ALT RS337 Mortar is rainproof after approximately 30-minutes, and can be walked-on and finish coated in approximately 1-hour. Prior to applying finish, remove excess aggregate from surface by broom, vacuum or oil-free blower.</p> <p><u>Finish:</u> Apply proprietary aesthetic surface topcoat. Apply an even topcoat of ALT Finish 288 pigmented or ALT Finish 220 Clear resin using a hard rubber squeegee and lambswool roller at a minimum consumption of 0.07 kg/ft² (0.8 kg/m²).</p> <p>Curing: ALT Finish is rainproof after approximately 30-minutes, and can be walked-on in approximately 2-hours. ALT Finish should be applied within 12-hours of the ALT RS337 Mortar application.</p>
<p>Surfacing Option 5: (12-year warranty) ALT RS337+ALT R268+ ALT Finish Topcoat</p>	<p>Surfacing option 5 uses a combination ALT R268 Textured Coating and pigmented finish to create a slip-resistant extra-duty wearing surface. Apply an even layer of ALT R268 Textured Coating using a trowel. Back roll the wet resin using a clean ALT roller pre-wetted with ALT R268 Textured Coating for added texture.</p> <p>Wearing Coat: Minimum consumption of 0.33 kg/ft² (3.5 kg/m²)</p> <p>Curing: ALT R268 Textured Coating is rainproof and can be walked-on in approximately 15-minutes and can bear vehicular traffic in approximately 45-minutes.</p> <p><u>Finish: (Optional)</u> Where required, apply proprietary aesthetic surface topcoat. Apply an even topcoat of ALT Finish 288 resin using a hard rubber squeegee and lambswool roller at a minimum consumption of 0.046 kg/ft² (0.50 kg/m²).</p> <p>Curing: ALT Finish is rainproof after approximately 30-minutes, and can be walked-on in approximately 2-hours. ALT Finish should be applied within 12-hours of the ALT R268 Textured Coating application.</p>
<p>Staging:</p>	<p>In a normal ALT R230 membrane application, flashings are installed first, followed by the application of the deck waterproofing, surfacing, aggregate and seal-coats.</p> <p>Work Interruptions: If work is interrupted for more than 12-hours, use ALT Activator to reactivate the transition area. ALT Activator should be allowed a minimum of 20-minutes evaporation time after application, and over-coated within 60-minutes of application. Re-apply ALT Activator as required to assure proper reactivation of transition areas.</p> <p>Tie-ins: For all tie-in locations, provide a minimum overlap of 4 inches (10 cm), reinforcing fabric and resin.</p>

Water Testing:	Prior to applying wearing layer, slip-resistant surfacing and finish topcoat, flood test all horizontal applications with a minimum 2” (51 mm) head of water for 48-hours. Mark any leaks and repair when the membrane is dry. Before flood testing, be sure the structure will withstand the dead load of the water. For well-sloped decks, segment the flood test to avoid deep water near drains. Conduct the flood test after completing the ALT R230 membrane waterproofing application. Immediately after the flood test and all necessary repairs are made apply surfacing and finish.
Protection:	Upon completion of new work (including all associated work), institute appropriate procedures for surveillance and protection of finished work during remainder of construction period. Protect all areas where membrane has been installed.

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