

ALT R230 Membrane BUR Roof Recovery Specification (insulated)



Technical Data Sheet

PART 1 GENERAL

System:	New cold liquid-applied reinforced roof membrane and optional light roof traffic surfacing system, including all other ancillary roof work but not limited to installation of roof drain, penetration and perimeter flashings, sealants and metal work as specified. This specification is recommended for roofing applications with limited access. For projects intended with regular roof traffic, see <i>ALT R230 Membrane Roofing & Walk-able Surfacing</i> specification.
Weather Restrictions:	Do not apply membrane during or with the threat of inclement weather. Application of cold liquid-applied reinforced membrane may proceed while air temperature is between 37° F (3° C) and 95° F (35° C) for ALT primers and finish 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.
Roofing Warranty:	Manufacturer's Warranty: Provide 20-year standard manufacturer's warranty under provisions of this section.

PART 2 PRODUCTS

Membrane:	Cold liquid-applied reinforced membrane with non-woven reinforcing fabric, for a finished dry film membrane thickness of .080 inch nominal per ply; slip-resistant aggregate and colored topcoat finish 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 and surfacing system.
Flashing:	Cold liquid-applied membrane with a non-woven reinforcing fabric, for a finished dry film membrane thickness of .080 inch nominal per ply; integral color finish 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.
Insulation:	<p>Insulation may be installed as a separation layer over the existing substrate and/or to obtain the desired thermal value as follows:</p> <p>Foam Roof Insulation: Minimum 1" thick closed-cell polyisocyanurate foam core integrally laminated to heavy non-asphaltic fiber-reinforced felt facers; complying with ASTM C 1289, Type II, Class 1, Grade 2; with minimum compressive strength of 20 psi, nominal 2.0 pcf density; using non-HCFC hydrocarbon blowing agents.</p> <p>Cover Board Insulation: Provide appropriate cover board insulation over rigid foam board insulation where required, and when hot mopping base sheet in asphalt adhesive. Cover board insulation may be a minimum ½" thick fiberboard, 4' x 4' maximum board dimension, complying with ASTM C208, C209 & C165 with 45 psi compressive strength; or other acceptable roof cover board as recommended and/or approved on a case-by-case basis by Membrane Manufacturer.</p>

Overlay Board:	Cementitious sheathing, ASTM C79; 1/2 inch thick minimum; moisture resistant, fire rated USG Securock barrier board, cement board or approved equal applied over roof insulation to provide a rigid monolithic substrate for application of the roofing membrane.
Insulation & Overlay Board Attachment:	<p>Insulation and overlay board may be attached using mechanical fasteners, adhesive or a combination of fasteners and adhesive in accordance with the Membrane Manufacturer's recommendations and as follows:</p> <p>Mechanical Fasteners: Proprietary corrosion resistant insulation fasteners of appropriate length with plates, as supplied or recommended by the Membrane Manufacturer.</p> <p>Asphalt Adhesive: Asphalt cutback solvent type primer conforming to ASTM D-41 and steep roofing asphalt conforming to ASTM D-312, Type III; as recommended or approved by the Membrane Manufacturer.</p> <p>Polyurethane Adhesive: Single component, moisture-cured polyurethane roofing adhesive dispensed from a portable, pre-pressurized container requiring no external power source as supplied or recommended by the Membrane Manufacturer.</p>
Base Sheet: (Optional)	APP granulated cap sheet, SBS granulated cap sheet, SBS heavy base sheet; applied over BUR substrate when required prior to application of the liquid-applied roofing membrane.

PART 3 EXECUTION

Preparation:	<p>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. Some flashing surfaces may require scarifying, sandblasting or grinding to achieve a suitable substrate.</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 roofing applications. Determinations of bond strength and moisture content shall be performed periodically by the Contractor throughout the course of work.</p> <p>On gravel surfaced roofs, all loose gravel shall be removed by spudding and power vacuuming. Gravel shall be removed to and disposed of off-site in a legal manner at an appropriate facility.</p> <p>For all roofs, blisters and ridges must be cut and patched using roofing manufacturer's resin-mortar patching mix to provide a reasonably level substrate surface.</p> <p>Strip and remove all existing roof membrane and roof perimeter, base, curb, pipe, drain and penetration flashings. Prepare roof and flashing substrate as required for application of new cold liquid-applied membrane.</p>
Insulation & Overlay Board Installation:	<p>Install acceptable insulation and overlay board in accordance with insulation manufacturer's requirements. Install only as much insulation and overlay board as can be covered with roofing membrane and completed before the end of each day's work or before the onset of inclement weather.</p> <p>Joint Treatment: After coating the exposed top face of the overlay board with ALT Primer, fill all voids and fastener points with ALT R290 Paste and strip joints with 4 inch (10 cm) minimum wide strips of ALT R230 fleece reinforced membrane.</p>
Insulation & Overlay Board Attachment:	Insulation may be mechanically fastened using corrosion resistant insulation fasteners and plates, adhered using hot asphalt or cold polyurethane adhesive.

<p>Insulation & Overlay Board Attachment: (cont.)</p>	<p>Mechanical Attachment: Consult Membrane Manufacturer to obtain acceptable fastening patterns for the specified insulation, overlay board and substrate. Mechanically fasten through composite of insulation and overlay board with appropriate fastener, plate, deck penetration and pull-out value requirements.</p> <p>Polyurethane Adhesive: Consult Membrane Manufacturer for acceptable polyurethane adhesive (PU) manufacturers. PU adhesive shall be applied as recommended by the adhesive manufacturer and approved by Membrane Manufacturer.</p> <p>Hot Asphalt Adhesive: When approved by Membrane Manufacturer, set each layer of insulation board and overlay board in a full mopping of hot steep asphalt (Type III) at the recommended EVT range and at the rate of 25 lbs. per 100 square feet over the prepared and primed deck or vapor barrier (if applicable).</p>
<p>Base Sheet: (Optional)</p>	<p>Install base sheet in accordance with base sheet manufacturer's current published specifications and recommendations for use as a substrate for a cold liquid-applied membrane. Base sheet may be attached using mechanical fasteners, hot asphalt adhesive, or torch applied.</p> <p>Overlap Joints: Overlap side laps a minimum of 2" and end laps a minimum of 4", or as recommended by the base sheet manufacturer. All joints and overlaps are to be heat-sealed before end of each day's work.</p>
<p>Primer:</p>	<p>Prime all substrates as recommended or required by Membrane Manufacturer. Primer is required on asphalt, 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 with aesthetic and/or skid resistant surface topcoat in approximately 45-minutes.</p>

Water Testing:	Prior to applying aggregate finish and seal-coat, flood test all horizontal applications with a minimum 2” (51 mm) head of water for 24 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 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.

DISCLAIMER

NO WARRANTY, EXPRESS OR IMPLIED, IS MADE IN THIS DOCUMENT. THE PRODUCT IS NOT CLAIMED TO BE MERCHANTABILITY OR FIT FOR ANY PARTICULAR PURPOSE. User and certified ALT Global applicators determine suitability only. See individual ALT Global product data sheets, SDS sheets, guide specifications and details for complete information regarding the suitability, application and handling of ALT Global products.