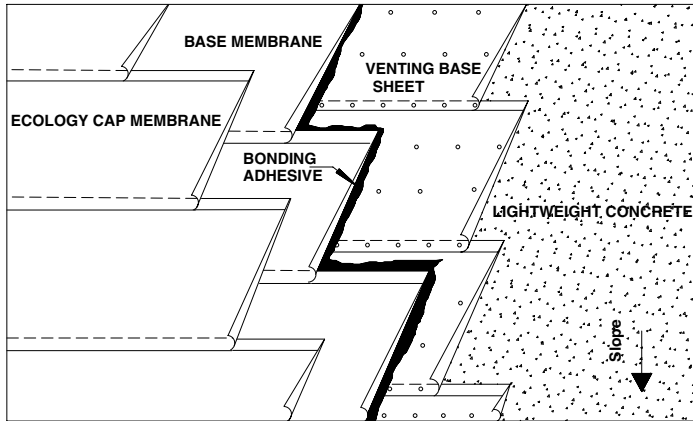


FOR APPLICATIONS OVER LIGHTWEIGHT DECKS



MATERIALS LIST AND MEMBRANE OPTIONS

Fasteners:

Use fasteners as shown in Ecology's General Design Recommendations for Lightweight Decks.

Bonding Bitumen For Base Plies:

- ERS- All Temp: Steep Grade (Type III) ASTM D-312-84 at a minimum 25 lbs. per 100 SF.
- ERS-All Temp: Special Steep Grade (Type IV) ASTM D-312-84 at 25 lbs. per 100 SF.
- ERS Hot Flex: Modified Mopping Asphalt at 25 lbs. per 100 SF.

Primer:

- ERS-301 Quick Dry Asphalt Primer at 125 - 150 SF. per gallon.

Ecology Base Membrane Options (Select 2 Plies):

- Asphalt Based: ERS-400, ERS-400-6, ERS-401, or ERS-403
- SBS Based: ERS-500, ERS-500-4, ERS-500-6 or ERS-500-6P
- SBS Torch Based: ERS-500-4T, ERS-500-6T or ERS-602

Ecology Cap Membrane Options:

- SBS/SEBS: ERS-602, ERS-603, ERS-604T, or ERS-703

Surfacing Options For Non-Granulated Sheets:

Ecology Coating	Membranes Accepted	Min. Coverage Rate
ERS-305:	All except ERS-600, ERS-602 & ERS-703	1-1/2 - 2 gal. per 100 SF.
ERS-308:	All except ERS-602 & ERS-703	1-1/2 - 2 gal. per 100 SF.
ERS-200:	All except ERS-703	3 gal. per 100 SF.
ERS-White Top:	All except ERS-600, ERS-602 & ERS-703	2 gal. per 100 SF.

Additional Surfacing Options For SBS:

- ERS All Temp: Hot Applied Asphalt at 60 - 70 lbs per 100 SF. with pea gravel embedded at the rate of approx. 400 lbs. per 100 SF.
- ERS Hot Flex: Hot Applied Rubberized Asphalt at 60 - 70 lbs per 100 SF. with pea gravel embedded at the rate of approx. 400 lbs. per 100 SF.
- ERS-302/ or 309: Cold Process Adhesive at 2 gallons per 100 SF. for mineral granules. At a minimum 5 gallons per 100 SF. for graveled surfaces.
- ERS Granules: Apply in wet adhesive to cover surface.
- Roofing Gravel: ASTM D1863 roofing aggregate at 400 lbs per 100 SF.

SPECIFICATION PROCEDURES

GENERAL:

This specification provides for the combined selection of two Ecology Base Ply Membranes and an Ecology Cap Membrane over lightweight deck systems. These specifications apply to positive slope roof systems with slopes up to 2", per published design specifications of Ecology Roof Systems®, the deck manufacturer, the fastener manufacturer, and the latest Factory Mutual guidelines. All rolls should be unrolled and relaxed prior to installation. The substrate must be repaired or replaced, where wet or damaged, if this specification is used for a replacement roof system.

BASE MEMBRANE (MINIMUM 2 PLIES):

Install the first layer of selected Ecology Base Membrane by means of mechanical fasteners in accordance with Ecology's approved procedures for lightweight decks. Begin by starting at the low point of the roof, with an 12" starter membrane layed up in shingle fashion perpendicular to the slope. Using minimum 2" side laps and 4" end laps, or as marked and required for selected membrane, continue installing full layers of membrane. Side laps shall be fastened at 9" intervals with two rows of fasteners set 12" in from the side laps at 18" intervals. Fasteners shall be staggered to prevent parallel patterns across the width of the sheet. Minimum total fasteners per 100 sq. ft. are 75, or in accordance with current FM Guidelines for the fastener used. All end laps should be staggered no less than 3' apart. *The first layer of base membrane shall not be ERS-400, 400-6, or 401.*

The second layer of base membrane shall be installed with hot mop or torch welding application depending on the type of membrane selected. Beginning at the low point, a 24" starter membrane should be installed, followed by full width layers applied in shingle fashion, perpendicular to the slope, using 2" side laps and 4" end laps, or as marked and required for selected membrane. All end laps shall be staggered no less than 3' apart.

CAP MEMBRANE:

Install the Ecology membrane with heat welded torch application beginning at the low point on the roof running parallel to the installed base membrane. Stagger the side and end laps of the cap membrane a minimum of 9" from the side and end laps of the base membrane. Heat should be applied to the full width of the roll until the modified bitumen has properly softened to provide adhesion to the substrate and provides a uniform flow of bitumen of about 1/4" around all seams. Unless otherwise marked, side laps on the Ecology membranes shall be a minimum of 4" and end laps a minimum of 8". For slopes of 1" - 2" per lineal foot, apply material parallel to the slope with head laps back-nailed 6" on center approximately 2" in from the edge. Stagger end laps a minimum of 36" from ends of the previous roll. Follow Ecology's published installation procedures for more detailed instructions.

SURFACING:

All smooth surface membranes must receive surface protection. Factory finished mineral and metal surface membranes do not require any additional protection, but mineral surfaces can be coated, if desired, using higher coverage rates for the rougher membrane surface. Smooth surface APP membranes should be coated with one of Ecology's reflective coatings. Application can be done, after the installation has weathered for 30 days, by roller, soft bristle brush or airless spray at the nominal rate of 1 - 2 gallons per 100 sq. ft. per coat depending on the coating selected. Follow application procedures outlined by Ecology Roof Systems® regarding preparation and dry time required.

Smooth surfaced SBS membranes, after a 30 day curing process, may be coated with one of the Ecology reflective coatings or can be surfaced with one of Ecology's hot applied asphalt blends with graded roofing aggregate embedded. The membranes may also be surfaced with an Ecology cold process adhesive with mineral granules embedded to cover the adhesive.

