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EVALUATION REPORT

Tarco RoofingOne Information Way, Suite 225
Little Rock, AR 72202

Evaluation Report 10880.07.08-R6

FL10450-R6

Date of Issuance: 07/11/2008

Revision 6: 07/02/2015

SCOPE:

This Evaluation Report is issued under Rule 61G20-3 and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code and Florida Building Code, Residential Volume. The products described herein have been evaluated for compliance with the 5th Edition (2014) Florida Building Code sections noted herein.

DESCRIPTION: Tarco Roof Underlayments

LABELING: Labeling shall be in accordance with the requirements the Accredited Quality Assurance Agency noted herein.

CONTINUED COMPLIANCE: This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance documentation changes, or provisions of the Code that relate to the product change. Acceptance of this Evaluation Report by the named client constitutes agreement to notify Robert Nieminen, P.E. if the product changes or the referenced Quality Assurance documentation changes. Trinity|ERD requires a complete review of this Evaluation Report relative to updated Code requirements with each Code Cycle.

ADVERTISEMENT: The Evaluation Report number preceded by the words "Trinity|ERD Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

INSPECTION: Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 8.

Prepared by:

Robert J.M. Nieminen, P.E.

Florida Registration No. 59166, Florida DCA ANE1983



The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 07/02/2015. This does not serve as an electronically signed document. Signed, sealed hardcopies have been transmitted to the Product Aboroval Administrator and to the named client

CERTIFICATION OF INDEPENDENCE:

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- 2. Trinity | ERD is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
- 3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the evaluation reports are being issued.
- 4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
- 5. This is a building code evaluation. Neither Trinity|ERD nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.



ROOFING COMPONENT EVALUATION:

1. SCOPE:

Product Category: Roofing
Sub-Category: Underlayment

Compliance Statement: Roof Underlayments, as produced by Tarco, have demonstrated compliance with the following sections of the Florida Building Code through testing in accordance with the following Standards. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

2. STANDARDS:

Section	<u>Property</u>	<u>Standard</u>	<u>Year</u>
1504.3.1	Wind Uplift	FM 4474	2004
1507.2.3, 1507.3.3, 1507.5.3, 1507.7.3,	Physical Properties	ASTM D226	2006
1507.8.3, 1507.9.3			
1507.2.3, 1507.2.8, 1507.4.5.1,	Physical Properties	ASTM D4869	2005
1507.4.5.2, 1507.5.3, 1507.5.3.2,			
1507.7.3, 1507.7.3.2, 1507.8.3,			
1507.8.3.2, 1507.9.3, 1507.9.3.2			
1507.2.4, 1507.2.9.2, 1507.5.3, 1507.7.3	Physical Properties	ASTM D1970	2009
1507.2.9.2	Physical Properties	ASTM D3909	1997
1507.2.9.2, 1507.3.3	Physical Properties	ASTM D6380	2003
1507.3.3	Installation Practice	FRSA/TRI April 2012 (04-12)	2012
1507.11.2	Physical Properties	ASTM D6164	2005
1523.6.5.2.1	Physical Properties	TAS 103	1995

3. REFERENCES:

<u>Entity</u>	<u>Examination</u>	<u>Reference</u>	<u>Date</u>
ERD (TST6049)	ASTM D6164	T6470.08.07-R1	08/30/2007
ERD (TST6049)	FM 4474	T6460.06.07-R1	10/09/2007
ERD (TST6049)	ASTM D1970	T30160.08.09	08/14/2009
ERD (TST6049)	TAS 103	T33190.08.10	08/06/2010
ERD (TST6049)	ASTM D1970	T32530.08.10	08/17/2010
ERD (TST6049)	FM 4474	T37610.07.11	06/29/2011
ERD (TST6049)	ASTM D3909	T40780.04.12	04/06/2012
ERD (TST6049)	ASTM D6380	T40790.04.12	04/06/2012
ERD (TST6049)	TAS 103	T35410.04.12	04/18/2012
ERD (TST6049)	ASTM D1970	T45250.04.13-R2	04/23/2013
ERD (TST6049)	Physical Properties	T43930.09.13-R2	09/11/2013
ERD (TST6049)	Physical Properties	TAR-SC9480.15	07/02/2015
PRI (TST5878)	ASTM D1970	BRY-018-02-01	08/11/2003
PRI (TST5878)	ASTM D1970	BRY-017-02-01	08/11/2003
PRI (TST5878)	ASTM D226	TOT-014-02-02	05/18/2004
PRI (TST5878)	ASTM D226	TOT-015-02-02	05/24/2004
PRI (TST5878)	ASTM D6380	TOT-029-02-01	07/05/2005
PRI (TST5878)	ASTM D4869	TOT-009-02-01	09/14/2004
PRI (TST5878)	ASTM D4869	TOT-009-02-02	09/14/2004
PRI (TST5878)	ASTM D226	TOT-041-02-01	05/24/2006
Miami-Dade (CER1592)	FBC HVHZ Certification	12-0420.02	10/03/2013
UL, LLC. (QUA9625)	Quality Assurance	Service Confirmation	Exp. 10/13/2017

4. PRODUCT DESCRIPTION:

4.1 Self-Adhering Underlayments:

- 4.1.1 **LeakBarrier** Fast90 Self-adhering Tile Underlayment is an asphalt-saturated organic felt coated on both sides with asphalt and surfaced on the top side with mineral granules and on the underside with a self-adhering compound and release film.
- 4.1.2 **LeakBarrier** MS300 Ice and Water Armor is a self-adhering, glass mat reinforced, mineral surfaced, SBS modified roof underlayment.
- 4.1.3 **LeakBarrier PS200 HT Ice and Water Armor** is a self-adhering, glass mat reinforced, fabric surfaced, SBS modified roof underlayment.

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- 4.1.4 **LeakBarrier PS200 MU Ice and Water Armor** is a self-adhering, glass mat reinforced, smooth poly film surfaced, SBS modified roof underlayment.
- 4.1.5 **LeakBarrier** NR500 HT is a self-adhering, plastic film surfaced, modified underlayment.
- 4.1.6 **LeakBarrier** SS400 Ice and Water Armor is a self-adhering, fiberglass reinforced, smooth surfaced modified underlayment.
- 4.2 <u>Mechanically Fastened Underlayments:</u>
- 4.2.1 **Tarco 15** is an ASTM D226 Type I, 15 lb asphalt-saturated organic felt
- 4.2.2 Tarco 30 is an ASTM D226 Type II, 30 lb asphalt-saturated organic felt
- 4.2.3 Tarco NO 30 is an ASTM D4869 Type II asphalt-saturated organic felt
- 4.2.4 **LeakBarrier EasyLay** is an asphalt-coated polyester fabric roof underlayment.
- 4.3 Mechanically Fastened and/or Bonded Underlayments:
- 4.3.1 **Fiberglass Mineral Surfaced Roll Roofing** is an ASTM D3909, glass-fiber-reinforced, asphalt-coated, granule surfaced underlayment used as a valley liner.
- 4.3.2 **ASTM Organic Mineral Surface Tile Underlayment** is an ASTM D6380, Class M asphalt-saturated organic roll roofing sheet.
- 4.3.3 **LeakBarrier** EasyMop™ SBS is a polyester reinforced, SBS modified bitumen roofing underlayment.

5. LIMITATIONS:

- 5.1 This is a building code evaluation. Neither Trinity|ERD nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.
- 5.2 This Evaluation Report is not for use in the HVHZ.
- 5.3 Fire Classification is not part of this Laboratory Report; refer to current Approved Roofing Materials Directory for fire ratings of this product.
- Tarco Roof Underlayments may be used with any prepared roof cover where the product is specifically referenced within FBC approval documents. If not listed, a request may be made to the AHJ for approval based on this evaluation combined with supporting data for the prepared roof covering.
- 5.5 Allowable roof covers applied atop Tarco underlayments are follows:

TABLE 1: ROOF COVER OPTIONS						
Underlayment	Asphalt Shingles	Nail-On Tile	Foam-On Tile	Metal	Wood Shakes & Shingles	Slate
LeakBarrier Fast90	Yes	Yes	Yes See 5.5.2	No	Yes	Yes
LeakBarrier MS300	Yes	No	No	No	Yes	Yes
LeakBarrier PS200 ^{HT}	Yes	Yes	Yes See 5.5.2	Yes	Yes	Yes
LeakBarrier PS200 ^{MU}	Yes	No	No	Yes	Yes	Yes
LeakBarrier NR500	Yes	No	No	Yes (No copper or zinc)	Yes	Yes
LeakBarrier SS400	Yes	No	No	No	Yes	Yes
LeakBarrier EasyLay	Yes	Yes (as base layer in 2- ply system)	Yes (as base layer in 2- ply system)	Yes	Yes	Yes
Tarco 15	Yes	No	No	Yes	Yes	No
Tarco 30	Yes	Yes (as base layer in 2- ply system)	Yes (as base layer in 2- ply system)	Yes	Yes	Yes
Tarco NO 30	Yes (double layer)	No	No	Yes (double layer)	Yes (double layer)	Yes (double layer)
Fiberglass Mineral Surfaced Roll Roofing	Yes Valley Liner per 1507.2.9.2 (2)	No	No	No	No	No
ASTM Organic Mineral Surface Tile Underlayment	Yes	Yes	Yes See 5.5.2	No	Yes	Yes



Table 1: Roof Cover Options						
Underlayment	Asphalt Shingles	Nail-On Tile	Foam-On Tile	Metal	Wood Shakes & Shingles	Slate
LeakBarrier EasyMop SBS	Yes	Yes	Yes See 5.5.2	No	Yes	Yes

- 5.5.1 Tarco 15, Tarco 30, Tarco NO 30 and EasyLay may be used as a mechanically attached base layer followed by a LeakBarrier self-adhering top layer or asphalt-applied ASTM Organic Mineral Surface Tile Underlayment or LeakBarrier EasyMop SBS with allowable roof covers noted above for the respective top layer underlayments.
- 5.5.2 "Foam-On Tile" is limited to use of 3M 2-Component Foam Roof Tile Adhesive AH-160 (FL6332) applications unless tensile adhesion / long term aging data from an accredited testing laboratory is provided.
- 5.6 Allowable Substrates:
- 5.6.1 LeakBarrier self-adhering direct-bond to deck:
 - New untreated plywood (unprimed or primed with ASTM D41 primer);
 - > Existing plywood (unprimed or primed with ASTM D41 primer);
 - > Structural concrete (unprimed or primed with ASTM D41 primer).

LeakBarrier PS200^{HT} self-adhering direct-bond to deck:

- > New untreated plywood (unprimed or primed with ASTM D41 primer);
- Existing plywood (unprimed or primed with ASTM D41 primer);
- New or existing OSB (unprimed or primed with ASTM D41 primer);
- Structural concrete (unprimed or primed with ASTM D41 primer).

Note: Tarco does not require priming of new or existing plywood or OSB sheathing. New or existing plywood or OSB sheathing should be cleaned of all dirt and debris prior to application of LeakBarrier membranes.

ASTM Organic Mineral Surface Tile Underlayment or LeakBarrier EasyMop SBS Direct-Bond to Deck:

- ASTM D41 primed structural concrete.
- 5.6.2 <u>Wind Resistance for Underlayment Systems in Foam-On Tile Applications:</u> FRSA/TRI April 2012 (04-12) does not address wind uplift resistance of all underlayment systems beneath foam-on tile systems, where the underlayment forms part of the load-path. The following wind uplift limitations apply to underlayment systems that are not addressed in FRSA/TRI April 2012 (04-12) and are used in foam-on tile applications. Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per FBC 1504.9 has already been applied). Refer to FBC 1609 for determination of design wind loads.
- 5.6.2.1 Maximum Design Pressure = -217.5 psf.

Deck: Structural concrete to meet project requirements to satisfaction of AHJ.

Primer: (Optional) ASTM D41

Underlayment: LeakBarrier PS200^{HT}, self-adhered.

5.6.2.2 Maximum Design Pressure = -75.0 psf.

Deck: Min. 19/32-inch plywood to meet project requirements to satisfaction of AHJ

Primer: (Optional) ASTM D41

Underlayment: LeakBarrier PS200^{HT}, self-adhered.

- 5.6.2.3 All other direct-deck, adhered Tarco underlayment systems beneath foam-on tile systems carry a Maximum Design Pressure of -45 psf.
- 5.6.3 <u>Bond to Mechanically Attached Base Sheet:</u>

LeakBarrier self-adhered to:

- > ASTM D226, Type I or II felt;
- ASTM D4869 felt;
- LeakBarrier EasyLay.

ASTM Organic Mineral Surface Tile Underlayment or LeakBarrier EasyMop SBS in hot asphalt to:

- ASTM D226, Type I or II felt;
- > ASTM D4601, Type II base sheet.

For installations under mechanically attached prepared roof coverings, base layer shall be attached per minimum codified requirements. For installations under foam-on tile systems, base layer shall be attached per minimum requirements of FRSA/TRI April 2012 (04-12).



- 5.6.4 <u>LeakBarrier Self-Adhering Bond to Other Substrate Types</u>:
 - > ASTM D41 primed metal (flashing metal, valley metal, etc.)
- 5.7 <u>Exposure Limitations</u>:
- 5.7.1 LeakBarrier EasyLay, FAST 90, ASTM Organic Mineral Surface Tile Underlayment and LeakBarrier EasyMop SBS shall not be left exposed for longer than 180-days after installation.
- 5.7.2 LeakBarrier PS200^{HT} shall not be left exposed for longer than 120-days after installation.
- 5.7.3 LeakBarrier MS300, NR500^{HT}, PS200^{MU} or SS400 shall not be left exposed for longer than 30-days after installation.
- 5.7.4 Tarco 15, Tarco 30 and Tarco NO 30 shall be covered as soon as possible after installation; exposure for more than 24 hours after installation could adversely affect performance.

6. INSTALLATION:

- 6.1 Tarco Roof Underlayments shall be installed in accordance with Tarco published installation requirements subject to the Limitations set forth in Section 5 herein and the specifics noted below.
- Re-fasten any loose decking panels, and check for protruding nail heads. Sweep the substrate thoroughly to remove any dust and debris prior to application, and primed the substrate (if applicable).

6.3 LeakBarrier® Fast90® Self-Adhering Tile Underlayment:

6.3.1 EasyLay shall be installed in compliance with the requirements for 90# felt underlayment (except the product is self-adhered) in FBC Sections 1507 for the type of prepared roof covering to be installed.

6.3.2 <u>Non-Tile Applications</u>:

Cut the Fast90 roll into 12' to 16' sections for workability and allow to relax prior to application.

Chalk a plumb line 36" from all outside perimeters; then chalk plumb lines 32" apart, upslope to the ridge line.

Membrane Application:

- Place a full width piece of Fast90 on the prepared substrate, parallel to the eave edge of the roof, with the selvedge edge positioned upslope and in-line with the 1st chalk line.
- > Fold back half the sheet and remove the exposed release film, taking care not to displace the membrane
- > Working from the centerline out, roll the membrane onto the substrate, taking care to avoid wrinkles and ridges, and repeat for the other half of the sheet.
- > Remove selvage release film, if present, and install capped or tin tagged nails 6" o.c. in the center of the selvedge edge.
- Install the subsequent sheets in the same manner, with upslope selvedge edges in-line with chalk lines, with 4" side laps and 8" end laps.
- > Seal all 8" end laps 1/16" thick application of asphalt plastic cement and stagger all end laps minimum 36".
- > Roll the entire surface with a weighted roller, paying particular attention to side laps, end laps and eave / rake areas to ensure a complete bond.

6.3.4 <u>Tile Applications:</u>

Reference is made to FRSA/TRI April 2012 (04-12) Installation Manual and Table 1 herein, using the instructions noted above as a guideline.

Wait a minimum of 24 hours prior to loading roof tiles.

All tiles shall be staged four tiles perpendicular to slope, six tiles on top, parallel to slope; not to exceed 10 tiles total to a maximum roof pitch of 5:12 for flat tiles and 6:12 for lugged tiles. If tiles are to be left in a staged condition for more than 30 days, tiles shall be staged two tiles perpendicular to slope, four tiles on top, parallel to slope; not to exceed 6 tiles total to a maximum roof pitch of 5:12 for flat tiles and 6:12 for lugged tiles.

At roof pitch in excess of those noted above, the tiles shall be staged behind a nominal 1 x 2 horizontal batten.



6.4 LeakBarrier® MS300, PS200^{HT}, PS200^{MU}, NR500^{HT} or SS400 Ice and Water Armor:

6.4.1 MS 300, PS200^{HT}, PS200^{MU}, NR500^{HT} or SS400 shall be installed in compliance with the requirements for ASTM D1970 underlayment in FBC Sections 1507 for the type of prepared roof covering to be installed.

6.4.2 <u>Non-Tile Applications</u>:

Cut MS 300, PS200 ^{HT}, PS200 ^{MU}, NR500 ^{HT} or SS400 to manageable sections and allow to relax prior to application.

Membrane Application:

- > Place a full width piece on the prepared substrate, aligned parallel to the eave edge and extend approximately 3/8" over the eave and rake with the selvedge edge positioned upslope.
- ➤ Fold back the upslope half of the sheet and remove the exposed release film, taking care not to displace the membrane
- > Working from the centerline out, roll the membrane onto the substrate, taking care to avoid wrinkles and ridges
- Apply a 1/16" thick layer of asphalt plastic cement over the eave and rake metal, extending 2" to 3" onto the deck surface
- Fold back the downslope half of the sheet, remove the release film and roll the membrane onto the substrate from the centerline out.
- > Seal all 6" end laps with a 1/16" thick application of asphalt plastic cement and stagger all end laps minimum 36".
- > Remove selvage release film, if present, and install second and subsequent courses in a similar manner.
- Install capped or tin-tagged nails 6" o.c. along the centerline of the laps.
- > At all T-joints, where an end-lap and the next overlapping course intersect, apply a bead of roofing laps cement before the overlapping course is laid.
- Roll the entire surface with a weighted roller, paying particular attention to side laps, end laps and eave / rake areas to ensure a complete bond.

6.4.3 <u>Tile Applications (PS200^{HT} only):</u>

Reference is made to FRSA/TRI April 2012 (04-12) Installation Manual and Table 1 herein, using the instructions noted above as a guideline.

Wait a minimum of 24 hours prior to loading roof tiles.

All tiles shall be staged four tiles perpendicular to slope, six tiles on top, parallel to slope; not to exceed 10 tiles total to a maximum roof pitch of 5:12 for flat tiles and 6:12 for lugged tiles. If tiles are to be left in a staged condition for more than 30 days, tiles shall be staged two tiles perpendicular to slope, four tiles on top, parallel to slope; not to exceed 6 tiles total to a maximum roof pitch of 5:12 for flat tiles and 6:12 for lugged tiles.

At roof pitch in excess of those noted above, the tiles shall be staged behind a nominal 1 x 2 horizontal batten.

6.4.4 Two (2) Ply Underlayment Systems:

LeakBarrier® SS400 Ice and Water Armor followed by LeakBarrier® SS400 Ice and Water Armor (direct-to-deck per 5.6.1 or over mechanically attached base sheet per 5.6.3) is allowable for use under <u>mechanically attached</u> prepared roof systems. Limits of use are those associated with the top-layer material. This is not a requirement, but is allowable if a 2-ply underlayment system is desired.

6.5 Tarco 15 and 30:

6.5.1 Tarco 15 and 30 shall be installed in compliance with the requirements for ASTM D226, Type I and II underlayments, respectively, in FBC Sections 1507 for the type of prepared roof covering to be installed.

6.5.2 Non-Tile Applications:

Reference is made to the current edition of the NRCA Steep-slope Roofing Manual.

6.5.3 <u>Tile Applications, base layer in 2-ply system (Tarco 30 only):</u>

Reference is made to FRSA/TRI April 2012 (04-12) Installation Manual and Table 1 herein.

6.6 Tarco NO 30:

6.6.1 Tarco NO 30 shall be installed in compliance with the requirements for ASTM D4869, Type II underlayment in FBC Sections 1507 for the type of prepared roof covering to be installed; 1507.4.5.2 (1), 1507.5.3.2 (1), 1507.7.3.2 (1), 1507.8.3.2 (1) or 1507.9.3.2 (1).

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6.7 LeakBarrier EasyLay:

- 6.7.1 EasyLay shall be installed in compliance with the requirements for ASTM D226, Type I or II underlayment in FBC Sections 1507 for the type of prepared roof covering to be installed.
- 6.7.2 Re-fasten any loose decking panels, and check for protruding nail heads. Sweep the substrate thoroughly to remove any dust and debris prior to application.

6.7.3 Non-Tile Applications:

Place a full width section of EasyLay, parallel to the eave edge of the roof and unroll 2 to 3 feet with the lay lines facing up, and position to the edge of the eave and rake. Install a few fasteners at the top, near the rake, and roll out the sheet to a manageable length. Pull, straighten and align the sheet so that any wrinkles are eliminated and the sheet is even with the eave edge. Fasten with 3/8" headed roofing nails or 1" capped (plastic or metal) nails, driven by hand or pneumatically, spaced 6" o.c. at all laps in the center of the seam area, and two staggered rows fastened 12" o.c. in the field of the sheet. Install nails such that the head of the nail is flush with the surface, without cutting into the surface. Fasten from the top to avoid walking or kneeling on unsecured sheet. Continue to the end of the substrate and fasten down. Align the next roll over the preceding sheet so as to form a minimum 4", water-shedding lap, and install per instructions above. Apply subsequent sheets in the same manner, with minimum 4" water-shedding laps and minimum 8" end-laps, which are staggered minimum 36" fro the preceding course.

For double layer applications, follow the instructions noted above, but using a minimum 19", water-shedding side lap. Allow for minimum 6" up the vertical transitions and minimum 6" over hips and ridges.

At valleys, first install a vertical length of EasyLay down the center of the valley, then start at the low point and work to the high point, rolling the membrane from the center outward in each direction, ensuring no wrinkles or tears. Covered with valley-metal or other valley lining material in accordance with NRCA recommendations.

Apply a thin coat of asphalt plastic cement to waterproof areas where any cuts or tears have occurred. Seams or joints that require adhesive or sealant can be treated with high quality plastic cement (asbestos free).

6.7.4 <u>Tile Applications, base layer in 2-ply system:</u>

Reference is made to FRSA/TRI April 2012 (04-12) Installation Manual and Table 1 herein.

6.8 ASTM Organic Mineral Surface Tile Underlayment:

6.8.1 Shall be installed in compliance with the requirements for ASTM D6380, Class M sheets in FBC Sections 1507 for the type of prepared roof covering to be installed.

6.8.2 Non-Tile Applications:

Reference is made to the current edition of the NRCA Steep-slope Roofing Manual and ARMA recommendations for installing shingle underlayments and flashings.

6.8.3 <u>Tile Applications:</u>

Reference is made to FRSA/TRI April 2012 (04-12) Installation Manual and Table 1 herein. Tile shall be loaded and staged in a manner that prevents tile slippage and/or damage to the underlayment.

6.9 LeakBarrier™ EasyMop SBS:

6.9.1 Shall be installed in compliance with current Tarco published installation requirements, subject to the limitations herein.

6.9.2 Non-Tile Applications:

For mechanically attached applications: Secure LeakBarrier EasyMop SBS using 3/8-inch headed roofing nails or 1-inch diameter cap-nails spaced 9-inch o.c. within the 4-inch wide side laps and 12-inch o.c. in two (2) equally spaced, staggered center rows in the center of the sheet. End-laps shall be minimum 6-inch wide, and offset end-laps minimum 3-feet from course to course. Seal end laps in accordance with Tarco requirements.

For bonded applications: Fully adhere LeakBarrier EasyMop SBS in hot-asphalt to the substrates noted in Section 5.5. Side laps shall be minimum 4-inch and end-laps minimum 6-inch wide, and offset end-laps minimum 3-feet from course to course. Side and end-laps shall be fully adhered in a complete mopping of hot asphalt with asphalt extending approximately 3/8-inch beyond the lap edge. Consult Tarco instructions regarding back-nailing requirements.



6.9.3 <u>Tile Applications:</u>

Refer to FRSA/TRI April 2012 (04-12) Installation Manual and Table 1 herein. Tile shall be loaded and staged in a manner that prevents tile slippage and/or damage to the underlayment.

7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction in order to properly evaluate the installation of this product.

8. MANUFACTURING PLANTS:

Contact the noted QA agency for information on product locations covered for F.A.C. Rule 61G20-3 QA requirements

9. QUALITY ASSURANCE ENTITY:

UL, LLC. - QUA9625; (847) 664-3281

- END OF EVALUATION REPORT -