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ENGINEER EVALUATE TEST CONSULT CERTIFY

EVALUATION REPORT

Tarco Roofing
One Information Way, Suite 225
Little Rock, AR 72202
(254) 913-7750

Evaluation Report 10880.07.08-R11
FL10450-R11
Date of Issuance: 07/11/2008
Revision 11: 09/25/2019

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 **6th Edition (2017) 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. NEMO ETC, LLC 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 "NEMO ETC, LLC 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 10.

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 09/25/2019. This does not serve as an electronically signed document.

CERTIFICATION OF INDEPENDENCE:

1. NEMO ETC, LLC does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. NEMO ETC, LLC 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 NEMO ETC, LLC 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: **Tarco Roof Underlayments**, as produced by **Tarco Roofing**, have demonstrated compliance with the following sections of the **6th Edition (2017) 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	Property	Standard	Year
1504.3.1	Wind Uplift	FM 4474	2011
1507.1.1, T1507.1.1	Physical Properties	ASTM D226	2009
1507.1.1, T1507.1.1	Physical Properties	ASTM D4869	2016
1507.1.1, T1507.1.1, 1507.2.9.2	Physical Properties	ASTM D1970	2015
1507.2.9.2	Physical Properties	ASTM D3909	2012
1507.2.9.2, FRSA/TRI April 2012	Physical Properties	ASTM D6380	2013
1507.3.3	Physical Properties	FRSA/TRI April 2012 (04-12)	2012
FRSA/TRI April 2012	Physical Properties	ASTM D6164	2011
TAS 110	Accelerated Weathering	ASTM D4798	2011

3. REFERENCES:

Entity	Examination	Reference	Date	Entity	Examination	Reference	Date
ERD (TST6049)	FRSA/TRI	T33190.08.10	08/06/2010	PRI (TST5878)	ASTM D1970	BRY-018-02-01	08/11/2003
ERD (TST6049)	ASTM D1970	T32530.08.10	08/17/2010	PRI (TST5878)	ASTM D1970	BRY-017-02-01	08/11/2003
ERD (TST6049)	FM 4474	T37610.07.11	06/29/2011	PRI (TST5878)	ASTM D226	TOT-014-02-02	05/18/2004
ERD (TST6049)	ASTM D3909	T40780.04.12	04/06/2012	PRI (TST5878)	ASTM D226	TOT-015-02-02	05/24/2004
ERD (TST6049)	ASTM D6380	T40790.04.12	04/06/2012	PRI (TST5878)	ASTM D4869	TOT-009-02-01	09/14/2004
ERD (TST6049)	ASTM D6164	T35410.04.12	04/18/2012	PRI (TST5878)	ASTM D4869	TOT-009-02-02	09/14/2004
ERD (TST6049)	ASTM D1970	T45250.04.13-R2	04/23/2013	PRI (TST5878)	ASTM D226	TOT-041-02-01	05/24/2006
ERD (TST6049)	FRSA/TRI	T43930.09.13-R2	09/11/2013	M-D (CER1592)	FBC HVHZ	16-1116.09	01/12/2017
ERD (TST6049)	D226 & D4869	SC4950.02.14-R2	06/25/2014	NEMO (TST6049)	FRSA/TRI	TAR-SC8020.06.18	06/05/2018
ERD (TST6049)	ASTM D1970	TAR-SC9480.15	07/02/2015	NEMO (TST6049)	Tensile adhesion	4S-TAR-18-002.07.18-1	07/20/2018
ERD (TST6049)	FM 4474	TAR-SC8020.14	12/03/2015	NEMO (TST6049)	FRSA/TRI	4S-TAR-18-002.07.18-2	07/20/2018
ERD (TST6049)	FM 4474	TAR-SC5670.03.16	03/21/2016	NEMO (TST6049)	ASTM D4798	4j-TAR-19-SSUDL.01.A	08/27/2019
ERD (TST6049)	FM 4474	T6460.06.07-R2	05/26/2017	Tarco Roofing	Adhesive comp	Affidavit	12/15/2015
ERD (TST6049)	ASTM D226	TAR-SC13965.02.17-R1	05/17/2017	UL, LLC. (QUA9625)	QA	Service Confirm (IND)	11/22/2016
ERD (TST6049)	FBC 1507.1.1	TAR-SC16115.17	10/02/2017	UL, LLC. (QUA9625)	QA	Service Confirm (PA)	06/28/2017
ERD (TST6049)	FRSA/TRI	TAR-SC16115.17	10/02/2017	UL, LLC. (QUA9625)	QA	Service Confirm (TX)	08/13/2018

4. PRODUCT DESCRIPTION:

	Product	Specification	Plant(s)	Description
4.1	LeakBarrier® MS300 Ice and Water Armor	ASTM D1970	Belton, TX Greencastle, PA	self-adhering, glass mat reinforced, mineral surfaced, SBS modified roof underlayment
4.2	LeakBarrier® PS200HT Ice and Water Armor	ASTM D1970 and FRSA/TRI April 2012 (04-12)	Belton, TX Greencastle, PA	self-adhering, glass mat reinforced, fabric surfaced, SBS modified roof underlayment

4. PRODUCT DESCRIPTION:

	Product	Specification	Plant(s)	Description
4.3	LeakBarrier® PS200MU Ice and Water Armor	ASTM D1970	Belton, TX Greencastle, PA	self-adhering, glass mat reinforced, smooth poly film surfaced, SBS modified roof underlayment
4.4	LeakBarrier® NR600 Ultra Ice and Water Armor	ASTM D1970 and FRSA/TRI April 2012 (04-12)	Greencastle, PA	self-adhering, polyester-fabric surfaced, SBS modified roof underlayment
4.5	LeakBarrier® SS400 Ice and Water Armor	ASTM D1970	Belton, TX Greencastle, PA	self-adhering, fiberglass reinforced, smooth surfaced modified underlayment
4.6	Tarco 15	ASTM D226, Type I	Belton, TX Greencastle, PA	asphalt-saturated organic felt
4.7	Tarco 30	ASTM D226, Type II	Belton, TX Greencastle, PA	asphalt-saturated organic felt
4.8	Tarco NO 30	ASTM D4869, Type II	Belton, TX Greencastle, PA	asphalt-saturated organic felt
4.9	LeakBarrier® EasyLay®	FBC 1507.1.1 & R905.1.1 (Exception)	Belton, TX Greencastle, PA	asphalt-coated polyester fabric roof underlayment
4.10	Fiberglass Mineral Surfaced Roll Roofing	ASTM D3909	Greencastle, PA	glass-fiber-reinforced, asphalt-coated, granule surfaced underlayment used as a valley liner
4.11	ASTM Organic Mineral Surface Tile Underlayment	ASTM D6380, Class M	Greencastle, PA	asphalt-saturated organic roll roofing sheet
4.12	LeakBarrier® EasyMop™ SBS	FRSA/TRI April 2012 (04-12)	Greencastle, PA	polyester reinforced, SBS modified bitumen roofing underlayment
4.13	LeakBarrier® EasyLay® UDL 15	FBC 1507.1.1 (Exception)	Gujarat, India	woven-polymeric scrim with a textured fabric on the top surface, for use as a base sheet in multi-ply underlayment systems
4.14	LeakBarrier® EasyLay® UDL Basic	FBC 1507.1.1 (Exception)	Gujarat, India	woven-polymeric scrim with a textured fabric on the top surface, for use as a base sheet in multi-ply underlayment systems
4.15	LeakBarrier® EasyLay® UDL 50	FBC 1507.1.1 (Exception)	Gujarat, India	woven-polymeric scrim with a non-woven fabric on the top surface and a rubberized polymeric coating on the back surface, for use as a base sheet in multi-ply underlayment systems

5. LIMITATIONS:

5.1 This is a building code evaluation. Neither NEMO ETC, LLC 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 FBC HVHZ jurisdictions.

5.3 Fire Classification is not part of this Evaluation Report; refer to current Approved Roofing Materials Directory for fire ratings of this product.

5.4 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 Authority Having Jurisdiction for approval based on this evaluation combined with supporting data for the prepared roof covering.

5.5 Allowable Roof Covers:

TABLE 1: ROOF COVER OPTIONS

Underlayment	Asphalt Shingles	Nail-On Tile	Foam-On Tile	Metal	Wood Shakes & Shingles	Slate
LeakBarrier MS300	Yes	No	No	No	Yes	Yes
LeakBarrier PS200^{HT}	Yes	Yes	Yes See 5.5.2	Yes (No copper or zinc)	Yes	Yes
LeakBarrier PS200^{MU}	Yes	No	No	Yes (No copper or zinc)	Yes	Yes
LeakBarrier NR600 Ultra	Yes	Yes	Yes See 5.5.2	Yes (No copper or zinc)	Yes	Yes
LeakBarrier SS400	Yes	No	No	No	Yes	Yes
LeakBarrier EasyLay	Yes	Yes (as base sheet in multi-ply system)	Yes (as base sheet in multi-ply system)	No	Yes	Yes
LeakBarrier EasyLay UDL 15, UDL Basic or UDL 50	Yes (See FL16884)	Yes (as base sheet in multi-ply system)	Yes (as base sheet in multi-ply system)	Yes (See FL16884)	Yes (See FL16884)	Yes (See FL16884)
Tarco 15	Yes	No	No	Yes	Yes	No
Tarco 30	Yes	Yes (as base sheet in multi-ply system)	Yes (as base sheet in multi-ply system)	Yes	Yes	Yes
Tarco NO 30	Yes	No	No	Yes	Yes	Yes
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	No	Yes	Yes See 5.5.2	No	No	No
LeakBarrier EasyMop SBS	No	Yes	Yes See 5.5.2	No	No	No

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 following Approved tile adhesives / underlayment combinations.

TABLE 1A: ALLOWABLE TILE ADHESIVE / UNDERLAYMENT COMBINATIONS[1]		
Adhesive	**Florida Product Approval**	**Underlayments**
Dow TILE BOND Roof Tile Adhesive	FL22525	LeakBarrier PS200^{HT}
ICP Adhesives Polyset® AH-160	FL6332	LeakBarrier PS200^{HT}, LeakBarrier NR600 Ultra, ASTM Organic Mineral Surface Tile Underlayment or LeakBarrier EasyMop SBS
ICP Adhesives Polyset® RTA-1	FL6276	LeakBarrier PS200^{HT}

5.6 Allowable Substrates:

TABLE 2: SUBSTRATE OPTIONS FOR ADHERED UNDERLAYMENTS			
Underlayment	**Application**	**Primer**	**Substrates**
LeakBarrier MS300	self-adhering	(Optional) ASTM D41	plywood; OSB or structural concrete
LeakBarrier PS200^{HT}			
LeakBarrier PS200^{MU}			
LeakBarrier NR600 Ultra			
LeakBarrier SS400			
LeakBarrier MS300	self-adhering	none	ASTM D226 felt; ASTM D4869 felt; LeakBarrier EasyLay, LeakBarrier EasyLay UDL 15, LeakBarrier EasyLay UDL Basic or LeakBarrier EasyLay UDL 50
LeakBarrier PS200^{HT}			
LeakBarrier PS200^{MU}			
LeakBarrier NR600 Ultra			
LeakBarrier SS400			
LeakBarrier MS300	self-adhering	ASTM D41	metal (flashing metal, valley metal, etc.)
LeakBarrier PS200^{HT}			
LeakBarrier PS200^{MU}			
LeakBarrier NR600 Ultra			
LeakBarrier SS400			
ASTM Organic Mineral Surface Tile Underlayment	hot asphalt	ASTM D41	structural concrete
LeakBarrier EasyMop SBS			
ASTM Organic Mineral Surface Tile Underlayment	hot asphalt	None	ASTM D226 felt, ASTM D4601 base sheet
LeakBarrier EasyMop SBS			

5.6.1 Wind Resistance for Underlayment Systems in Foam-On Tile Applications:

The following wind uplift limitations apply to underlayment systems that are not prescriptively addressed in FRSA/TRI April 2012 (04-12) and are used in foam-on or mortar-set 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 FRSA/TRI April 2012 (04-12), Appendix A, Table 1A or FBC 1609 for determination of design wind loads.

#1 Maximum Design Pressure = **-75.0 psf**:

Deck: Min. 15/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction

Primer: (Optional) ASTM D41

Base Ply: (Optional) LeakBarrier PS200^{MU}, self-adhered.

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

[1] *Refer to Tile Manufacturer's or Adhesive Manufacturer's Florida Product Approval for Overturning Moment Resistance Performance.*

#2 Maximum Design Pressure = **-120.0 psf**:

Deck: Min. 15/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction

Primer: (Optional) ASTM D41

Joint Treatment: Plywood joints are covered with 4-inch wide strips of LeakBarrier PS200^{MU} or LeakBarrier EasyBase, rolled into place to create continuous bond

Base Ply: (Optional) LeakBarrier PS200^{MU}, self-adhered

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

#3 Maximum Design Pressure = **-217.5 psf**:

Deck: Structural concrete to meet project requirements to satisfaction of Authority Having Jurisdiction.

Primer: (Optional) ASTM D41

Base Ply: (Optional) LeakBarrier PS200^{MU}, self-adhered

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

#4 Maximum Design Pressure = **-45.0 psf***:

Deck: Min. 15/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.

Base Sheet: LeakBarrier EasyLay UDL 15, LeakBarrier EasyLay UDL Basic or LeakBarrier EasyLay UDL 50 (48" wide rolls); See FBC FL16884.

Fasteners: 12 ga. x 1.25-inch long x 3/8-inch head diameter annular ring shank roofing nails and 1-5/8-inch diameter tin caps

Spacing: 6" o.c. at the 4-inch wide side laps and 8" o.c. at three (3) equally spaced, staggered center rows.

Base Ply: (Optional) LeakBarrier PS200^{MU}, self-adhered

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

#5 Maximum Design Pressure = **-45.0 psf***:

Deck: Min. 15/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.

Base Sheet: LeakBarrier EasyLay UDL 15, LeakBarrier EasyLay UDL Basic or LeakBarrier EasyLay UDL 50 (48" wide rolls); See FBC FL16884.

Fasteners: 12 ga. x 1.25-inch long x 3/8-inch head diameter annular ring shank roofing nails and 1-5/8-inch diameter tin caps

Spacing: 6" o.c. at the 4-inch wide side laps and 8" o.c. at three (3) equally spaced, staggered center rows.

Primer: ASTM D41 primer at tin-caps.

Base Ply: (Optional) LeakBarrier PS200^{MU}, self-adhered

Underlayment: LeakBarrier NR600 Ultra, self-adhered.

#6 Maximum Design Pressure = **-60.0 psf**:

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

Base Sheet: LeakBarrier EasyLay

Fasteners: 12 ga. x 1.25-inch long x 3/8-inch head diameter annular ring shank roofing nails and 1-5/8-inch diameter tin caps

Spacing: 7" o.c. at the 4-inch wide side laps and 7" o.c. at three (3) equally spaced, staggered center rows.

Base Ply: (Optional) LeakBarrier PS200^{MU}, self-adhered

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

#7 Maximum Design Pressure = **-60.0 psf**:

Deck: Min. 15/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.

Base Sheet: LeakBarrier EasyLay UDL 15, LeakBarrier EasyLay UDL Basic or LeakBarrier EasyLay UDL 50 (48" wide rolls); See FBC FL16884.

Fasteners: 12 ga. x 1.25-inch long x 3/8-inch head diameter annular ring shank roofing nails and 1-5/8-inch diameter tin caps

Spacing: 6" o.c. at the 4-inch wide side laps and 6" o.c. at four (4) equally spaced, staggered center rows.

Base Ply: (Optional) LeakBarrier PS200^{MU}, self-adhered

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

#8 Maximum Design Pressure = **-60.0 psf**:

Deck: Min. 15/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.

Base Sheet: LeakBarrier EasyLay UDL 15, LeakBarrier EasyLay UDL Basic or LeakBarrier EasyLay UDL 50 (48" wide rolls); See FBC FL16884.

Fasteners: 12 ga. x 1.25-inch long x 3/8-inch head diameter annular ring shank roofing nails and 1-5/8-inch diameter tin caps

Spacing: 6" o.c. at the 4-inch wide side laps and 6" o.c. at four (4) equally spaced, staggered center rows.

Primer: ASTM D41 primer at tin-caps.

Base Ply: (Optional) LeakBarrier PS200^{MU}, self-adhered

Underlayment: LeakBarrier NR600 Ultra, self-adhered and back nailed using 12 ga. x 1.25-inch long x 3/8-inch head diameter annular ring shank roofing nails and 1-5/8-inch diameter tin caps spaced 12" o.c. within the self-adhering side laps.

#9 Maximum Design Pressure = **-82.5 psf**:

Deck: Min. 15/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.

Base Sheet: LeakBarrier EasyLay

Fasteners: Simplex MAXX Cap Fasteners

Spacing: 8" o.c. at the 4-inch wide side laps and 8" o.c. at four (4) equally spaced, staggered center rows.

Base Ply: (Optional) LeakBarrier PS200^{MU}, self-adhered

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

#10 Maximum Design Pressure = **-120.0 psf**:

Deck: Min. 15/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.

Base Sheet: LeakBarrier EasyLay

Fasteners: 12 ga. x 1.25-inch long x 3/8-inch head diameter annular ring shank roofing nails and 1-5/8-inch diameter tin caps

Spacing: 4" o.c. at the 4-inch wide side laps and 4" o.c. at four (4) equally spaced, staggered center rows.

Base Ply: (Optional) LeakBarrier PS200^{MU}, self-adhered

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

5.6.1.1 All other direct-deck, adhered Tarco underlayment systems beneath foam-on tile systems carry a Maximum Design Pressure of -45 psf.

5.6.1.2 For mechanically attached Base Sheet, the maximum design pressure for the selected assembly shall meet or exceed that required under FRSA/TRI April 2012 (04-12), Appendix A, Table 1A.

Alternatively, the maximum design pressure for the selected assembly shall meet or exceed the Zone 1 design pressure determined in accordance with FBC 1609. In this case, Zones 2 and 3 shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are ANSI/SPRI WD1, FM Loss Prevention Data Sheet 1-29 and Roofing Application Standard RAS 117. Assemblies marked with an asterisk* carry the limitations set forth in Section 2.2.10.1 of FM Loss Prevention Data Sheet 1-29 (January 2016) for Zone 2/3 enhancements.

5.7 Exposure Limitations:

TABLE 3: EXPOSURE LIMITATIONS

Underlayment	Maximum Exposure (days)
LeakBarrier PS200^{HT}, LeakBarrier NR600 Ultra, LeakBarrier EasyLay, ASTM Organic Mineral Surface Tile Underlayment and LeakBarrier EasyMop SBS	180
LeakBarrier MS300, PS200^{MU} or SS400	30
Tarco 15, Tarco 30 and Tarco NO 30	1

5.8 Tile Slippage Limitations (FRSA/TRI April 2012 (04-12)):

When loading roof tiles on the underlayment in direct-deck tile assemblies, the maximum roof slope shall be as follows. These slope limitations can only be exceeded by using battens during loading of the roof tiles.

TABLE 4: TILE SLIPPAGE LIMITATIONS FOR DIRECT-DECK TILE INSTALLATIONS

Underlayment	Tile Profile	Staging Method	Maximum Slope
LeakBarrier PS200^{HT}	Flat	10-tile stack or 6-tile stack (4 over 2)	6:12
	Lugged	6-tile stack (4 over 2)	6:12
LeakBarrier NR600 Ultra	Flat or Lugged	6-tile stack (4 over 2)	6:12
LeakBarrier EasyMop SBS	Flat	6-tile stack (4 over 2)	5:12
	Lugged	6-tile stack (4 over 2)	6:12

6. INSTALLATION:

6.1 Tarco Roof Underlayments shall be installed in accordance with Tarco Roofing published installation requirements subject to the Limitations set forth in Section 5 herein and the specifics noted below.

6.2 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, and prime the substrate (if applicable).

6.3 LeakBarrier® MS300, PS200^{HT}, PS200^{MU}, NR600 Ultra or SS400 Ice and Water Armor:

6.3.1 Non-Tile Applications:

Shall be installed in compliance with the requirements for ASTM D1970 underlayment in FBC Table 1507.1.1 for the type of prepared roof covering to be installed and Tarco Roofing published requirements.

6.3.2 Tile Applications (LeakBarrier PS200^{HT} and LeakBarrier NR600 Ultra only):

Shall be installed in compliance with the requirements for Self-Adhered Membrane set forth in FRSA/TRI April 2012 (04-12) and Tarco Roofing published requirements.

For mechanically fastened tile roofing over 2-ply system, consisting of Base Sheet and self-adhering top sheet(s), Base Sheet fastening shall be not less than FRSA/TRI April 2012 (04-12), Table 1.

For adhesive-set tile applications, refer to Section 5.6.1 herein.

Refer to Section 5.8 for tile staging limitations. If tiles are to be left in a staged condition for more than 30 days, Tarco Roofing requires tiles be staged two tiles perpendicular to slope, four tiles on top, parallel to slope, regardless of the allowance in Section 5.8.

6.3.3 Multi-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 5.6.2) is allowable for use under mechanically attached prepared roof systems. Limits of use are those associated with the top-layer material. This is not a requirement, but is allowable if a multi-ply underlayment system is desired.

6.4 Tarco 15 and 30:

6.4.1 Non-Tile Applications:

Shall be installed in compliance with the codified requirements for ASTM D226, Type I (Tarco 15) or ASTM D226 Type II (Tarco 30) underlayment in FBC Table 1507.1.1 for the type of prepared roof covering to be installed and Tarco Roofing published requirements.

6.4.2 Tile Applications (Tarco 30 only):

Tarco 30 is limited to use as a mechanically attached base sheet in the "Two Ply System" from FRSA/TRI April 2012 (04-12). Reference is made to Table 1 herein, coupled with FRSA/TRI April 2012 (04-12) and Tarco Roofing published requirements.

6.5 Tarco NO 30:

6.5.1 Shall be installed in compliance with the codified requirements for ASTM D4869, Type II underlayment in FBC Table 1507.1.1 for the type of prepared roof covering to be installed and Tarco Roofing published requirements.

6.6 LeakBarrier EasyLay:

6.6.1 Non-Tile Applications:

Shall be installed in compliance with the codified requirements for ASTM D226, Type II underlayment in FBC Table 1507.1.1 for the type of prepared roof covering to be installed and Tarco Roofing published requirements.

6.6.2 Tile Applications, base layer in multi-ply system:

LeakBarrier EasyLay is limited to use as a mechanically attached base sheet in the "Two Ply System" from FRSA/TRI April 2012 (04-12). Reference is made to Table 1 and Section 5.6.1 herein, coupled with FRSA/TRI April 2012 (04-12) and Tarco Roofing published requirements.

6.7 ASTM Organic Mineral Surface Tile Underlayment and LeakBarrier™ EasyMop SBS:

6.7.1 Tile Applications:

6.7.1 ASTM Organic Mineral Surface Tile Underlayment and LeakBarrier™ EasyMop SBS are limited to use as an alternate to "Mineral Surface Roll Roofing" (ASTM D6380, Class M) in the "Single Ply System" from FRSA/TRI April 2012 (04-12) beneath mechanically fastened tile roof systems or the Hot Asphalt applied "Cap Sheet" in the "Two Ply System" from FRSA/TRI April 2012 (04-12) beneath mechanically fastened or adhered tile roof systems. Reference is made to Table 1 and Section 5.6.1 herein, coupled with FRSA/TRI April 2012 (04-12) and Tarco Roofing published requirements.

6.8 Tile Staging:

6.8.1 Tile shall be loaded and staged in a manner that prevents tile slippage and/or damage to the underlayment. Refer to Table 4 herein, and Tarco Roofing published requirements for tile staging.

6.8.2 Battens and/or Counter-battens, as required by the tile manufacturer and FRSA/TRI April 2012 (04-12) must be used on all roof slopes greater than 7:12. Precautions should be taken as needed, such as the use of battens or nail-boards, to prevent tile sliding and/or damage to the underlayment during the loading process.

6.8.3 Tarco Roofing specifies the minimum cure time after installation of self-adhering membranes and before loading of roofing tiles is forty-eight (48) hours.

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 manufacturer or the named QA entity for plants covered under **Rule 61G20-3 QA** requirements. Refer to Section 4 herein for product & production locations having met codified physical properties specifications.

9. QUALITY ASSURANCE ENTITY:

UL LLC – QUA9625; (414) 248-6409; Karen.buchmann@ul.com
UL LLC – QUA9625; (631) 546-2458; Kanchi.Agrawala-Dokania@ul.com

- END OF EVALUATION REPORT -