

ICC-ES Evaluation Report

ESR-3297

Issued May 1, 2012

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DIVISION: 07 00 00—THERMAL AND MOISTURE
PROTECTION

Section: 07 52 00—Modified Bituminous Sheet Roofing

REPORT HOLDER:

TARCO

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EVALUATION SUBJECT:

LEAKBARRIER® EASYBASE™ AND LEAKBARRIER®
EASTYSTICK PLUS™ SELF-ADHERING ROOFING
MEMBRANES

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2009 and 2006 *International Building Code*® (IBC)
- 2009 and 2006 *International Residential Code*® (IRC)

Properties evaluated

- Weather resistance
- Wind uplift resistance
- Fire classification
- Impact resistance

2.0 USES

The LeakBarrier® EasyBase™ and LeakBarrier® EasyStick Plus™ modified bitumen roofing membranes are roof coverings used in Class A, B and C roof covering systems.

3.0 DESCRIPTION

3.1 General:

The LeakBarrier® modified bitumen roofing membranes consist of polyester-reinforced, granule-surfaced, styrene butadiene styrene (SBS) modified bitumen, and are installed on a combustible or noncombustible deck. Roof covering systems utilizing LeakBarrier® roofing membranes consist of self-adhering EasyStick Plus™ modified bitumen roofing membrane and EasyBase™ self-adhering base sheets.

3.2 Materials:

3.2.1 LeakBarrier® EasyLay® HPP Base Sheet: LeakBarrier® EasyLay® HPP is a 20-mil-thick (0.5 mm), 42-pound-per-100-square-foot (2.05 kg/m²), asphalt-

saturated underlayment recognized in [ESR-2634](#). The underlayment is used as the base sheet for systems described in Tables 2, 3 and 4.

3.2.2 Barrier Board: Barrier board, when used, must be minimum 1/4-inch-thick (12.7 mm) DensDeck manufactured by G-P Gypsum Corporation or minimum 1/4-inch-thick (12.7 mm) SECUROCK™ Gypsum-Fiber Roof Board manufactured by USG Corporation. See the systems listed in Tables 1 and 4 for minimum required thickness of barrier boards.

3.2.3 LeakBarrier® EasyBase™: LeakBarrier® EasyBase™ is an SBS modified bituminous, glass fiber-reinforced, self-adhering base sheet used in the systems described in Tables 1 through 4. Material thickness is nominally 60 mils (1.5 mm). Nominal weight of the membrane is 35 pounds per 100 square feet of coverage (15.9 kg per 9.3 m²). Roll size is 3 feet by 72 feet (0.9 m by 22 m).

3.2.4 LeakBarrier® EasyStick Plus™: LeakBarrier® EasyStick Plus™ is an SBS modified, granule-surfaced, polyester-reinforced, self-adhering, modified bituminous cap sheet membrane used for systems identified in Tables 1 through 4. Material thickness is nominally 120 mils (3 mm). Nominal weight of the membrane is 80 pounds per 100 square feet of coverage (36.3 kg per 9.3 m²). Roll size is 3 feet by 36 feet (0.9 m by 11 m).

3.3 Insulation:

See Tables 1 through 4 for insulations used with specific roofing systems. Foam plastic insulation, where used, must have a flame-spread index of not more than 75, when tested in accordance with ASTM E84 or UL 723 at a thickness intended for use. Roof insulation must comply with the applicable material standard specified in IBC Table 1508.2 or IRC Table R906.2.

4.0 INSTALLATION

4.1 General:

Installation of the membrane system must comply with the manufacturer's published installation instructions, the applicable code and this report. The manufacturer's published installation instructions must be available on the jobsite at all times during installation.

The slope of the roof must be a minimum of 1/4:12 (2 percent) and must not be more than the maximum slope indicated for the particular roof system as listed in Table 4.

Surfaces must be clean, dry and without voids that may interfere with adhesion. For reroofing, all old roofing and other loose materials must be removed prior to installation of the membrane.

The membranes must be installed when ambient or deck temperatures are above 40°F (4.5°C).

Penetrations and terminations of the roof coverings must be flashed and made weathertight in accordance with the requirements of the membrane manufacturer (report holder) and IBC Section 1503.2 and IRC Section R903.2, as applicable.

4.2 Wind Uplift Resistance:

The allowable wind uplift pressures for the membrane roof covering systems described in this report are noted in Tables 1 through 3.

4.3 Impact Resistance:

The roofing membranes described in this report meet the requirements for impact resistance based on testing in accordance with Section 5.5 of FM 4470.

4.4 Fire Classification:

4.4.1 New Construction: Roof covering systems described in Table 4, when installed in accordance with this report, are classified as Class A roof covering systems in accordance with UL 790 or ASTM E108.

4.4.2 Reroofing: Prior to installation of new roof coverings, inspection in accordance with IBC Section 1510 or IRC Section R907, and approval from the code official having jurisdiction, are required.

Class A, B or C roof covering systems may be installed over existing roof covering systems under the following conditions, provided the resulting classification is the lower of the new and existing roofing classification:

- New uninsulated systems installed only over existing uninsulated assemblies.
- New insulated systems installed over existing uninsulated systems only.

5.0 CONDITIONS OF USE

The LeakBarrier® EasyBase™ and LeakBarrier® EasyStick Plus™ modified bitumen roofing membranes described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Installation of the roofing systems must comply with the applicable code, the manufacturer’s published installation instructions and this report. If there are any conflicts between the manufacturer’s published installation instructions and this report, this report governs.
- 5.2 The roof covering systems must be installed only by applicators approved by Tarco Incorporated.

5.3 Foam plastic insulation, where used, must bear the label of an approved agency indicating that the foam plastic has a flame-spread index of not more than 75 when tested in accordance with ASTM E84 or UL 723 at the maximum thickness intended for use, subject to the approval of the code official.

5.4 Foam plastic insulation must be separated from the interior of the building by an approved thermal barrier in accordance with IBC Section 2603.4.1.5, 2009 IRC Section R316.5.2, or 2006 IRC Section R314.5.2, as applicable, except when application without a thermal barrier is specifically recognized in an ICC-ES evaluation report as noted in Footnote 4 to Table 4.

5.5 Above-deck thermal insulation board must comply with the applicable standards listed in IBC Table 1508.2 or IRC Table R906.2.

5.6 Design wind uplift pressures on any roof area, including edge and corner zones, must not exceed the allowable wind pressure for the system installed in that particular area. Refer to the allowable wind uplift pressure for roof coverings as listed in Tables 1 through 3.

5.7 The allowable wind uplift pressures listed in Tables 1 through 3 are for the roof covering only. The deck and framing to which the roof covering is attached must be designed for the applicable components and cladding wind loads in accordance with the applicable code.

5.8 Calculations demonstrating that the required wind resistance is less than the allowable wind resistance must be submitted to the code official.

5.9 When application is over existing roofs, documentation of the wind uplift resistance of the composite roof construction must be submitted to the code official at the time of permit application.

5.10 The membranes are manufactured in Belton, Texas, under a quality control program with inspections by UL LLC (AA-668).

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Membrane Roof-covering Systems (AC75), dated July 2010.

7.0 IDENTIFICATION

Each roll of the membranes and base sheets is identified with a label noting the manufacturer’s name (TARCO) and address; the product name; the evaluation report number (ESR-3297); and the name of the inspection agency (UL LLC).

TABLE 1—ROOF COVERING ALLOWABLE WIND UPLIFT PRESSURES (WOOD DECKING, MECHANICALLY ATTACHED INSULATION, ADHERED ROOF COVERING)

SYSTEM NO.	ROOF DECK	INSULATION		ROOF COVERING			ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type	Attachment	Base	Ply	Cap	
W-2	Minimum 19/32-inch plywood, maximum 24-inch spans, attached with 8d ring shank nails 6 inches on center	Min. 3/8-inch SECUROCK™ Gypsum-fiber Roof Board	OMG No.12 or No.14 Heavy Duty, with OMG 3-inch Galvalume Steel Plate or Trufast DP or HD with Trufast MP-3 (1 per 1 ft ²)	LeakBarrier EasyBase	(Optional) EasyBase	LeakBarrier EasyStick Plus	60

For SI: 1 inch = 25.4 mm; 1psf = 48 Pa.

**TABLE 2—ROOF COVERING ALLOWABLE WIND UPLIFT PRESSURES
(WOOD DECKING, LOOSE LAID INSULATION, MECHANICALLY ATTACHED BASE SHEET, ADHERED ROOF COVERING)**

SYSTEM NO.	ROOF DECK	INSULATION		BASE SHEET		ROOF COVERING		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type ¹	Attachment	Type	Attachment	Ply	Cap	
W-3	Minimum 1 ⁹ / ₃₂ -inch plywood, maximum 24 inch spans, attached with 8d ring shank nails 6 inches on center	Any type, thickness or combination	Loose laid	LeakBarrier EasyLay	OMG No.12 or No.14 Heavy Duty, with OMG 3-inch Galvalume Steel Plate or Trufast DP or HD with Trufast MP-3 (10 inches o.c. in the min. 4-inch lap and 10inches o.c. in two equally spaced, staggered center rows	LeakBarrier EasyBase	LeakBarrier EasyStick Plus	60

For **SI**: 1 inch = 25.4 mm; 1psf = 48 Pa.

¹Insulation may be polyisocyanurate complying with ASTM C1289.

**TABLE 3—ROOF COVERING ALLOWABLE WIND UPLIFT PRESSURES
(WOOD DECKING, MECHANICALLY ATTACHED BASE SHEET, ADHERED ROOF COVERING)**

SYSTEM NO.	ROOF DECK	BASE SHEET		ROOF COVERING		ALLOWABLE WIND UPLIFT PRESSURE (psf)
		Type	Fastener and Attachment	Ply	Cap	
W-5	Minimum 1 ⁹ / ₃₂ -inch plywood, maximum 24 inch spans, attached with 8d ring shank nails 6 inches on center	LeakBarrier EasyLay	12 gage annular ring shank nails 7 min. 32 gage, 1 ⁵ / ₈ -inch-diameter tin caps (7 inches o.c. in the min. 4-inch lap and 7inches o.c. in three, equally spaced, staggered rows)	LeakBarrier EasyBase	EasyStick Plus	60
W-6	Minimum 1 ⁹ / ₃₂ -inch plywood, maximum 24 inch spans, attached with 8d ring shank nails 6 inches on center	LeakBarrier EasyLay	OMG No.12 or No.14 Heavy Duty, with OMG 3-inch Galvalume Steel Plate or Trufast DP or HD with Trufast MP-3 (10 inches o.c. in the min. 4-inch lap and 10inches o.c. in two, equally spaced, staggered center rows)	LeakBarrier EasyBase	EasyStick Plus	60

For **SI**: 1 inch = 25.4 mm; 1psf = 48 Pa.

TABLE 4—ROOFING SYSTEM FIRE CLASSIFICATION⁶

SYSTEM No.	ROOF CLASS ¹	ROOF DECK ²	MAX. SLOPE	INSULATION ^{3,4}	BARRIER BOARD ⁵	BASE SHEET	PLY SHEET	MEMBRANE
1	A	1 ⁵ / ₃₂ -inch plywood	1/2:12	None	None	LeakBarrier EasyLay (mechanically attached)	LeakBarrier EasyBase	LeakBarrier EasyStick Plus
2	A	1 ⁵ / ₃₂ -inch plywood	1/2:12	Optional	Minimum 1/4-inch G-P DensDeck or SECUROCK™ Glass-Mat Roof Board)	(Optional) LeakBarrier EasyLay (mechanically attached)	(Optional) One or more layer of LeakBarrier EasyBase	LeakBarrier EasyStick Plus
3	A	1 ⁵ / ₃₂ -inch plywood	1/2:12	UL Classified (Minimum 1 inch thick)	Minimum 1/4-inch G-P DensDeck or SECUROCK™ Glass-Mat Roof Board	(Optional) LeakBarrier EasyLay (mechanically attached)	(Optional) One or more layer of LeakBarrier EasyBase	LeakBarrier EasyStick Plus
4	A	1 ⁵ / ₃₂ -inch plywood	1/2:12	UL Classified (Minimum 1 inch thick)	Minimum 1/4-inch G-P DensDeck or SECUROCK™ Glass-Mat Roof Board	LeakBarrier EasyLay (mechanically attached)	(Optional) One or more layer of LeakBarrier EasyBase	LeakBarrier EasyStick Plus
5	A	1 ⁵ / ₃₂ -inch plywood (all deck joints must be blocked with 2-by-4 lumber)	1/2:12	None	Minimum 1/4-inch SECUROCK™ Gypsum Fiber Roof Board	(Optional) LeakBarrier EasyLay (mechanically attached)	(Optional) One or more layer of LeakBarrier EasyBase	LeakBarrier EasyStick Plus
6	A	1 ⁵ / ₃₂ -inch plywood (all deck joints must be blocked with 2-by-4 lumber)	1/2:12	None	Minimum 1/4-inch SECUROCK™ Gypsum Fiber Roof Board	LeakBarrier EasyLay (mechanically attached)	One or more layer of LeakBarrier EasyBase	LeakBarrier EasyStick Plus

TABLE 4—ROOFING SYSTEM FIRE CLASSIFICATION⁶ (Continued)

SYSTEM No.	ROOF CLASS ¹	ROOF DECK ²	MAX. SLOPE	INSULATION ^{3,4}	BARRIER BOARD ⁵	BASE SHEET	PLY SHEET	MEMBRANE
7	A	¹⁵ / ₃₂ -inch plywood	¹ / ₂ :12	(Optional) UL Classified (Any thickness)	Minimum ¹ / ₂ -inch SECUROCK™ Gypsum Fiber Roof Board	LeakBarrier EasyLay (mechanically attached)	(Optional) One or more layer of LeakBarrier EasyBase	LeakBarrier EasyStick Plus
8	A	¹⁵ / ₃₂ -inch plywood	¹ / ₂ :12	(Optional) UL Classified (Any thickness)	Minimum ¹ / ₂ -inch SECUROCK™ Gypsum Fiber Roof Board	LeakBarrier EasyLay (mechanically attached)	(Optional) One or more layer of LeakBarrier EasyBase	LeakBarrier EasyStick Plus
9	A	¹⁵ / ₃₂ -inch plywood	¹ / ₂ :12	(Optional) UL Classified (Any thickness)	Minimum ¹ / ₄ -inch SECUROCK™ Gypsum Fiber Roof Board	LeakBarrier EasyLay (mechanically attached)	(Optional) One or more layer of LeakBarrier EasyBase	LeakBarrier EasyStick Plus
10	A	Noncombustible	¹ / ₂ :12	None	None	LeakBarrier EasyLay (mechanically attached)	(Optional) LeakBarrier EasyBase	LeakBarrier EasyStick Plus
11	A	Noncombustible	¹ / ₂ :12	(Optional) UL Classified (Any thickness)	Minimum ¹ / ₄ -inch SECUROCK™ Gypsum Fiber Roof Board	(Optional) LeakBarrier EasyLay (mechanically attached)	(Optional) One or more layer of LeakBarrier EasyBase	LeakBarrier EasyStick Plus
12	A	Noncombustible	¹ / ₂ :12	(Optional) UL Classified (Any thickness)	Minimum ¹ / ₄ -inch SECUROCK™ Gypsum Fiber Roof Board	LeakBarrier EasyLay (mechanically attached)	(Optional) LeakBarrier EasyBase	LeakBarrier EasyStick Plus
13	A	Noncombustible	¹ / ₄ :12	UL Classified (Minimum 1 inch thick)	None	LeakBarrier EasyLay (mechanically attached)	None	LeakBarrier EasyStick Plus with Karnak No. 298 coating at 1.5 gal/square
14	A	Noncombustible	¹ / ₄ :12	UL Classified (Minimum 1 inch thick)	None	One or more layers of any UL Classified G1 or G2 asphalt glass fiber felt, hot mopped in place followed by LeakBarrier underlayment, hot mopped	None	LeakBarrier EasyStick Plus with Karnak No. 298 coating at 1.5 gal/square

For **SI**: 1 inch = 25.4 mm; 1 square = 9.29 m²; 1 gallon = 3.785 L.

¹Noncombustible deck classifications are applicable for use over combustible decks (minimum ¹⁵/₃₂-inch-thick plywood), when minimum ¹/₂-inch-thick, Type X gypsum wallboard or minimum ¹/₄-inch-thick G-P Gypsum Corporation DensDeck is used directly over the combustible deck with all joints staggered a minimum of 6 inches from plywood joints.

²Combustible wood decks must be minimum ¹⁵/₃₂-inch-thick (11.9 mm) plywood. Noncombustible decks must be minimum No.22 gage steel or concrete with a minimum compressive strength of 2500 psi.

³All foam plastic insulation must be UL-classified foam plastic for roofing systems, and must be limited to the maximum thickness in accordance with Section 5.3.

⁴Foam plastic insulation is permitted to be installed over a steel deck without a thermal barrier when there is an ICC-ES evaluation report on the specific foam plastic for direct-to-deck applications. See Sections 3.3 and 5.4.

⁵The barrier board must be mechanically fastened to the deck with all joints staggered a minimum of 6 inches from plywood joints.

⁶The barrier board, insulation, base sheet, ply sheet, membrane and coatings must be UL-Classified for roofing system applications.

ICC-ES Evaluation Report**ESR-3297 Supplement**

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**Section: 07 52 00—Modified Bituminous Sheet Roofing****REPORT HOLDER:****TARCO****ONE INFORMATION WAY, SUITE 225****LITTLE ROCK, ARKANSAS 72202****(501) 945-4506**www.tarcoroofing.com**EVALUATION SUBJECT:****LEAKBARRIER® EASYBASE™ AND LEAKBARRIER™ EASYSTICK PLUS™ SELF-ADHERING ROOFING MEMBRANES****1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that LeakBarrier® EasyBase™ and LeakBarrier™ Easystick Plus™ Self-Adhering Roofing Membranes, recognized in ICC-ES master report ESR-3297, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2010 *Florida Building Code—Building*
- 2010 *Florida Building Code—Residential*

2.0 CONCLUSIONS

The LeakBarrier® EasyBase™ and LeakBarrier™ EasyStick Plus™ self-adhering roofing membranes, described in Sections 2.0 through 7.0 of the master evaluation report ESR-3297, comply with the 2010 *Florida Building Code—Building* and the 2010 *Florida Building Code—Residential*, provided the design and installation are in accordance with the *International Building Code*® (IBC) and the *International Residential Code*® (IRC) provisions noted in the master report.

Use of the LeakBarrier® EasyBase™ and LeakBarrier™ Easystick Plus™ Self-Adhering Roofing Membranes for compliance with the High-Velocity Hurricane Zone provisions of the 2010 *Florida Building Code—Building* and the 2010 *Florida Building Code—Residential* has not been evaluated, and is outside the scope of this evaluation report.

For products falling under Florida Rule 9N-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the master report issued on May 1, 2012.