

Product Evaluation

RC121 | 1020

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: RC-121

Effective Date: October 1, 2020

Re-evaluation Date: October 2024

Product Name: Liberty Self-Adhering Roof Systems

Manufacturer: GAF
1 Campus Drive
Parsippany, NJ 07054
(800) 766-3411
technicalquestions@gaf.com

General Description:

Liberty SBS Self-Adhering Cap Sheet: Polyester reinforced self-adhering SBS modified bitumen cap sheet. Designed to be used with the Liberty SBS Self-Adhering Base/Ply Sheet or Liberty SBS Mechanically Attached Base Sheet.

Liberty SBS Self-Adhering Base/Ply Sheet: Fiberglass reinforced, self-adhering, SBS modified bitumen membrane for ply and base ply applications. Designed for use with the Liberty SBS Self-Adhering Cap Sheet.

Liberty SBS Mechanically Attached Base Sheet: Fiberglass reinforced, SBS modified bitumen base sheet for use with self-adhering membranes.

StormSafe Anchor Sheet: Woven polypropylene reinforced, polypropylene coated base sheet for use with self-adhering membranes.

Limitations:

Roof Framing: Roof framing must be as specified in each assembly listed in this evaluation report.

Roof Deck: The roof deck must be secured to the roof framing as specified in the assemblies listed in this evaluation report to resist the required uplift loads.

Positive Drainage of Roof Deck: Roof decks, in which this product is to be installed upon, must be provided with positive drainage. A minimum roof slope after construction of 1/4" per foot is required.

Design Wind Pressures: The design wind uplift pressures must be as specified in the assemblies listed in this evaluation report.

Installation:

General Installation Requirements: International Residential Code (IRC) and International Building Code (IBC) requirements must be satisfied, and the manufacturer's installation instructions followed, unless otherwise specified by this product evaluation report.

Installation: Installation must be in accordance with the following assemblies. Refer to the manufacturer's specifications for additional installation requirements.

Fastener Penetration: Fasteners specified in the assemblies listed in this evaluation report must be long enough to penetrate through the roof deck.

Assembly No. 1 – Wood Deck with Mechanically Attached Base Sheet

Design Pressure Rating: -45 psf

Roof Deck: Minimum 15/32" plywood secured to roof framing spaced a maximum of 24" on center with minimum 8d common wire nails spaced a maximum of 6" on center along the panel edges and 6" on center along intermediate framing members.

Fire Barrier: (Optional) Minimum 0.25" thick DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, or SECUROCK Glass-Mat Roof Board may be loose laid over the deck or a coating of FireOut Fire Barrier Coating may be applied to the deck at a rate of 1 gal/sq.

Base Sheet: Liberty SBS Mechanically Attached Base Sheet is secured to the deck with minimum 12 gauge annular ring shank nails having not less than 20 rings per inch and heads not less than 3/8" in diameter applied through minimum 1-5/8" diameter tin caps (minimum 32 gauge), spaced 8" on center along the minimum 3" wide side laps and in three evenly spaced, staggered rows in the field of the sheet.

Ply: (Optional) Liberty SBS Self-Adhering Base/Ply Sheet self-adhered to the base sheet within nominal 3-1/4" wide side laps.

Cap: Liberty SBS Self-Adhering Cap Sheet is self-adhered to the base sheet or optional ply (when present) within nominal 4" wide side laps.

Assembly No. 2 – Wood Deck with Mechanically Attached Base Sheet

Design Pressure Rating: -60 psf

Roof Deck: Minimum 15/32" plywood secured to roof framing spaced a maximum of 24" on center with minimum 8d common wire nails spaced a maximum of 6" on center along the panel edges and 6" on center along intermediate framing members.

Fire Barrier: (Optional) Coating of FireOut Fire Barrier Coating may be applied to the deck at a rate of 1 gal/sq.

Insulation: (Optional) May consist of one or more of the following, any combination, loose laid over the deck: Minimum 0.25" thick DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Glass-Mat Roof Board, minimum 0.5" thick EnergyGuard Polyiso Insulation, EnergyGuard HD Polyiso Insulation, EnergyGuard HD Plus Polyiso, Energy Guard RN, EnergyGuard Perlite Recover Board, Structodek High Density Fiberboard Roof Insulation, minimum 0.75" thick EnergyGuard Perlite Roof Insulation.

Base Sheet: Liberty SBS Mechanically Attached Base Sheet is secured to the deck with Drill Tec 3" Ribbed Galvalume Plates (Flat) and Drill-Tec #14 Fasteners spaced 8" on center in the minimum 3" wide side laps and 8" on center in two evenly spaced, staggered rows in the field of the sheet.

Ply: (Optional) Liberty SBS Self-Adhering Base/Ply Sheet self-adhered to the base sheet within nominal 3-1/4" wide side laps.

Cap: Liberty SBS Self-Adhering Cap Sheet is self-adhered to the base sheet or optional ply (when present) within nominal 4" wide side laps.

Assembly No. 3 – Wood Deck with Mechanically Attached Insulation

Design Pressure Rating: -45 psf

Roof Deck: Minimum 15/32" plywood secured to roof framing spaced a maximum of 24" on center with minimum 8d common wire nails spaced a maximum of 6" on center along the panel edges and 6" on center along intermediate framing members.

Fire Barrier: (Optional) Minimum 0.25" thick DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board or SECUROCK Glass-Mat Roof Board may be loose laid over the deck or a coating of FireOut Fire Barrier Coating may be applied to the deck at a rate of 1 gal/sq.

- Insulation:** Minimum 1.5" thick EnergyGuard Polyiso Insulation secured to the deck with Drill-Tec 3" Ribbed Galvalume Plates (Flat) and Drill-Tec #14 Fasteners applied with a contributory area of 2.0 ft² per fastener.
- Base Sheet:** Liberty SBS Self-Adhering Base/Ply Sheet is self-adhered to the base sheet within nominal 3-1/4" wide side laps.
- Ply:** (Optional) Liberty SBS Self-Adhering Base/Ply Sheet self-adhered to the base sheet within nominal 3-1/4" wide side laps.
- Cap:** Liberty SBS Self-Adhering Cap Sheet is self-adhered to the base sheet or optional ply (when present) within nominal 4" wide side laps.

Assembly No. 4 – Wood Deck with Mechanically Attached Cover Board

Design Pressure Rating: -52.5 psf

Roof Deck: Minimum 15/32" plywood secured to roof framing spaced a maximum of 24" on center with minimum 8d common wire nails spaced a maximum of 6" on center along the panel edges and 6" on center along intermediate framing members.

Insulation: (Optional) May consist of one or more of the following, any combination, loose laid: Minimum 0.5" thick EnergyGuard Polyiso Insulation, EnergyGuard RN Polyiso Insulation, EnergyGuard Perlite Recover Board, Structodek High Density Fiberboard Roof Insulation, minimum 0.75" thick EnergyGuard Perlite Roof Insulation.

Cover Board: Minimum 0.5" thick DensDeck Prime secured to the deck with Drill Tec 3 in. Ribbed Galvalume Plates (Flat) and Drill-Tec #14 Fasteners applied within a maximum contributory area of 2.0 ft² per fastener.

Base Sheet: Liberty SBS Self-Adhering Base/Ply Sheet is self-adhered to the base sheet within nominal 3-1/4" wide side laps.

Ply: (Optional) Liberty SBS Self-Adhering Base/Ply Sheet self-adhered to the base sheet within nominal 3-1/4" wide side laps.

Cap: Liberty SBS Self-Adhering Cap Sheet is self-adhered to the base sheet or optional ply (when present) within nominal 4" wide side laps.

Assembly No. 5 – Wood Deck with Mechanically Attached Base Sheet**Design Pressure Rating:** -60 psf**Roof Deck:** Minimum 19/32" plywood secured to roof framing spaced a maximum of 24" on center with minimum 8d common wire nails spaced a maximum of 6" on center along the panel edges and 6" on center along intermediate framing members.**Fire Barrier:** (Optional) Coating of FireOut Fire Barrier Coating may be applied to the deck at a rate of 1 gal/sq.**Insulation:** (Optional) May consist of one or more of the following, any combination, loose laid over the deck: Minimum 0.25" thick DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Glass-Mat Roof Board, minimum 0.5" thick EnergyGuard Polyiso Insulation, EnergyGuard HD Polyiso Insulation, EnergyGuard HD Plus Polyiso Insulation, EnergyGuard RN Polyiso Insulation, EnergyGuard Perlite Recover Board, Structodek High Density Fiberboard Roof Insulation, minimum 0.75" thick EnergyGuard Perlite Roof Insulation.**Base Sheet:** StormSafe Anchor Sheet is mechanically secured to the deck with Drill-Tec AccuTrac Flat Plates and Drill-Tec #12 Fasteners spaced 9 inches on center along the minimum 4" wide side laps and in three evenly spaced, staggered rows in the field of the sheet.**Cap:** Liberty SBS Self-Adhering Cap Sheet is self-adhered to the base sheet or optional ply (when present) with nominal 4" wide side laps.**Assembly No. 6 – Wood Deck with Self-Adhered Cover****Design Pressure Rating:** -90 psf**Roof Deck:** Minimum 15/32" plywood secured to roof framing spaced a maximum of 24" on center with minimum 8d common wire nails spaced a maximum of 6" on center along the panel edges and 6" on center along intermediate framing members.**Primer:** Matrix 307 Premium Asphalt Primer is applied to plywood deck.**Base Sheet:** Liberty SBS Self-Adhering Base/Ply Sheet is self-adhered to the base sheet within nominal 3" wide side laps.**Cap:** Liberty SBS Self-Adhering Cap Sheet is self-adhered to the base sheet or optional ply (when present) within nominal 4" wide side laps.

Assembly No. 7 – Wood Deck with Mechanically Attached Base Sheet**Design Pressure Rating:** -97.5 psf**Roof Deck:** Minimum 15/32" plywood secured to roof framing spaced a maximum of 24" on center with minimum 8d common wire nails spaced a maximum of 6" on center along the panel edges and 6" on center along intermediate framing members.**Fire Barrier:** (Optional) Coating of FireOut Fire Barrier Coating may be applied to the deck at a rate of 1 gal/sq.**Insulation:** Minimum 1.0" EnergyGuard Polyiso Insulation or EnergyGuard Tapered Polyiso Insulation, loose-laid or presecured to deck.**Base Sheet:** Liberty SBS Mechanically Attached Base Sheet is mechanically secured to the deck with Drill-Tec 3" Steel Plates and Drill-Tec #12 Fasteners spaced 8" on center along the minimum 3" wide side laps and in two evenly spaced, staggered rows in the field of the sheet.**Ply:** Liberty SBS Self-Adhering Base/Ply Sheet self-adhered to the base sheet within nominal 3" wide side laps.**Cap:** Liberty SBS Self-Adhering Cap Sheet is self-adhered to the base sheet or optional ply (when present) within nominal 4" wide side laps.**Note:** Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.