

Product Evaluation

RC49 | 1120

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-49

Effective Date: November 1, 2020

Re-evaluation Date: November 2024

Product Name: GAF GAFGLAS and Tri-Ply Built-Up Roofing Roof Coverings and RUBEROID, Tri-Ply SBS and APP Modified Bitumen Membranes

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

General Description:

GAFGLAS and Tri-Ply Built-up Roofing Sheets

GAFGLAS Ply 4 and Tri-Ply Ply 4 are built-up roofing ply felts. They consist of a fiberglass mat which is coated with asphalt.

GAFGLAS FlexPly 6 is a premium, built-up roofing ply felt, consisting of a premium fiberglass mat which is coated with asphalt.

GAFGLAS #75 Base Sheet and Tri-Ply #75 Base Sheet are asphalt coated, glass base sheets, surfaced with sand on both sides.

GAFGLAS #80 Ultima Base Sheet is a heavyweight, asphalt coated, glass reinforced base sheet, surfaced with sand on both sides.

GAFGLAS STRATAVENT Nailable Venting Base Sheet is an asphalt coated base sheet surfaced with mineral granules on the bottom side and sand on the top side.

GAFGLAS STRATAVENT Perforated Venting Base Sheet is a perforated and asphalt coated base sheet surfaced with mineral granules on the bottom side and sand on the top side.

GAFGLAS Mineral Surfaced Cap Sheet and Tri-Ply BUR Granule Cap Sheet are built up roofing cap sheets that consist of a fiberglass mat which is coated with asphalt. The back of the sheet is coated with sand and the top of the sheet is coated with granules.

GAFGLAS EnergyCap Mineral Surfaced Cap Sheet is a built-up roofing cap sheet that consists of a fiberglass mat which is coated with asphalt. The back of the sheet is coated with sand. The top of the sheet is surfaced with granules that are coated with United Coatings EnergyCote coating.

RUBEROID and Tri-Ply Mop Applied SBS Modified Sheets

RUBEROID Mop Smooth and Ruberoid Mop Smooth 1.5 are polyester mat reinforced, SBS modified bitumen membranes which have a top and bottom surfacing of sand. These products may be used as base sheets, base plies, plies, or as cap plies.

RUBEROID Mop Plus Smooth is a heavyweight polyester reinforced, SBS modified bitumen membrane which has a top and bottom surfacing of sand. This product may be used as a base sheet, base ply, ply, or cap ply.

RUBEROID Mop Granule and Tri-Ply APP Smooth are polyester mat reinforced, SBS modified bitumen membranes which have a top surfacing of roofing granules and bottom surfacing of fine sand. These products are used as cap plies.

RUBEROID Mop Plus Granule is a heavyweight polyester mat reinforced, SBS modified bitumen membrane which has a top surfacing of granules and bottom surfacing of sand. This product is used as a cap ply.

RUBEROID Mop Plus Granule FR is a heavyweight polyester mat reinforced, SBS modified bitumen membrane which has a top surfacing of granules and bottom surfacing of sand. The polyester mat is coated with a coating that is inherently fire resistant. This product is used as a cap ply.

RUBEROID Mop Granule FR is a polyester mat reinforced, SBS modified bitumen membrane which has a top surfacing of granules and bottom surfacing of sand. The polyester mat is coated with a coating that is inherently fire resistant. This product is used as a cap ply.

RUBEROID EnergyCap Mop Plus Granule FR is a heavyweight polyester mat reinforced, SBS modified bitumen membrane which has a bottom surfacing of sand and a top surfacing of granules that are coated with United Coatings EnergyCote coating. The polyester mat is coated with a coating that is inherently fire resistant. This product is used as a cap ply.

RUBEROID 30 Granule is a fiberglass mat reinforced, SBS modified bitumen membrane which has a top surfacing of roofing granules and bottom surfacing of sand. This product is used as a cap ply.

RUBEROID EnergyCap 30 Granule FR is a fiberglass mat reinforced, SBS modified bitumen membrane which has a bottom surfacing of sand and a top surfacing of granules that are coated with United Coatings EnergyCote coating. The fiberglass mat is coated with a coating that is inherently fire resistant. This product is used as a cap ply.

RUBEROID 30 Granule FR is a fiberglass mat reinforced, SBS modified bitumen membrane which has a top surfacing of granules and bottom surfacing of fine sand. The fiberglass mat is coated with a coating that is inherently fire resistant. This product is used as a cap ply.

Tri-Ply SBS Granule Cap Sheet is a granule surfaced, mop applied SBS cap sheet reinforced with a polyester mat.

RUBEROID 20 Smooth is an SBS polymer-modified base or ply sheet reinforced with a fiberglass mat.

RUBEROID and Tri-Ply Torch Applied APP Modified Bitumen Sheets

Ruberoid Torch Smooth and Tri-Ply APP Smooth are polyester mat reinforced, APP modified bitumen membranes which have a top surfacing of talc and a bottom surfacing of polyethylene. These products may be used as base plies, plies, or cap plies.

Ruberoid Torch Granule and Tri-Ply APP Granule are polyester mat reinforced, APP modified bitumen membranes which have a top surfacing of granules and a bottom surfacing of polyethylene. These products are used as cap plies.

RUBEROID Torch Plus Granule FR is a heavy polyester mat reinforced, APP modified bitumen membrane which has a top surfacing of granules and a bottom surfacing of polyethylene. The polyester mat is coated with a coating which is inherently fire resistant. The product is used as a cap ply.

RUBEROID EnergyCap Torch Granule FR is a polyester mat reinforced, APP modified bitumen membrane which has a bottom surfacing of polyethylene and a top surfacing of granules that are coated with United Coatings EnergyCote coating. The polyester mat is coated with a coating which is inherently fire resistant. The product is used as a cap ply.

RUBEROID Torch Applied (Heat-Weld) SBS Modified Bitumen Sheets

RUBEROID HW Smooth is a polyester mat reinforced, SBS modified bitumen membrane which has a bottom surfacing of polypropylene and a top surfacing of sand. This product is used as a base ply or ply sheet.

RUBEROID HW 25 Smooth is a fiberglass mat reinforced, SBS modified bitumen membrane which has a bottom surfacing of polypropylene and a top surfacing of sand. This product is used as a base ply or ply sheet.

RUBEROID HW Granule is a polyester mat reinforced, SBS modified bitumen membrane which has a bottom surfacing of polypropylene and a top surfacing of granules. This product is used as a cap ply.

RUBEROID HW Plus Granule FR is a heavyweight polyester mat reinforced, SBS modified bitumen membrane which has a bottom surfacing of polypropylene and a top surfacing of granules. The polyester mat is coated with a coating which is inherently fire resistant. This product is used as a cap ply.

RUBEROID HW Granule FR is a polyester mat reinforced, SBS modified bitumen membrane which has a bottom surfacing of polypropylene and a top surfacing of granules. The polyester mat is coated with a coating which is inherently fire resistant. This product is used as a cap ply.

RUBEROID EnergyCap HW Plus Granule FR is a heavyweight polyester mat reinforced, SBS modified bitumen membrane which has a bottom surfacing of polypropylene and a top surfacing of granules that are coated with United Coatings EnergyCote coating. The polyester mat is coated with a coating that is inherently fire resistant. This product is used as a cap ply.

RUBEROID HW Plus Granule is a heavyweight polyester mat reinforced, SBS modified bitumen membrane which has a bottom surfacing of polypropylene and a top surfacing of granules. This product is used as a cap ply.

Limitations:

Design Wind Pressure: -45 psf

For All Applications: Roof decks in which these products are installed upon must be provided with positive drainage and that a minimum roof slope after construction of 1/4" per foot is recommended.

Installation:

Manufacturer's installation instructions must be followed, unless otherwise specified by this product evaluation.

Membrane Options

Membrane Type	Products
Hot Asphalt Adhered RUBEROID SBS Cap Plies	RUBEROID Mop Granule, Tri-Ply APP Smooth, RUBEROID Mop Plus Granule, RUBEROID Mop Plus Granule FR, RUBEROID Mop Granule R, RUBEROID EnergyCap Mop Plus Granule FR, RUBEROID 30 Granule, RUBEROID 30 Granule FR, RUBEROID EnergyCap 30 Granule FR.
Hot Asphalt Adhered GAFGLAS Cap Plies	GAFGLAS Mineral Surfaced Cap Sheet, Tri-Ply BUR Granule Cap Sheet, GAFGLAS EnergyCap Mineral-Surfaced Cap Sheet
Torch Adhered RUBEROID SBS Heat-Weld Cap Plies	RUBEROID HW Granule, RUBEROID HW Plus Granule, RUBEROID SBS Heat-Weld Plus FR, RUBEROID HW Granule FR, RUBEROID EnergyCap HW Plus Granule FR
Torch Adhered RUBEROID APP Plies	RUBEROID Torch Smooth, Tri-Ply APP Smooth, RUBEROID Torch Granule, Tri-Ply APP Granule, RUBEROID Torch Plus Granule FR, RUBEROID EnergyCap Torch Granule FR, RUBEROID EnergyCap Torch Plus Granule FR

System No. 1

Deck	Minimum 5/8" plywood
Deck Coating or Slip Sheet	(Optional). FireOut Fire Barrier Coating is applied at 1 gal/sq or VersaShield Solo Fire-Resistant Slip Sheet. Mechanically attached.
Insulation	(Optional). One or more of the following, any combination: Minimum 1-1/2" thick EnergyGuard Polyiso Insulation, EnergyGuard RH Polyiso Insulation, EnergyGuard RN Polyiso Insulation, EnergyGuard Ultra Polyiso Insulation; Minimum 1/2" thick EnergyGuard RM Polyiso Insulation; Minimum 1-1/2" thick EnergyGuard RA Composite Polyiso Insulation; Minimum 1/2" thick Structodeck High Density Fiberboard Roof Insulation, EnergyGuard RH HD Polyiso Insulation, EnergyGuard HD Polyiso Insulation, EnergyGuard HD Plus Polyiso Insulation, EnergyGuard Perlite Recover Board; Minimum 3/4" thick EnergyGuard Perlite Roof Insulation; or Minimum 1/4" thick DensDeck, SECUROCK Glass-Mat Roof Board, SECUROCK Gypsum-Fiber Roof Board. Loose laid on the deck until the base sheet is fastened.
Base Sheet	GAFGLAS #75 base sheet, GAFGLAS #80 Ultima base sheet or GAFGLAS Stratavent Eliminator Venting nailable base sheet is mechanically fastened either through the optional insulation (when present) or directly to the deck using Drill-Tech #12 or #14 fasteners and Drill-Tec 3" standard steel plates, Drill-Tec AccuTrac flat plates, Drill-Tec AccuTrac Recessed plates (for use with optional insulation only), or with Drill-Tec ASAP 3S. The fasteners and plates are spaced at a maximum 12" on center. through minimum 2" wide laps and at a maximum of 12 inches on center in two rows staggered in the field of the sheet, spaced approximately 12.5" on center. The fasteners must be long enough to penetrate through the deck a minimum of 1".
Ply Sheet	Minimum three (3) layers of GAFGLAS Ply 4, GAFGLAS FlexPly 6, or Tri-Ply 4 built-up roofing ply sheets hot mopped to the base sheet at a rate of 20-25 pounds per 100 square feet.
Surfacing	Smooth coating of Special Roofing Bitumen, or GAF Premium Fibered Aluminum Roof Coating, or Weather Coat Emulsion, or GAF Aluminum Emulsion applied at the following rates: Special Roofing Bitumen (20 lbs./100 sf., slope up to 1/2" per foot) GAF Premium Fibered Aluminum Roof Coating (1-1/2 to 2 gal./100 sf, slope of 1/4" per foot or more) Weather Coat Emulsion (3 gal./100 sf., slope up to 6" per foot) GAF Aluminum Emulsion (1-1/2 to 2 gal./100 sf., slope up to 6" per foot)

System No. 2

Deck	Same as System 1
Deck Coating or Slip Sheet	Same as System 1
Insulation	Same as System 1
Base Sheet	Same as System 1
Ply Sheet	(Optional) Two (2) or three (3) layers of GAFGLAS Ply 4 or GAFGLAS FlexPly 6 ply sheets hot mopped to the base sheet at a rate of 20-25 pounds per 100 square feet.
Membrane	Hot asphalt adhered RUBEROID SBS Cap Plies; Hot asphalt adhered GAFGLAS cap plies; Torch adhered RUBEROID SBS Heat-Weld cap plies; or Torch adhered RUBEROID APP Cap plies per Table 1

System No. 3

Deck	Same as System 1
Deck Coating or Slip Sheet	Same as System 1
Insulation	Same as System 1
Base Sheet	Same as System 1
Ply Sheet	(Optional) One (1) or two (2) plies of RUBEROID Mop Smooth; RUBEROID Mop Smooth 1.5; or RUBEROID Mop Plus Smooth. Adhered to the base sheet with hot asphalt applied at a rate of 20-25 pounds per 100 square feet.
Membrane	RUBEROID Mop Granule; Tri-Ply APP Smooth, RUBEROID Mop Plus Granule; RUBEROID Mop Plus Granule FR; RUBEROID Mop Granule FR; or RUBEROID EnergyCap Mop Plus Granule FR

System No. 4

Deck	Same as System 1
Deck Coating or Slip Sheet	Same as System 1
Insulation	Same as System 1
Base Sheet	Same as System 1
Ply Sheet	(Optional) One (1) or two (2) plies of RUBEROID 20 Smooth. Adhered to the base sheet with hot asphalt applied at a rate of 20-25 pounds per 100 square feet.
Membrane	Torch Adhered RUBEROID APP Cap Plies per Table 1

System No. 5

Deck	Same as System 1
Deck Coating or Slip Sheet	Same as System 1
Insulation	Same as System 1
Base Sheet	Same as System 1
Ply Sheet	(Optional) One (1) or two (2) plies of RUBEROID Torch Smooth or Tri-Ply APP Smooth. Torch applied to the base sheet.
Membrane	Torch Adhered RUBEROID APP Cap Plies per Table 1

System No. 6

Deck	Same as System 1
Deck Coating or Slip Sheet	Same as System 1
Insulation	Same as System 1
Base Sheet	Same as System 1
Ply Sheet	(Optional) One (1) or two (2) plies of RUBEROID HW 25 Smooth or RUBEROID HW Smooth. Torch applied to the base sheet.
Membrane	Torch Adhered RUBEROID APP Cap Plies per Table 1

System No. 7

Deck	Same as System 1
Deck Coating or Slip Sheet	Same as System 1
Insulation	Same as System 1
Base Sheet	Same as System 1
Ply Sheet	Two (2) or three (3) layers of GAFGLAS Ply 4; GAFGLAS FlexPly 6; Tri-Ply Ply 4 ply sheets; or two (2) plies or RUBEROID 20 Smooth. Adhered to the base sheet with hot asphalt at a rate of 20-25 pounds per 100 square feet.
Membrane	Hot asphalt adhered GAFGLAS Cap Plies per Table 1

System No. 8

Deck	Same as System 1
Deck Coating or Slip Sheet	Same as System 1
Insulation	Minimum 1-1/2" thick EnergyGuard Polyiso insulation. Secured to the roof deck with Drill-Tec #14 fasteners and Drill-Tec 3" steel plates; Drill-Tec 3" standard steel plates, Drill-Tec AccuTrac Recessed Plates, Drill-Tec AccuTrac flat plates, or with the Drill-Tec ASAP 3S. Applied within a tributary area of 2.0 sf per fastener.
Base Sheet	Same as System 1
Ply Sheet	Two (2) or three (3) layers of GAFGLAS Ply 4; GAFGLAS FlexPly 6; Tri-Ply Ply 4 ply sheets; or two (2) plies or RUBEROID 20 Smooth. Adhered to the base sheet with hot asphalt at a rate of 20-25 pounds per 100 square feet.
Membrane	Hot asphalt adhered GAFGLAS Cap Plies per Table 1

System No. 9

Deck	Same as System 1
Deck Coating or Slip Sheet	Same as System 1
Insulation	Minimum 1-1/2" thick EnergyGuard Polyiso insulation. Secured to the roof deck with Drill-Tec #14 fasteners and Drill-Tec 3" steel plates; Drill-Tec 3" standard steel plates, Drill-Tec AccuTrac Recessed Plates, Drill-Tec AccuTrac flat plates, or with the Drill-Tec ASAP 3S. Applied within a tributary area of 2.0 sf per fastener.
Base Sheet	GAFGLAS Stratavent Perforated Venting Base Sheet. Laid over the insulation with minimum 2" wide side laps.
Ply Sheet	(Optional) One (1) or two (2) plies of RUBEROID Mop Smooth; RUBEROID Mop Smooth 1.5; or RUBEROID Mop Plus Smooth. Adhered to the base sheet with hot asphalt applied at a rate of 20-25 pounds per 100 square feet
Membrane	RUBEROID Mop Granule; Tri-Ply APP Smooth, RUBEROID Mop Plus Granule; RUBEROID Mop Plus Granule FR; RUBEROID Mop Granule FR; or RUBEROID EnergyCap Mop Plus Granule FR

System No. 10

Deck	Same as System 1
Deck Coating or Slip Sheet	Same as System 1
Insulation	Minimum 1-1/2" thick EnergyGuard Polyiso insulation. Secured to the roof deck with Drill-Tec #14 fasteners and Drill-Tec 3" steel plates; Drill-Tec 3" standard steel plates, Drill-Tec AccuTrac Recessed Plates, Drill-Tec AccuTrac flat plates, or with the Drill-Tec ASAP 3S. Applied within a tributary area of 2.0 sf per fastener.
Base Sheet	GAFGLAS Stratavent Perforated Venting Base Sheet. Laid over the insulation with minimum 2" wide side laps.
Ply Sheet	(Optional) One (1) or two (2) plies of RUBEROID 20 Smooth. Adhered to the base sheet with hot asphalt applied at a rate of 20-25 pounds per 100 square feet
Membrane	Hot asphalt adhered RUBEROID SBS Cap Plies per Table 1

System No. 11

Deck	Same as System 1
Deck Coating or Slip Sheet	Same as System 1
Insulation	Minimum 1-1/2" thick EnergyGuard Polyiso insulation. Secured to the roof deck with Drill-Tec #14 fasteners and Drill-Tec 3" steel plates; Drill-Tec 3" standard steel plates, Drill-Tec AccuTrac Recessed Plates, Drill-Tec AccuTrac flat plates, or with the Drill-Tec ASAP 3S. Applied within a tributary area of 2.0 sf per fastener.
Base Sheet	GAFGLAS Stratavent Perforated Venting Base Sheet. Laid over the insulation with minimum 2" wide side laps.
Ply Sheet	Two (2) or three (3) layers of GAFGLAS Ply 4; GAFGLAS FlexPly 6; Tri-Ply Ply 4 ply sheets; or two (2) plies or RUBEROID 20 Smooth. Adhered to the base sheet with hot asphalt at a rate of 20-25 pounds per 100 square feet.
Membrane	Hot asphalt adhered GAFGLAS Cap Plies per Table 1

System No. 12

Deck	Same as System 1
Deck Coating or Slip Sheet	(Optional) FireOut Fire Barrier Coating applied at a rate of 1 gal/sq. or VersaShield Solo Fire-Resistant Slip Sheet, mechanically attached.
Insulation	Same as System 3
Base Sheet	Same as System 3
Ply Sheet	Three (3) plies of GAFGLAS Ply 4; GAFGLAS FlexPly 6; Tri-Ply Ply 4 ply sheets; Adhered to the base sheet with hot asphalt at a rate of 20-25 pounds per 100 square feet
Surfacing	Same as System 1

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.