

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION RC-49

Effective November 1, 2013

*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 shall be subject to reevaluation **November 2017**.*

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.

GAF GAFGLAS and Tri-Ply Built-up Roofing Roof Covers and Ruberoid, Tri-Ply and RoofMatch SBS and APP Modified Bitumen Membranes manufactured by:

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will be accepted in designated catastrophe zones along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

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

GAFGLAS STRATAVENT Eliminator Venting Perforated 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 Mineral Surfaced 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 BUR 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 TOPCOAT EnergyCote Elastomeric Coating.

Ruberoid, Tri-Ply and RoofMatch 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 as a cap ply.

Ruberoid Dual Smooth is a combination polyester and fiberglass 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 as a cap ply.

Ruberoid Mop Granule, Tri-Ply TP-4 and RoofMatch SBS Modified Granular 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 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 FR is a heavyweight polyester mat reinforced, SBS modified bitumen membrane which has a top surfacing of granules and a bottom surfacing of sand. The polyester mat is coated with a coating which is inherently fire resistant. This product is used as a cap ply.

Ruberoid Mop 170 FR is a polyester mat reinforced, SBS modified bitumen membrane which has a top surfacing of granules and a bottom surfacing of sand. The polyester mat is coated with a coating which is inherently fire resistant. This product is used as a cap ply.

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

Ruberoid EnergyCap Mop 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 TOPCOAT EnergyCote Elastomeric Coating. The polyester mat is coated with a coating which is inherently fire resistant. This product is used as a cap ply.

Ruberoid 30 is a fiberglass 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 EnergyCap 30 FR SBS Membrane 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 TOPCOAT EnergyCote Elastomeric Coating. The fiberglass mat is coated with a coating which is inherently fire resistant. This product is used as a cap ply.

Ruberoid 30 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 which is inherently fire resistant. This product is used as a cap ply.

Ruberoid, Tri-Ply and RoofMatch Torch Applied APP Modified Bitumen Sheets

Ruberoid Torch Smooth and Tri-Ply TP-4 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, Tri-Ply TP-4G and RoofMatch APP Modified Granular 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 FR is a heavyweight polyester mat reinforced, APP modified bitumen membrane with a top surfacing of granules and a bottom surfacing of polyethylene. The polyester mat is coated with a coating which is inherently fire resistant. This product is used as a cap ply.

Ruberoid EnergyCap Torch Plus FR is a heavyweight polyester mat reinforced, APP modified bitumen membrane which has a bottom surfacing of polyethylene and a top surfacing of granules that are coated with TOPCOAT EnergyCote Elastomeric Coating. The polyester mat is coated with a coating which is inherently fire resistant. This 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 TOPCOAT EnergyCote Elastomeric Coating. The polyester mat is coated with a coating which is inherently fire resistant. This product is used as a cap ply.

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

Ruberoid SBS Heat-Weld 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 SBS Heat-Weld 25 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 SBS Heat-Weld 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 SBS Heat-Weld Plus 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 SBS Heat-Weld 170 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 SBS Heat-Weld Plus 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 TOPCOAT EnergyCote Elastomeric Coating. The polyester mat is coated with a coating which is inherently fire resistant. This product is used as a cap ply.

Ruberoid SBS Heat-Weld Plus 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

For All Applications: Roof decks in which this product is to be installed upon shall be provided with positive drainage and that a minimum roof slope after construction of $\frac{1}{4}$ inch per foot is recommended.

INSTALLATION INSTRUCTIONS

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

System No. 1

Design Wind Pressure: -45 psf

Deck: Shall be applied to a minimum $\frac{5}{8}$ inch structural sheathing.

Deck Coating or Slip Sheet: (Optional) FireOut Fire Barrier Coating is applied at 1 gal/sq or VersaShield Solo Fire-Resistant Slip Sheet is mechanically attached.

Insulation: (Optional, one or more of the following, any combination) min. 0.5 in. thick EnergyGuard Polyiso Insulation, EnergyGuard RH Polyiso Insulation, EnergyGuard RN Polyiso Insulation, EnergyGuard Ultra Polyiso Insulation, min. 1.5 in. thick EnergyGuard RA Composite Polyiso Insulation, min. 0.5 in. thick Structodek High Density Fiberboard Roof Insulation, EnergyGuard RH HD Polyiso Insulation, EnergyGuard HD Polyiso Insulation, EnergyGuard HD Plus Polyiso Insulation, EnergyGuard Perlite Recover Board, min. 0.75 in. thick EnergyGuard Perlite Roof Insulation or min. 0.25 in. thick Dens Deck, SECUROCK Glass-Mat Roof Board or SECUROCK Gypsum-Fiber Roof Board is 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-Tec #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), Drill-Tec 3" Steel Plates (for use with optional insulation only) or with the Drill-Tec ASAP 3S. The fasteners are spaced at a maximum 12 inches o.c. through minimum 2 inch wide laps and at a maximum of 12 inches o.c. in two rows staggered in the field of the sheet, spaced approximately 12.5 inches o.c. The fasteners shall penetrate through the deck a minimum of $\frac{3}{4}$ inch.

Ply Sheet(s) and Cap Ply: Per 1A, 1B, 1C, 1D, 1E or 1F below.

1A: (Optional) Two or three layers of GAFGLAS Ply 4, GAFGLAS FlexPly 6; roofing ply felt hot mopped to the base sheet at a rate of 20-25 lbs./100 sf. For use under Hot Asphalt Adhered Ruberoid SBS Cap Plies, Torch Adhered Ruberoid SBS Heat-Weld Cap Plies or Torch Adhered Ruberoid APP Cap Plies per the membrane table below.

1B: (Optional) One or two plies of Ruberoid Mop Smooth, Ruberoid Mop Smooth 1.5, Ruberoid Dual Smooth or Ruberoid Mop Plus Smooth adhered to the base sheet with hot asphalt applied at a rate of 20 -25 lbs/100 sf. For use under Hot Asphalt Adhered Ruberoid SBS Cap Plies excluding Ruberoid 30, Ruberoid 30 FR and Ruberoid EnergyCap 30 FR SBS Membrane per the membrane table below.

1C: (Optional) One or two plies of Ruberoid 20 adhered to the base sheet with hot asphalt applied at a rate of 20 – 25 lbs/100 sf. For use under Hot Asphalt Adhered Ruberoid SBS Cap Plies per the membrane table below.

1D: (Optional) One or two layers of Ruberoid Torch Smooth or Tri-Ply TP-4 torch applied to the base sheet. For use under Torch Adhered Ruberoid APP Cap Plies per the membrane table below.

1E: (Optional) One or two layers of Ruberoid SBS Heat-Weld 25 or Ruberoid SBS Heat-Weld Smooth torch applied to the optional base sheet or ply sheet(s). For use under Torch Adhered Ruberoid SBS Heat-Weld Cap Plies per the membrane table below.

1F: Two or three layers of GAFGLAS Ply 4, GAFGLAS FlexPly 6, Tri-Ply Ply 4; roofing ply felt; one or two plies of Ruberoid 20 adhered to the base sheet with hot asphalt applied at a rate of 20 -25 lbs/100 sf. For use with Hot Asphalt Adhered GAFGLAS Cap Plies. (Note that this configuration does not provide for optional membrane layers in between the base sheet and cap ply. The GAFGLAS Cap Plies may only be used over minimum two adhered asphaltic base plies or over minimum one adhered asphaltic SBS modified bitumen ply as specified herein.)

Membrane:

Hot Asphalt Adhered Ruberoid SBS Cap Plies:	Ruberoid Mop Granule, Tri-Ply TP-4, RoofMatch SBS Modified Granular, Ruberoid Mop Plus, Ruberoid Mop FR, Ruberoid Mop 170 FR, Ruberoid Dual FR, Ruberoid EnergyCap Mop FR, Ruberoid 30, Ruberoid 30 FR, Ruberoid EnergyCap 30 FR SBS Membrane
Hot Asphalt Adhered GAFGLAS Cap Plies:	GAFGLAS Mineral Surfaced Cap Sheet, Tri-Ply Mineral Surfaced Cap Sheet, GAFGLAS EnergyCap BUR Mineral Surfaced Cap Sheet
Torch Adhered Ruberoid SBS Heat-Weld Cap Plies:	Ruberoid SBS Heat-Weld Granule, Ruberoid SBS Heat-Weld Plus, Ruberoid SBS Heat-Weld Plus FR, Ruberoid SBS Heat-Weld 170 FR, Ruberoid EnergyCap SBS Heat-Weld Plus FR
Torch Adhered Ruberoid APP Cap Plies:	Ruberoid Torch Smooth, Tri-Ply TP-4, Ruberoid Torch Granule, Tri-Ply TP-4G, RoofMatch APP Modified Granular, Ruberoid Torch FR, Ruberoid EnergyCap Torch Granule FR, Ruberoid EnergyCap Torch Plus FR

System No. 2

Design Wind Pressure: -45 psf

Deck: Shall be applied to a minimum $\frac{5}{8}$ inch structural sheathing.

Deck Coating or Slip Sheet: (Optional) FireOut Fire Barrier Coating is applied at 1 gal/sq or VersaShield Solo Fire-Resistant Slip Sheet is mechanically attached.

Insulation: Minimum 1.5 in. thick EnergyGuard Polyiso Insulation is secured to the 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 3 S applied within a contributory area of 2.0 ft² per fastener.

Base Sheet: GAFGLAS Stratavent Eliminator Vening Perforated Base Sheet is laid dry over the insulation within minimum 2.0 in. wide side laps.

Ply Sheet(s) and Cap Ply: Per 2A, 2B, 2C, or 2D below.

2A: (Optional) Two or three layers of GAFGLAS Ply 4, GAFGLAS FlexPly 6 or Tri-Ply Ply 4; roofing ply felt hot mopped to the base sheet at a rate of 20-25 lbs./100sf. For use under Hot Asphalt Adhered Ruberoid SBS Cap Plies, Torch Adhered Ruberoid SBS Heat-

Weld Cap Plies or Torch Adhered Ruberoid APP Cap Plies per the membrane table below.

2B: (Optional) One or two plies of Ruberoid Mop Smooth, Ruberoid Mop Smooth 1.5, Ruberoid Dual Smooth or Ruberoid Mop Plus Smooth adhered to the base sheet with hot asphalt applied at a rate of 20 -25 lbs/100 sf. For use under Hot Asphalt Adhered Ruberoid SBS Cap Plies excluding Ruberoid 30, Ruberoid 30 FR and Ruberoid EnergyCap 30 FR SBS Membrane per the membrane table below.

2C: (Optional) One or two plies of Ruberoid 20 adhered to the base sheet with hot asphalt applied at a rate of 20 – 25 lbs/100 sf. For use under Hot Asphalt Adhered Ruberoid SBS Cap Plies.

2D: Two or three layers of GAFGLAS Ply 4, GAFGLAS FlexPly 6, Tri-Ply Ply 4; roofing ply felt; one or two plies of Ruberoid 20 adhered to the base sheet with hot asphalt applied at a rate of 20 -25 lbs/100 sf. For use with Hot Asphalt Adhered GAFGLAS Cap Plies. (Note that this configuration does not provide for optional membrane layers in between the base sheet and cap ply. The GAFGLAS Cap Plies may only be used over minimum two adhered asphaltic base plies or over minimum one adhered asphaltic SBS modified ply as specified herein.)

Membrane:

Hot Asphalt Adhered Ruberoid SBS Cap Plies:	Ruberoid Mop Granule, Tri-Ply TP-4, RoofMatch SBS Modified Granular, Ruberoid Mop Plus, Ruberoid Mop FR, Ruberoid Mop 170 FR, Ruberoid Dual FR, Ruberoid EnergyCap Mop FR, Ruberoid 30, Ruberoid 30 FR, Ruberoid EnergyCap 30 FR SBS Membrane
Hot Asphalt Adhered GAFGLAS Cap Plies:	GAFGLAS Mineral Surfaced Cap Sheet, Tri-Ply Mineral Surfaced Cap Sheet, GAFGLAS EnergyCap BUR Mineral Surfaced Cap Sheet
Torch Adhered Ruberoid APP Cap Plies:	Ruberoid Torch Smooth, Tri-Ply TP-4, Ruberoid Torch Granule, Tri-Ply TP-4G, RoofMatch APP Modified Granular, Ruberoid Torch FR, Ruberoid EnergyCap Torch Granule FR, Ruberoid EnergyCap Torch Plus FR

System No. 3

Design Wind Pressure: -45 psf

Deck: Shall be applied to a minimum $\frac{5}{8}$ inch structural sheathing.

Deck Coating or Slip Sheet: (Optional) FireOut Fire Barrier Coating is applied at 1 gal/sq or VersaShield Solo Fire-Resistant Slip Sheet is mechanically attached.

Insulation: None.

Base Sheet: GAFGLAS #80 Ultima Base Sheet or Ruberoid 20 are secured to the deck with minimum 12 gauge, 1 $\frac{1}{4}$ " long galvanized ring shank nails and minimum 32 gauge 1 $\frac{5}{8}$ " diameter tin caps, spaced 9" o.c. in the 4" wide base sheet side laps and 9" o.c. in two staggered rows in the field of the sheet.

Ply Sheet(s) and Cap Ply: Per 3A, 3B, 3C, 3D, 3E or 3F below.

3A: (Optional) Two or three layers of GAFGLAS Ply 4, GAFGLAS FlexPly 6; roofing ply felt hot mopped to the base sheet at a rate of 20-25 lbs./100 sf. For use under Hot Asphalt Adhered Ruberoid SBS Cap Plies, Torch Adhered Ruberoid SBS Heat-Weld Cap Plies or Torch Adhered Ruberoid APP Cap Plies per the membrane table below.

3B: (Optional) One or two plies of Ruberoid Mop Smooth, Ruberoid Mop Smooth 1.5, Ruberoid Dual Smooth, Ruberoid Mop Plus Smooth are adhered to the base sheet with hot asphalt applied at a rate of 20 -25 lbs/100 sf. For use under Hot Asphalt Adhered Ruberoid SBS Cap Plies excluding Ruberoid 30, Ruberoid 30 FR and Ruberoid EnergyCap 30 FR SBS Membrane per the membrane table below.

3C: (Optional) One or two plies of Ruberoid 20 are adhered to the base sheet with hot asphalt applied at a rate of 20 – 25 lbs/100 sf. For use under Hot Asphalt Adhered Ruberoid SBS Cap Plies per the membrane table below.

3D: (Optional) One or two layers of Ruberoid Torch Smooth, Tri-Ply TP-4 torch applied to the base sheet. For use under Torch Adhered Ruberoid APP Cap Plies per the membrane table below.

3E: (Optional) One or two layers of Ruberoid SBS Heat-Weld 25 or Ruberoid SBS Heat-Weld Smooth torch applied to the optional base sheet or ply sheet(s). For use under Torch Adhered Ruberoid SBS Heat-Weld Cap Plies per the membrane table below.

3F: Two or three layers of GAFGLAS Ply 4, GAFGLAS FlexPly 6, Tri-Ply Ply 4; roofing ply felt; one or two plies of Ruberoid 20 are adhered to the base sheet with hot asphalt applied at a rate of 20 -25 lbs/100 sf. For use with Hot Asphalt Adhered GAFGLAS Cap Plies. (Note that this configuration does not provide for optional membrane layers in between the base sheet and cap ply. The GAFGLAS Cap Plies may only be used over minimum two adhered asphaltic base plies or over minimum one adhered asphaltic SBS Modified Bitumen ply as specified herein.)

Membrane:

Hot Asphalt Adhered Ruberoid SBS Cap Plies:	Ruberoid Mop Granule, Tri-Ply TP-4, RoofMatch SBS Modified Granular, Ruberoid Mop Plus, Ruberoid Mop FR, Ruberoid Mop 170 FR, Ruberoid Dual FR, Ruberoid EnergyCap Mop FR, Ruberoid 30, Ruberoid 30 FR, Ruberoid EnergyCap 30 FR SBS Membrane
Hot Asphalt Adhered GAFGLAS Cap Plies:	GAFGLAS Mineral Surfaced Cap Sheet, Tri-Ply Mineral Surfaced Cap Sheet, GAFGLAS EnergyCap BUR Mineral Surfaced Cap Sheet
Torch Adhered Ruberoid SBS Heat-Weld Cap Plies:	Ruberoid SBS Heat-Weld Granule, Ruberoid SBS Heat-Weld Plus, Ruberoid SBS Heat-Weld Plus FR, Ruberoid SBS Heat-Weld 170 FR, Ruberoid EnergyCap SBS Heat-Weld Plus FR
Torch Adhered Ruberoid APP Cap Plies:	Ruberoid Torch Smooth, Tri-Ply TP-4, Ruberoid Torch Granule, Tri-Ply TP-4G, RoofMatch APP Modified Granular, Ruberoid Torch FR, Ruberoid EnergyCap Torch Granule FR, Ruberoid EnergyCap Torch Plus FR

System No. 4

Design Wind Pressure: -75 psf

Deck: Shall be applied to a minimum $\frac{5}{8}$ inch structural sheathing.

Deck Coating or Slip Sheet: (Optional) FireOut Fire Barrier Coating is applied at 1 gal/sq or VersaShield Solo Fire-Resistant Slip Sheet is mechanically attached.

Insulation: None.

Base Sheet: GAFGLAS #80 Ultima Base Sheet or Ruberoid 20 are secured to the deck with minimum 12 gauge, 1 $\frac{1}{4}$ " long galvanized ring shank nails and minimum 32 gauge 1 $\frac{5}{8}$ " diameter tin caps, spaced 8" o.c. in the 4" wide base sheet side laps and 8" o.c. in three staggered rows in the field of the sheet.

Ply Sheet(s) and Cap Ply: Per 4A, 4B, 4C, 4D, 4E or 4F below.

4A: (Optional) Two or three layers of GAFGLAS Ply 4, GAFGLAS FlexPly 6; roofing ply felt hot mopped to the base sheet at a rate of 20-25 lbs./100 sf. For use under Hot Asphalt Adhered Ruberoid SBS Cap Plies, Torch Adhered Ruberoid SBS Heat-Weld Cap Plies or Torch Adhered Ruberoid APP Cap Plies per the membrane table below.

4B: (Optional) One or two plies of Ruberoid Mop Smooth, Ruberoid Mop Smooth 1.5, Ruberoid Dual Smooth, Ruberoid Mop Plus Smooth are adhered to the base sheet with hot asphalt applied at a rate of 20 -25 lbs/100 sf. For use under Hot Asphalt Adhered Ruberoid SBS Cap Plies excluding Ruberoid 30, Ruberoid 30 FR and Ruberoid EnergyCap 30 FR SBS Membrane per the membrane table below.

4C: (Optional) One or two plies of Ruberoid 20 are adhered to the base sheet with hot asphalt applied at a rate of 20 – 25 lbs/100 sf. For use under Hot Asphalt Adhered Ruberoid SBS Cap Plies per the membrane table below.

4D: (Optional) One or two layers of Ruberoid Torch Smooth, Tri-Ply TP-4 torch applied to the base sheet. For use under Torch Adhered Ruberoid APP Cap Plies per the membrane table below.

4E: (Optional) One or two layers of Ruberoid SBS Heat-Weld 25 or Ruberoid SBS Heat-Weld Smooth torch applied to the optional base sheet or ply sheet(s). For use under Torch Adhered Ruberoid SBS Heat-Weld Cap Plies per the membrane table below.

4F: Two or three layers of GAFGLAS Ply 4, GAFGLAS FlexPly 6, Tri-Ply Ply 4; roofing ply felt; one or two plies of Ruberoid 20 are adhered to the base sheet with hot asphalt applied at a rate of 20 -25 lbs/100 sf. For use with Hot Asphalt Adhered GAFGLAS Cap Plies. (Note that this configuration does not provide for optional membrane layers in between the base sheet and cap ply. The GAFGLAS Cap Plies may only be used over minimum two adhered asphaltic base plies or over minimum one adhered asphaltic SBS Modified Bitumen ply as specified herein.)

Membrane:

Hot Asphalt Adhered Ruberoid SBS Cap Plies:	Ruberoid Mop Granule, Tri-Ply TP-4, RoofMatch SBS Modified Granular, Ruberoid Mop Plus, Ruberoid Mop FR, Ruberoid Mop 170 FR, Ruberoid Dual FR, Ruberoid EnergyCap Mop FR, Ruberoid 30, Ruberoid 30 FR, Ruberoid EnergyCap 30 FR SBS Membrane
Hot Asphalt Adhered GAFGLAS Cap Plies:	GAFGLAS Mineral Surfaced Cap Sheet, Tri-Ply Mineral Surfaced Cap Sheet, GAFGLAS EnergyCap BUR Mineral Surfaced Cap Sheet
Torch Adhered Ruberoid SBS Heat-Weld Cap Plies:	Ruberoid SBS Heat-Weld Granule, Ruberoid SBS Heat-Weld Plus, Ruberoid SBS Heat-Weld Plus FR, Ruberoid SBS Heat-Weld 170 FR, Ruberoid EnergyCap SBS Heat-Weld Plus FR
Torch Adhered Ruberoid APP Cap Plies:	Ruberoid Torch Smooth, Tri-Ply TP-4, Ruberoid Torch Granule, Tri-Ply TP-4G, RoofMatch APP Modified Granular, Ruberoid Torch FR, Ruberoid EnergyCap Torch Granule FR, Ruberoid EnergyCap Torch Plus FR

Note: The manufacturer's installation instructions shall be on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC) and the International Building Code (IBC).