

TGFU.R1306 - Roofing Systems

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Roofing Systems

GAF

R1306

1 Campus Dr
Parsippany, NJ 07054 United States

"RUBEROID® 20 Smooth" or "RUBEROID® Mop Smooth" or "RUBEROID® Mop Smooth 1.5" may be utilized as an alternate to Type G2 "GAFLAS® #75 Base Sheet" or "Tri-Ply® #75 Base Sheet" or "GAFLAS® #80 Ultima™ Base Sheet" base sheets in any of the following Classifications.

Torch applied "RUBEROID® HW" SBS roofing membranes may be used as alternates to "RUBEROID® Mop" SBS roofing membranes in any applicable Classification as follows:

- A. "RUBEROID® HW Smooth" may be used as an alternate to "RUBEROID® Mop Smooth" or "RUBEROID® Mop Smooth 1.5"
- B. "RUBEROID® HW 25 Smooth" may be used as an alternate to "RUBEROID® 20 Smooth"
- C. "RUBEROID® HW Granule" may be used as an alternate to "RUBEROID® Mop Granule"
- D. "RUBEROID® HW Plus Granule" may be used as an alternate to "RUBEROID® Mop Plus Granule"
- E. "RUBEROID® HW Granule FR" may be used as an alternate to "RUBEROID® Mop Granule FR"
- F. "RUBEROID® HW Plus Granule FR" may be used as an alternate to "RUBEROID® Mop Plus Granule FR"
- G. "RUBEROID® EnergyCap HW Plus Granule FR" may be used as an alternate to "RUBEROID® EnergyCap Mop Plus Granule FR"

Minimum 1/2-in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck® Prime Roofboard" or "DensDeck® DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Roof Board" (Type FRX-G) or "SECUROCK® Glass-Mat Roof Board" (Type SGMRX) may be used in any existing noncombustible roof deck Classification. When this is done, the resulting roofing system is acceptable for use over minimum 15/32-in. thick combustible roof decks. However, the butt joints in the gypsum board and Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck® Prime Roofboard" or "DensDeck® DuraGuard™ Roofboard" are to offset a minimum of 6-in. with the butt joints in the roof deck. If polystyrene is part of the roof system, it must be placed below the overlayment board. Minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Roof Board" (Type FRX-G) and "SECUROCK® Glass-Mat Roof Board" (Type SGMRX) are limited to a maximum 3:12 inline when used over a combustible roof deck in a system with any UL Classified insulation except polystyrene.

Multiple plies of Type G1 "GAFLAS® Ply 4" or "Tri-Ply® Ply 4" or "GAFLAS® Flex Ply 6" or "Tri-Ply® Ultra-Flexible Ply 6" may be adhered to Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck® Prime Roofboard" or "DensDeck® DuraGuard™ Roofboard" in hot roofing asphalt.

"GAFLAS® FlexPly™ 6 5L" and "GAFLAS® FlexPly™ 6" may be used interchangeably in any roof covering system listed below.

"EnergyGuard™ Ultra" is an acceptable alternate to "EnergyGuard™" in any applicable Classification.

"GAFGlas® Stratavent® Nailable Venting Base Sheet" may be mechanically fastened or fully adhered with hot roofing asphalt over noncombustible roof decks and as a recover over existing roof covering systems.

"EnergyGuard™ Perlite Insulation" may be utilized as a cover board over "EnergyGuard™" in any of the following systems.

Unless otherwise indicated, the roof insulation is mechanically fastened, fully adhered with hot roofing asphalt or UL Classified urethane insulation adhesive. Polystyrene referenced in any of the following Classifications include insulation.

Unless otherwise indicated, all insulations may be adhered with any UL Classified Insulation Adhesive per the manufacturer's installation instructions (excluding "LRF Adhesive O") in any applicable non-combustible roof deck Classifications.

"EnergyGuard™ Tapered" is an acceptable alternate to "EnergyGuard™" in any applicable Classification.

"EnergyGuard™ Ultra Tapered" is an acceptable alternate to "EnergyGuard™ Ultra" in any applicable Classification.

"EnergyGuard™ NH Tapered" is an acceptable alternate to "EnergyGuard™ NH" in any applicable Classification.

"EnergyGuard™ NH Ultra Tapered" is an acceptable alternate to "EnergyGuard™ NH Ultra" in any applicable Classification.

"EnergyGuard™ Barrier Tapered" is an acceptable alternate to "EnergyGuard™ Barrier".

"EnergyGuard™ NH Barrier Tapered" is an acceptable alternate to "EnergyGuard™ NH Barrier".

Minimum 1/2-in. thick "EnergyGuard™ Barrier" is an acceptable alternate to "EnergyGuard™ Ultra" in any applicable Classification.

Minimum 1/2-in. thick "EnergyGuard™ NH Barrier" is an acceptable alternate to "EnergyGuard™ NH Ultra" in any applicable Classification.

"EnergyGuard™ RA Tapered" may be substituted for "EnergyGuard™ RA" in any of the systems listed below that utilize "EnergyGuard™ RA". "EnergyGuard™ RA" may be perforated on one side for use as the contact side for BUR or modified bitumen membrane.

"EnergyGuard™ RA Ultra Tapered" may be substituted for "EnergyGuard™ RA Ultra" in any of the systems listed below.

"EnergyGuard™ RA Ultra" may be substituted for "EnergyGuard™ RA" polyisocyanurate insulation in any of the following Classifications.

For Combustible Roof Decks - Class A: A minimum 3 in. layer or a minimum two layers of 1.5 in. of "EnergyGuard™ RA Ultra" is placed directly over a combustible deck and is covered with any UL Classified roofing membrane used in any UL Class A roofing assembly to achieve a Class A fire Classification. As an alternative, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the 3 in. minimum total thickness of "EnergyGuard™ RA Ultra". The insulation may be loosely laid or attached with fasteners and plates, hot roofing asphalt or cold adhesive. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation joints must be staggered a minimum of 6 in. from the deck joints or from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roofing assembly, however the incline cannot exceed 1/2:12.

See Above

ASPHALT FELT SYSTEMS WITH HOT ROOFING ASPHALT

Type G2 asphalt glass mat base sheet ("GAFGlas® #75 Base Sheet" or "Tri-Ply® #75 Base Sheet" or "GAFGlas® #80 Ultima™ Base Sheet") is a suitable alternate for Type G1 asphalt glass fiber ply sheet ("GAFGlas® Ply 4" or "Tri-Ply® Ply 4" or "GAFGlas® Flex Ply 6" or "Tri-Ply® Ultra-Flexible Ply 6") in the Class A, B or C roof covering systems indicated below.

The roof deck may first be covered with one ply Type G2 asphalt saturated glass mat base sheet "GAFGlas® Stratavent® Nailable Venting Base Sheet" or "GAFGlas® Stratavent® Perforated Venting Base Sheet". Perforated base sheets to be loose laid or fully adhered with hot roofing asphalt and nailable base sheets are to be mechanically fastened granule side down.

As an option Type G2 asphalt glass mat base sheet ("GAFGlas® #75 Base Sheet" or "Tri-Ply® #75 Base Sheet" or "GAFGlas® #80 Ultima™ Base Sheet" or "GAFGlas® Stratavent® Nailable Venting Base Sheet") may be substituted for Type G1 asphalt glass fiber ply sheet ("GAFGlas® Ply 4" or "Tri-Ply® Ply 4" or "GAFGlas® Flex Ply 6" or "Tri-Ply® Ultra-Flexible Ply 6") as the nailed base ply in the following systems.

Bottom ply or base sheet may be fully adhered with hot roofing asphalt or mechanically fastened.

Unless otherwise indicated, all insulations may be fully adhered with hot roofing asphalt or mechanically fastened.

"GAFGlas® Flashing" or "RUBEROID®" may be used for flashing in any of the Class A, B or C systems listed below.

When "perlite" is referenced, this includes any UL Classified perlite insulation.

Crushed stones or slag are suitable alternates for gravel in any of the Class A, B or C systems listed.

Structural cement fiber building units are considered suitable to be included as a deck in the following Class A, B or C systems listed over C-15/32 or NC.

The use of gypsum board under any of the following Class A, B or C systems does not adversely affect the rating. The use of minimum 1/2-in. thick gypsum board is an acceptable alternate for minimum insulation over C-15/32 thick roof decks.

The use of polystyrene insulation board between minimum 3/4-in. thick perlite board and deck with rosin paper (perlite/rosin paper/polystyrene/perlite) is a suitable alternate for polyisocyanurate board in the following Class A, B or C systems.

Trumbull "Perma Mop" may be utilized with any of the following "Asphalt Felt Systems with Hot Roofing Asphalt".

"GAFGLAS® #80 Ultima™ Base Sheet" may be used in any of the following systems.

"GAFTEMP Permalite Recover Board" may be used in lieu of any perlite insulation in any of the following NC Classifications.

Unless otherwise indicated, any of the "Asphalt Felt Systems with Hot Roofing Asphalt" may be surfaced with "United Coatings™ FireShield MB Roof Coating" or "FireShield® MB Roof Coating" applied at a rate of 2-1/2 to 3-gal./100-ft².

Class A, B and C

Hot roofing asphalt, for use with glass felts or modified bitumen membranes.

Torch applied "RUBEROID® Heat Weld" SBS roofing membranes may be used as alternates to "RUBEROID® Mop" SBS roofing membranes in any applicable Classification.

"RUBEROID® HW 25 Smooth" may be used as an alternate to "RUBEROID® Mop Smooth" or "RUBEROID® Mop Smooth 1.5".

Class A

1. Deck: C-15/32

Incline: 3

Barrier Board (Optional): — One or more layers of minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck® Prime Roofboard", "DensDeck® DuraGuard™ Roofboard"; or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Roof Board" (Type FRX-G) or "SECUROCK® Glass-Mat Roof Board" (Type SGMRX) or minimum 1/4-in. thick National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcellFA Glass Mat Roof Board".

Primer (Optional): — Asphalt primer complying with ASTM D41/D41M, applied at a rate of 0.75 - 1.0 gal./100-ft.², GAF SA Primer applied at 0.7 - 1.0 gal./100-ft.², "EverGuard® TPO Quick Spray Adhesive LV50" spray applied in full coverage to the barrier board (approximately 2000-ft.² of installed coverage per 27-lb. canister) or "EverGuard® TPO Quick Spray Adhesive" spray applied in full coverage to the barrier board (approximately 2000-ft.² of installed coverage per 30-lb. canister).

Vapor Barrier (Optional): — One or more plies "GAF® SA Vapor Retarder", "GAF SA Vapor Retarder XL" or "GAF SA Vapor Retarder XL40", self-adhered.

Insulation: — One or more layers perlite or wood fiber or glass fiber or polyisocyanurate or urethane or perlite/polyisocyanurate composite or perlite/urethane composite or wood fiber/polyisocyanurate composite or phenolic, any thickness.

Ply Sheet: — Three or more plies Type G1 "GAFGLAS® Ply 4", "Tri-Ply® Ply 4", "GAFGLAS® Flex Ply 6", "GAFGLAS Ply 4 M", "GAFGLAS FlexPly 6 M" or "Tri-Ply® Ultra-Flexible Ply 6", fully adhered with hot roofing asphalt.

Surfacing: — Roofing gravel applied at a minimum of 400-lbs./100-ft.² and embedded into a flood coat of hot roofing asphalt applied at a minimum of 60-lbs./100-ft.².

2. Deck: C-15/32

Incline: 2

Barrier Board (Optional): — One or more layers minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck® Prime Roofboard" or "DensDeck® DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Roof Board" (Type FRX-G) or "SECUROCK® Glass-Mat Roof Board" (Type SGMRX) or minimum 1/4-in. thick National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcellFA Glass Mat Roof Board".

Insulation: — One or more layers perlite or wood fiber or glass fiber or polyisocyanurate or urethane or perlite/polyisocyanurate composite or perlite/urethane composite or wood fiber/polyisocyanurate composite or phenolic, any thickness.

Ply Sheet: — Three or more plies Type G1 "GAFGLAS® Ply 4" or "Tri-Ply® Ply 4" or "GAFGLAS® Flex Ply 6" or "Tri-Ply® Ultra-

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck® Prime Roofboard" or "DensDeck® DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Roof Board" (Type FRX-G) or "SECUROCK® Glass-Mat Roof Board" (Type SGMRX) or minimum 1/4-in. thick National Gypsum Co "DEXcell Glass Mat Roof Board" or "DEXcellFA Glass Mat Roof Board" mechanically fastened or adhered with OMG Inc. "OlyBond Fastening System" or any UL Classified insulation adhesive with butt joints in the barrier board products staggered a minimum of 6-in. from plywood deck joints.

Base Sheet: — One ply "GAFGLAS® Stratavent® Nailable Venting Base Sheet" or "GAFGLAS® Stratavent® Perforated Venting Base Sheet", loose laid or Type G2 "GAFGLAS® #75 Base Sheet" or "Tri-Ply #75 Base Sheet" or "GAFGLAS® #80 Ultima™ Base Sheet", fully adhered with hot roofing asphalt.

Ply Sheet: — One or two plies "RUBEROID® Mop Smooth" or "RUBEROID® Mop Plus Smooth" fully adhered with hot roofing asphalt.

Membrane: — "GAFGLAS® Mineral Surfaced Cap Sheet" or "Tri-Ply® BUR Granule Cap Sheet", fully adhered with hot roofing asphalt.

Coating: — "EnergyCote™ Roof Coating" or "GAF EnergyCote™ Roof Coating" or "TOPCOAT® MB Plus Coating" or "United Coatings™ Roof Mate™ MB Plus Coating" or "Bleed-Block Acrylic Base Coat" or "GAF Bleed-Block Acrylic Base Coat" applied at a rate of 2-gal./100-ft.².

20. Deck: C-15/32

Incline: 1

Base Sheet: — One ply Type G2 "GAFGLAS® #75 Base Sheet" or "Tri-Ply® #75 Base Sheet" mechanically fastened.

Insulation (Optional): — Any thickness or combination: perlite or wood fiber or glass fiber or polyisocyanurate, mechanically fastened or hot mopped or adhered with OMG Inc. "OlyBond Fastening System" or any UL Classified insulation adhesive.

Base Sheet: — One or more plies "RUBEROID® 20 Smooth", "Ruberoid® 20 Plus Smooth" or "RUBEROID® HW 25 Smooth", mechanically fastened or fully adhered with hot roofing asphalt.

Cap Sheet: — Type G3 "GAFGLAS® Mineral Surfaced Cap Sheet" or "Tri-Ply® BUR Granule Cap Sheet" or "GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet".

21. Deck: NC

Incline: 2

Barrier Board (Optional): — One or more layers minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck® Prime Roofboard" or "DensDeck® DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Roof Board" (Type FRX-G) or "SECUROCK® Glass-Mat Roof Board" (Type SGMRX) or minimum 1/4-in. thick National Gypsum Co "DEXcell Glass Mat Roof Board" or "DEXcellFA Glass Mat Roof Board".

Insulation (Optional): — One or more layers perlite or wood fiber or glass fiber or polyisocyanurate or urethane or perlite/polyisocyanurate composite or perlite/urethane composite or wood fiber/polyisocyanurate composite or phenolic, any thickness.

Base Sheet: — Two plies Type G1 "GAFGLAS® Ply 4" or "Tri-Ply® Ply 4" or "GAFGLAS® Flex Ply 6", "GAFGLAS Ply 4 M", "GAFGLAS FlexPly 6 M" or one ply Type G2 "GAFGLAS® #75 Base Sheet" or "Tri-Ply® #75 Base Sheet" or "GAFGLAS® #80 Ultima™ Base Sheet" mechanically fastened or fully adhered with hot roofing asphalt or one ply Type G2 "GAFGLAS® Stratavent® Nailable Venting Base Sheet" or "GAFGLAS® Stratavent® Perforated Venting Base Sheet" loose laid, mechanically fastened or fully adhered.

Ply Sheet: — One or more plies Type G1 "GAFGLAS® Ply 4" or "Tri-Ply® Ply 4" or "GAFGLAS® Flex Ply 6", "GAFGLAS Ply 4 M", "GAFGLAS FlexPly 6 M", fully adhered with hot roofing asphalt. **See Note Section**

Cap Sheet: — Type G3 "GAFGLAS® Mineral Surfaced Cap Sheet" or "Tri-Ply® BUR Granule Cap Sheet" or "GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet", fully adhered with hot roofing asphalt.

22. Deck: NC

Incline: 3

Base Sheet: — — GAFGLAS FlexPly 6 M", "GAFGLAS Ply 4 M", mechanically fastened or hot mopped. May use "Modified BUR Asphalt".

Insulation (Optional): — Perlite or glass fiber, any thickness, mechanically fastened or hot mopped. May use "Modified BUR Asphalt".

Ply Sheets: — One or more layers "GAFGLAS FlexPly 6 M", "GAFGLAS Ply 4 M".

Surfacing: — Gravel, crushed stone or crushed slag, in a flood coat of hot roofing asphalt.

3. Deleted.

4. Deleted.

5. Deleted.

6. Deleted.

7. Deleted.

8. **Deck:** C-15/32

Incline: 3/4

Existing Roof System: — Class A, B or C roof covering system to retain the existing Classification covered with:

Membrane: — “EverGuard® TPO FB Ultra” or “EverGuard® TPO Fleece-Back Membrane” or “EverGuard® TPO Fleece-Back Membrane XT” 60-mil to 80-mil or “EverGuard Extreme® TPO FB Ultra” or “EverGuard Extreme® TPO Fleece-Back Membrane” 60-mil to 80-mil, fully adhered with hot roofing asphalt or mechanically fastened.

FLUID APPLIED COATING SYSTEMS

Class A

1. **Deck:** NC

Incline: Unlimited

Base Coat: — "TOPCOAT® Membrane Coating", "United Coatings™ Roof Mate™ TCM Roof Coating", "TOPCOAT® Membrane WOB" or "United Coatings™ Roof Mate™ WOB Coating" or “WOB Acrylic TopCoat®” applied at a rate of 1 to 1.5-gal./100-ft.².

Intermediate Coat (Optional): — TOPCOAT® Membrane Coating", "United Coatings™ Roof Mate™ TCM Roof Coating", "TOPCOAT® Membrane WOB" or "United Coatings™ Roof Mate™ WOB Coating" or “WOB Acrylic TopCoat®” applied at a rate of 1 to 1.5-gal./100-ft.².

Top Coat: — "TOPCOAT® Membrane Coating", "United Coatings™ Roof Mate™ TCM Roof Coating", "TOPCOAT® Membrane WOB" or "United Coatings™ Roof Mate™ WOB Coating" or “WOB Acrylic TopCoat®” applied at a rate of 1 to 1.5-gal./100-ft.².

2. **Deck:** NC

Incline: Unlimited

Coating: — "TOPCOAT® Membrane Coating", "United Coatings™ Roof Mate™ TCM Roof Coating", "TOPCOAT® Membrane WOB" or "United Coatings™ Roof Mate™ WOB Coating" or “WOB Acrylic TopCoat®” applied at a rate of 2 to 3-gal./100-ft.².

3. **Deck:** NC

Incline: 3

Primer (Optional): — "UniTile LV Sealer" (Not UL Classified) applied at a rate of 1/4 gal./100-ft.².

Base Coat: — "TOPCOAT® Surface Seal SB Coating" or "United Coatings™ Surface Seal SB Roof Coating" or “Surface Seal SB Roof Coating” or “GAF Surface Seal SB Roof Coating” applied at a rate of 1 to 1-1/2 gal./100-ft.².

Mid Coat (Optional): — One or two applications "TOPCOAT® Surface Seal SB Coating" or "United Coatings™ Surface Seal SB Roof Coating" or “Surface Seal SB Roof Coating” or “GAF Surface Seal SB Roof Coating” applied at a rate of 1 to 1-1/4 gal./100-ft.².

Top Coat: — "TOPCOAT® Surface Seal SB Coating" or "United Coatings™ Surface Seal SB Roof Coating" or “Surface Seal SB Roof Coating” or “GAF Surface Seal SB Roof Coating” applied at a rate of 1 to 1-1/4 gal./100-ft.².

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