

# UL Listings - SAMB

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**MULE-HIDE PRODUCTS, CO., INC.  
UNDERWRITERS LABORATORIES (UL)  
TGFU.R13850**

**ROOFING SYSTEMS – SELF-ADHERED MODIFIED BITUMEN**

Revised August 2018

**ANY SYSTEM**

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\* Note: Assembly numbers shown in the following listings correspond to the UL Master Listing number for all Mule-Hide Products, Co., Inc.

\*\*Note: Assembly numbers shown in the following listings correspond to the UL Master Listing number for **Atlas Roofing Corp.**

\*\*\*Note: Assembly numbers shown in the following listings correspond to the UL Master Listing number for **GEORGIA-PACIFIC GYPSUM LLC**

Uniform thickness or tapered insulation may be used in the following systems provided they do not exceed the indicated incline or thickness.

Any system listed for use over a combustible deck can be installed over a non-combustible deck and achieve the same classification.

Unless otherwise indicated, on non-combustible decks, Mule-Hide Products "Poly ISO 1-NB", "Poly ISO 1-HD" or "Poly ISO 1-HD90" or "Poly ISO 1-HD-Composite" may replace, or be used in addition to, any Poly ISO 1 product or any UL Classified wood fiberboard, in any UL Classified insulated roofing system assembly and retain the classification of that assembly, though the max slope cannot exceed 1/2:12 if "Poly ISO 1- HD", "Poly ISO 1-HD-Composite" or " Poly ISO 1-HD90" is used directly below TPO membrane. Unless otherwise indicated, on combustible decks, "Poly ISO 1-NB", "Poly ISO 1-HD", "Poly ISO 1-HD-Composite", and "Poly ISO 1-HD90" may be used in addition to any Poly ISO 1 product or any UL Classified wood fiber board, in any insulated UL Classified roofing system assembly and retain the classification of that assembly, though the max slope cannot exceed 1/2:12 if "Poly ISO 1- HD", "Poly ISO 1-HD-Composite" or " Poly ISO 1-HD90" is used directly below TPO membrane.

Mule-Hide Products "Poly ISO 1-HD", "Poly ISO 1-HD-Composite" or "Poly ISO 1-HD90" (min. 1/2 in. thickness) may be used over any UL Classified polystyrene on non-combustible decks. Max incline shall be in accordance with the Classification established for the insulation/membrane roofing system, but cannot exceed 2:12.

Unless otherwise indicated, insulation is mechanically fastened to the roof deck.

Unless otherwise indicated, when referring to gypsum board in the following classifications, the following will be referenced: G-P Gypsum DensDeck®, 1/4 in. min, SECUROCK Glass-Mat Roof Board (Type SGMRX) or SECUROCK Gypsum-Fiber Roof Board (Type FRX-G), minimum 1/4 in., Regular gypsum board (not Classified) laid with staggered joints (6 in. offset) measuring 0.463 in. thick min and weighing 184 lbs/sq min or Georgia Pacific "Sound Deadening" Board, measuring 0.208 in. thick min and weighing 109 lbs/sq min. 1/4 in. (min) SECUROCK Gypsum-Fiber Roof Board (Type FRX-G) is limited to a maximum 3:12 slope when used as a thermal barrier over a combustible deck in a system with any UL Classified insulation except polystyrene. 1/2 in. (min) SECUROCK Gypsum-Fiber Roof Board (Type FRX-G) is limited to a maximum 1:12 slope when used as a thermal barrier over a combustible deck in a system without insulation or with any UL Classified polystyrene insulation.

1/4 in. thick (min) G-P Gypsum DensDeck®, ¼ in. thick (min.) Owens Corning Strataguard, 1/4 in. thick (min) SECUROCK Glass-Mat Roof Board (Type SGMRX) or SECUROCK Gypsum-Fiber Roof Board (Type FRX-G) or regular gypsum board may replace "HP Recovery Board" in any existing noncombustible deck Classification. When this is done, the resulting roofing system is acceptable for use over combustible (15/32 in. min) roof decks. The joints in the gypsum board are offset 6 in. with the joints in the deck. 1/4 in. (min) SECUROCK Gypsum-Fiber Roof Board (Type FRX-G) is limited to a maximum 3:12 slope when used over a combustible deck in a system with any UL Classified insulation except polystyrene. 1/2 in. (min) SECUROCK Gypsum-Fiber Roof Board (Type FRX-G) is limited to a maximum 1:12 slope when used over a combustible deck in a system without insulation or with any UL Classified polystyrene insulation.

1/2 in. thick (min) gypsum board, ¼ in. thick (min.) Owens Corning Strataguard, 1/4 in. thick (min) SECUROCK Glass-Mat Roof Board (Type SGMRX) or SECUROCK Gypsum-Fiber Roof Board (Type FRX-G) or 1/4 in. thick (min) G-P Gypsum DensDeck® may be used in any existing noncombustible deck Classification. When this is done, the resulting roofing system is acceptable for use over combustible (15/32 in. min) roof decks. The joints in the gypsum board and overlayment board are offset 6 in. with the joints in the deck. 1/4 in. (min) SECUROCK Gypsum-Fiber Roof Board (Type FRX-G) is limited to a maximum 3:12 slope when used as a thermal barrier over a combustible deck in a system with any UL Classified insulation except polystyrene. 1/2 in. (min) SECUROCK Gypsum-Fiber Roof Board (Type FRX-G) is limited to a maximum 1:12 slope when used as a thermal barrier over a combustible deck in a system without insulation or with any UL Classified polystyrene insulation.

Unless otherwise indicated, any UL Classified wood fiber board, any oriented strand board (OSB), Mule-Hide Poly ISO 1-NB or Hunter Panels H-Shield-NB may replace "HP Recovery Board" in any of the systems mentioned below.

Straight or tapered insulation may be used in the following assemblies provided they do not exceed the indicated incline or thickness and carry a UL label.

A vapor barrier (non-UL Classified) may be used below the insulation in any of the following systems without affecting the Classification.

Unless otherwise indicated, the term "Referenced Insulations" will include the following: Atlas Roofing "ACFoam II" or "ACFoam III", Mule-Hide Poly ISO 2, Dow "Hy-Therm AP", Hunter Panels "H-Shield", "H-Shield ca", "H-Shieldw", "H-Shield-CG", "H-Shield CGw", "H-Shield HD", "H-Shield HD90", "H-Shield HD Composite" or "H-Shield HD Composite CG", Mule-Hide Poly ISO 1, Poly ISO 1 DWD, Poly ISO 1-HD, Poly ISO 1-HD90, Poly ISO 1-HD-Composite, Johns Manville "ENRGY- 2", or "ENRGY-3", Firestone Building Products "ISO 95+GL", "GW" or "HF", Rmax "Multi-Max", any thickness.

## ALL SYSTEMS

### **Class A, B or C (See Note 1)**

**\*\*\*1. Deck: C-15/32**

**Incline:** See Notes 1 and 4

**Insulation:** — Any UL Classified, any thickness.

**Barrier Board: (See Note 2)** — ¼-in., ½-in. or 5/8-in. thick "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck Prime 2™ Roofboard" or "DensDeck DuraGuard® Roofboard" with all joints staggered a min of 6 in. from the plywood joints.

**Membrane:** — Any UL Classified modified bitumen system, BUR system or CPE, CSM, CSPE, EPDM, NBP, PIB, PVC, TPO or TRE membrane system suitable for use with any roof insulation.

**\*\*\*2. Deck: C-15/32**

**Incline:** See Notes 1 and 4

**Barrier Board: (See Note 3)** — ¼-in., ½-in. or 5/8-in. thick "DensDeck® Roofboard," or "DensDeck Prime® Roofboard" or "DensDeck Prime 2™ Roofboard" or "DensDeck DuraGuard® Roofboard" with all joints staggered a min of 6 in. from the plywood joints.

**Insulation (Optional):** — Fiberglass, polyisocyanurate, perlite or wood fiber, any thickness.

**Membrane:** — Any UL Classified modified bitumen system, BUR system or CPE, CSM, CSPE, EPDM, NBP, PIB, PVC, TPO or TRE membrane system suitable for use with any roof insulation.

Note 1: Classification (A, B or C) and max incline will be the same as that of the Classified Roofing System (TGFU) currently limited to noncombustible deck.

Note 2: The use of the "DensDeck® Roofboard," or "DensDeck Prime® Roofboard" or (min ½ in.) "DensDeck Prime 2™ Roofboard" or "DensDeck DuraGuard® Roofboard" as a barrier board over the insulation permits the use of any Classified Roofing System (TGFU) which otherwise is limited to use over noncombustible deck.

Note 3: The use of the "DensDeck® Roofboard," or "DensDeck Prime® Roofboard" or (min ½ in.) "DensDeck Prime 2™ Roofboard" or "DensDeck DuraGuard® Roofboard" as a barrier board directly over the combustible deck permits the use of any Classified Roofing System (TGFU) which otherwise is limited to use over noncombustible deck. When used, insulation must consist of one of the types specified.

Note 4: The use of ¼ in. thick "DensDeck Prime 2™" limited to a slope of 2-1/2 in. or less.

## **ALL SYSTEMS**

### **Class A**

#### **For Combustible Decks - Class A:            Incline: 1/2**

1. A minimum 3 in. layer or a minimum two layers of 1.5 in. of "Poly ISO 1-DWD" or "Poly ISO 1-HD-Composite" 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 "Poly ISO 1-DWD" or "Poly ISO 1-HD-Composite". 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 can not exceed 1/2:12.
2. A minimum 1.9 in. layer of "Poly ISO 1-DWD" or "Poly ISO 1-HD-Composite" is placed over a minimum 1 layer of Carlisle "FR Base Sheet 1S" or Elk "VersaShield FB-1S" over a combustible deck. The insulation 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 1.9 in. minimum total thickness of "Poly ISO 1-DWD" or "Poly ISO 1-HD-Composite". 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 can not exceed 1/2:12.
3. A minimum 1 in. layer of Mule-Hide Panels "Poly ISO 1-WD-Class A" 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 1 in. minimum thickness of Mule-Hide Panels "Poly ISO 1-WD-Class A ". 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 can not exceed 1/2:12.

Class A – All Systems (Continued)

**\*\* For Combustible Decks - Class A:**

4. A minimum 1 in. layer of "AC Foam IV" placed directly over a combustible deck and covered with any UL Classified roofing membrane used in any UL Class A roofing assembly to achieve a Class A fire Classification. As an alternate, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used above or below the 1 in. minimum total thickness of "AC Foam IV." 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 1:12.

**ALL SYSTEMS**

**Class B**

**For Combustible Decks - Class B:            Incline: 1/2**

1. A minimum 1.9 in. layer of "Poly ISO 1-DWD", or a minimum 2 in. thick layer of Carlisle "Polyiso HP-WLC" or Atlas "AC Foam III" is placed directly over a combustible deck and is covered with any UL Classified roofing membrane used in any UL Class B roofing assembly to achieve a Class B fire Classification. As an alternative, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the 1.9 in. minimum thickness layer of "Poly ISO 1-DWD". 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 can not exceed 1/2:12.

## CLASS A – FULLY ADHERED

### 1. Deck: C-15/32

**Incline:** 2

**Insulation (Optional):** — Polyisocyanurate, polystyrene, perlite, wood fiber or polyisocyanurate/perlite board, any thickness.

**Barrier Board:** — Minimum ¼-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", or minimum ¼-in United States Gypsum Co. "Securock™ Roof Board (Type FRX-G)" mechanically fastened with all joints staggered 6-in. from the plywood joints.

**Base Sheet:** — "NAIL BASE" (poly/sand), mechanically fastened or "SA BASE SHEET (FR)" self-adhered.

**Ply Sheet (Optional):** — "SA BASE SHEET (FR)", self-adhered.

**Membrane:** — "SA-APP CAP SHEET (FR)" or "SA-SBS CAP SHEET (FR)", self-adhered.

### 2. Deck: NC

**Incline:** 2

**Insulation (Optional):** — Polyisocyanurate, polystyrene, perlite, wood fiber or polyisocyanurate/perlite board, any thickness.

**Barrier Board:** — Minimum ¼-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", or minimum ¼-in. thick United States Gypsum Co. "Securock Roof Board (Type FRX-G)" mechanically fastened with all joints staggered 6-in. from the plywood joints.

**Base Sheet:** — "NAIL BASE" (poly/sand), mechanically fastened or "SA BASE SHEET (FR)" self-adhered.

**Ply Sheet (Optional):** — "SA BASE SHEET (FR)", self-adhered.

**Membrane:** — "SA-APP CAP SHEET (FR)" or "SA-SBS CAP SHEET (FR)", self-adhered.

### 3. Deck: C-15/32

**Incline:** 1/2

**Insulation (Optional):** — Polyisocyanurate 1.5-in. (minimum) with all joints staggered 6-in. (minimum) from the plywood joints.

**Base Sheet:** — Type G2, mechanically fastened followed by "NAIL BASE", mechanically fastened.

**Ply Sheet (Optional):** — "SA BASE SHEET (FR)", self-adhered.

**Membrane:** — "SA-APP CAP SHEET (FR)" or "SA-SBS CAP SHEET (FR)" self-adhered.

### 4. Deck: NC

**Incline:** 2

**Insulation:** — "Poly Iso 2" or Atlas Roofing Corp. "ACFoam III", "ACFoam II" or Hunter Panels "H-Shield", any thickness.

**Base Sheet:** — "NAIL BASE" (poly/sand), heat fused or mechanically fastened or "SA BASE SHEET (FR)", self-adhered.

**Membrane:** — "SA-APP CAP SHEET (FR)" or "SA-SBS CAP SHEET (FR)" self-adhered.

### 5. Deck: NC

**Incline:** 3

**Insulation (Optional):** — "Poly Iso 2" or Atlas Roofing Corp. "ACFoam III", "ACFoam II" or Hunter Panels "H-Shield", any thickness.

**Base Sheet:** — "SA BASE SHEET (FR)", self-adhered.

**Membrane:** — "SA-APP CAP SHEET (FR)" or "SA-SBS CAP SHEET (FR)" self-adhered.

Class A – Fully Adhered (Continued)

- 6. Deck:** NC **Incline:** 3  
**Membrane:** — "SA-APP CAP SHEET (FR)" or "SA-SBS CAP SHEET (FR)" self-adhered.
- 7. Deck:** NC **Incline:** 1  
**Insulation (Optional):** — Polyisocyanurate, any thickness.  
**Base Sheet (Optional):** — "SA BASE SHEET" self-adhered or "NAIL BASE" (poly/sand), mechanically fastened.  
**Membrane:** — "SA-APP CAP SHEET" or "SA-SBS CAP SHEET" self-adhered.
- 8. Deck:** C-15/32 **Incline:** 2  
**Insulation (Optional):** — Polyisocyanurate, perlite, wood fiber or polyisocyanurate/perlite board, any thickness.  
**Barrier Board:** — Minimum ¼-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", mechanically fastened. with all barrier board butt joints staggered a minimum of 6-in. from the plywood roof deck joints.  
**Base Sheet:** — "Nail Base" mechanically fastened or "SA Base Sheet 6163 (FR)" self-adhered.  
**Ply Sheet (Optional):** — "Nail Base" heat fused or mechanically fastened or "SA Base Sheet 6163 (FR)" self-adhered.  
**Membrane:** — "SA-APP Cap Sheet (FR)", "SA-APP KoolCap G FR", "SA-SBS Cap Sheet (FR)", "SA-SBS KoolCap FR", "APP Torch G FR" or "APP Torch KoolCap G FR" heat fused.
- 9. Deck:** C-15/32 **Incline:** 1/2  
**Insulation (Optional):** — Minimum 1½-in. thick polyisocyanurate with all insulation butt joints staggered a minimum of 6-in. from the plywood roof deck butt joints.  
**Base Sheet:** — Type G2, mechanically fastened followed by "Nail Base" mechanically fastened.  
**Ply Sheet (Optional):** — "SA Base Sheet 6163 (FR)" self-adhered.  
**Membrane:** — "SA-APP Cap Sheet (FR)", "SA-APP KoolCap G FR", "SA-SBS Cap Sheet (FR)", "SA-SBS KoolCap FR" or "APP Torch G FR", heat fused.
- 10. Deck:** NC **Incline:** 2  
**Insulation (Optional):** — Atlas Roofing Corp. "ACFoam III" or "ACFoam II" or Hunter Panels "H-Shield", any thickness.  
**Base Sheet:** — "Nail Base" heat fused or mechanically fastened or "SA Base Sheet 6163 (FR)" self-adhered.  
**Membrane:** — "SA-APP Cap Sheet (FR)", "SA-APP KoolCap G FR", "SA-SBS Cap Sheet (FR)", "SA-SBS KoolCap FR" self-adhered or "APP Torch G FR" or "APP Torch KoolCap G FR" heat fused.
- 11. Deck:** NC **Incline:** 3  
**Insulation (Optional):** — Atlas Roofing Corp. "ACFoam III" or "ACFoam II" or Hunter Panels "H-Shield" any thickness.  
**Base Sheet:** — "SA Base Sheet 6163 (FR)" self-adhered.  
**Membrane:** — "SA-APP Cap Sheet (FR)", "SA-APP KoolCap G FR", "SA-SBS Cap Sheet (FR)" or "SA-SBS KoolCap FR" self-adhered.



Class A – Fully Adhered (Continued)

12. **Deck:** NC

**Incline:** 3

**Membrane:** — "SA-APP Cap Sheet (FR)", "SA-APP KoolCap G FR", "SA-SBS KoolCap FR" or "SA-SBS Cap Sheet (FR)" self-adhered.

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

**Incline:** 2

**Insulation (Optional):** — Polyisocyanurate, perlite, wood fiber or polyisocyanurate/perlite board, any thickness.

**Base Sheet:** — "Nail Base", mechanically fastened. Ply Sheet (Optional): — "SA Base Sheet 6163 (FR)" self-adhered.

**Membrane:** — "SA-Base Cap Sheet (FR)", "SA-APP Kool Cap G FR", "SA-Base SBS Cap Sheet (FR)" or "SA-Base KoolCap FR", self-adhered; or "APP Torch G FR", heat fused.

61. **Deck:** C - 7/16-in. "Mule-Hide FR Deck Panel A" or Barrier Technology Corp. "Blazeguard A"\*

**Incline:** 1/2

**Membrane:** — Any UL Classified fully adhered EPDM, PVC, TPO or self-adhered modified bitumen cap sheet. Maximum incline is determined by the existing membrane Classification but cannot exceed 1/2:12.

\* - All deck with non-coated edges require all deck joints blocked with 2 x 4 lumber. Gaps in "Mule-Hide FR Deck Panel" or Barrier Technology Corp. "Blazeguard A" are caulked with Rectorseal "FlameSafe® FS900+" caulk. All FR Deck panel with edges coated with "Blazeguard Fire-Resistant Paint", 80-250 ft<sup>2</sup>/gal., only require blocking below the open joints with 2 x 4 lumber.

108. **Deck:** NC

**Incline:** See Note

**Insulation (Optional):** — Any UL Classified insulation, any thickness.

**Barrier Board:** — "Mule-Hide FR Deck Panel A" or Barrier Technology Corp. "Blazeguard A"\*

**Membrane:** — Any UL Classified Mule-Hide fully adhered EPDM, PVC, TPO or self-adhered modified bitumen cap sheet,

Note: Maximum incline is determined by the existing membrane/adhesive Classification.

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**CLASS B – FULLY ADHERED**

- 1. Deck: NC** **Incline: 1**  
**Insulation (Optional):** — Polyisocyanurate, any thickness.  
**Base Sheet (Optional):** — "SA BASE SHEET", self-adhered.  
**Membrane:** — "SA-APP CAP SHEET" or "SA-SBS CAP SHEET", self-adhered.
- 2. Deck: C-15/32** **Incline: 1/2**  
**Insulation (Optional):** — Polyisocyanurate, any thickness.  
**Barrier Board:** — Minimum ¼-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", mechanically fastened.  
**Base Sheet:** — "NAIL BASE" (poly/sand), mechanically fastened.  
**Ply Sheet (Optional):** — "SA Base Sheet", self-adhered.  
**Membrane:** — "SA-APP CAP SHEET" or "SA-SBS CAP SHEET", self-adhered.
- 3. Deck: C-15/32** **Incline: 1/4**  
**Ply Sheet:** — "SA BASE SHEET", self-adhered.  
**Membrane:** — "SA-APP CAP SHEET" or "SA-SBS CAP SHEET", self-adhered.
- 4. Deck: NC** **Incline: 1**  
**Insulation (Optional):** — Polyisocyanurate, any thickness.  
**Base Sheet (Optional):** — "SA Base Sheet 6163 (FR)" self-adhered or "Nail Base" mechanically fastened.  
**Ply Sheet (Optional):** — "APP Torch S" heat fused.  
**Membrane:** — "SA-SBS KoolCap" self-adhered, heat fused.
- 5. Deck: C-15/32** **Incline: 1/2**  
**Insulation (Optional):** — Polyisocyanurate, any thickness.  
**Barrier Board:** — Minimum ¼-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", mechanically fastened with all barrier board butt joints staggered a minimum of 6-in. from the plywood roof deck joints.  
**Base Sheet:** — "Nail Base" (poly/sand) mechanically fastened.  
**Ply Sheet (Optional):** — "SA Base Sheet 6163" self-adhered.  
**Membrane:** — "SA-APP KoolCap G", "SA-SBS KoolCap" self-adhered or "APP Torch G" heat fused.
- 6. Deck: C-15/32** **Incline: 1/4**  
**Base Sheet (Optional):** — "Nail Base" mechanically fastened.  
**Ply Sheet:** — "SA Base Sheet 6163" self-adhered or "Nail Base" mechanically fastened.  
**Membrane:** — "SA-APP Cap Sheet", "SA-APP KoolCap G", "SA-SBS KoolCap" self-adhered or "APP Torch G" heat fused.

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Class B – Fully Adhered (Continued)

7. **Deck:** NC

**Incline:** 1

**Insulation:** — Any UL Certified, any thickness.

**Barrier Board:** — ¼, 3/8, ½ or 5/8-in. thick United States Gypsum Co. "SECUROCK™ Roof Board (Type FRX-G)".

**Base Sheet (Optional):** — "SA Base Sheet 6163" self-adhered or "Nail Base" mechanically fastened.

**Ply Sheet (Optional):** — "APP Torch S" heat fused.

**Membrane:** — "SA-APP Cap Sheet", "SA-APP KoolCap G", "XtraFlex Kool APP G SA", "SA-SBS Cap Sheet", "SA-SBS KoolCap" self-adhered or "APP Torch G" heat fused.

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

**Incline:** 2

**Insulation (Optional):** — Polyisocyanurate, perlite, wood fiber or polyisocyanurate/perlite board, any thickness.

**Barrier Board:** — Minimum ¼-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", mechanically fastened with all barrier board butt joints staggered a minimum of 6-in. from the plywood roof deck joints.

**Base Sheet:** — "Nail Base" mechanically fastened, heat fused or hot mopped.

**Ply Sheet (Optional):** — "Nail Base" mechanically fastened, heat fused or hot mopped.

**Membrane:** — "SA-APP Cap Sheet (FR)", "SA-APP KoolCap G FR", "SA-SBS Cap Sheet (FR)", "SA-SBS KoolCap FR", "APP Torch G FR", "APP Torch KoolCap G FR" heat fused or hot mopped.

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**CLASS C – FULLY ADHERED**

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

**Incline:** 2

**Base Sheet:** — "Nail Base" or Type G2 base sheet mechanically fastened.

**Membrane:** — "SA-APP Cap Sheet", "SA-APP KoolCap G", "SA-SBS Cap Sheet", "SA-SBS KoolCap" self-adhered.

5. **Deck:** C - 7/16-in. "Mule-Hide FR Deck Panel C" or Barrier Technology Corp Blazeguard C"

**Incline:** 2

**Membrane:** — Any UL Classified fully adhered EPDM, PVC, TPO or self-adhered modified bitumen cap sheet. Maximum incline is determined by the existing membrane Classification but cannot exceed 2:12.

18. **Deck:** NC

**Incline:** See Note

**Insulation (Optional):** — Any UL Classified insulation, any thickness.

**Barrier Board:** — "Mule-Hide FR Deck Panel C or Barrier Technology Corp, "Blazeguard C" - 7/16 in. min."

**Membrane:** — Any UL Classified Mule-Hide fully adhered EPDM, PVC, TPO or self-adhered modified bitumen cap sheet,

Note: Maximum incline is determined by the existing membrane/adhesive Classification.

**Class C**

1. **Deck:** "PyroXL", min. 15/32-in Fire-Retardant-Treated Plywood (Building Unit)

**Incline:** See Note

**Membrane:** — Any UL Classified fully adhered EPDM, PVC, TPO or self-adhered modified bitumen cap sheet.

Note: Maximum incline is determined by the membrane.

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## MAINTENANCE AND REPAIR SYSTEMS

### CLASS A, B AND C

12. **Deck:** C-15/32 or NC

**Incline:** See Note

**Existing Roof System:** — Any Class A, B or C roofing system, to retain the existing Classification, is covered with:

**Insulation:** — Hunter Panels "Poly ISO 1-HD" or " Poly ISO 1-HD90".

**Membrane:** — Any UL Classified membrane.

Max incline shall be in accordance with Classification established for insulation/membrane roofing system, but cannot exceed 2:12. TPO membranes are limited to a 1/2:12. max. slope.

13. **Deck:** C-15/32 or NC

**Incline:** See Note

**Existing Roof System:** — Any Class A, B or C roofing system, to retain the existing Classification, is covered with:

**Insulation:** — Hunter Panels " Poly ISO 1-HD-Composite ".

**Membrane:** — Any UL Classified membrane.

Note: Max incline shall be in accordance with Classification established for insulation/membrane roofing system, but cannot exceed 2:12. TPO membranes are limited to a 1/2:12. max. slope.

## MAINTENANCE AND REPAIR SYSTEMS

### CLASS A

21. **Deck:** NC

**Incline:** See Note

**Existing Roof System:** — Class A, B or C roofing system (gravel may be removed from gravel built-up or ballasted single-ply system).

**Insulation:** — A minimum 3 in. layer or minimum two layers of "Poly ISO 1-DWD".

**Membrane:** — Any UL Classified roofing membrane.

Note: The maximum incline shall be in accordance with the Class A Classification established for the membrane/insulation roofing assembly, however the incline can not exceed 1/2:12.

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

**Incline:** See Note

**Existing Roof System:** — Class A, B or C roofing system (gravel may be removed from gravel built-up or ballasted single-ply system).

**Insulation:** — A minimum 3 in. layer or minimum two layers of "Poly ISO 1-DWD".

**Membrane:** — Any UL Classified roofing membrane.

Note: The maximum incline shall be in accordance with the Class A Classification established for the membrane/insulation roofing assembly, however the incline can not exceed 1/2:12.

### CLASS B

6. **Deck:** NC

**Incline:** See Note

**Existing Roof System:** — Class A, B or C roofing system (gravel may be removed from gravel built-up or ballasted single-ply system).

**Insulation:** — A minimum 1.9 in. layer of "Poly ISO 1-DWD".

**Membrane:** — Any UL Classified roofing membrane.

Note: The maximum incline shall be in accordance with the Class A Classification established for the membrane/insulation roofing assembly, however the incline can not exceed 1/2:12.

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

**Incline:** See Note

**Existing Roof System:** — Class A, B or C roofing system (gravel may be removed from gravel built-up or ballasted single-ply system).

**Insulation:** — A minimum 1.9 in. layer of "Poly ISO 1-DWD".

**Membrane:** — Any UL Classified roofing membrane.

Note: The maximum incline shall be in accordance with the Class A Classification established for the membrane/insulation roofing assembly, however the incline can not exceed 1/2:12.