

## Commercial/Industrial Roofing Systems

 **UL Listing: SBS Modified Bitumen Roofing Systems****SBS MODIFIED BITUMEN SYSTEMS**

Any noncombustible deck Classification incorporating polyisocyanurate insulation may substitute the polyisocyanurate with EPS covered by a layer of 1/2 in. thick (min) wood fiber board.

Any Classification incorporating polyisocyanurate insulation may incorporate a layer of wood fiber board (any thickness) on top or bottom of the insulation.

Polystyrene insulation (any thickness), covered with 1/2 in. thick min perlite, is an acceptable alternate to any insulation in any of the following noncombustible roof deck Classifications.

"DynaLastic 180S" may be used under "DynaGlas FR" in all applicable Classifications providing that a Type G2 base sheet is utilized in addition to the "DynaLastic 180S" product.

"Dibiflex" is a suitable alternate to "Roof Defender SBS Cap Sheet" in all applicable Classifications.

"Nord Flex Duo Ply FR Cap Sheet" may be used in lieu of "DynaGlas FR" in all applicable Classifications.

"Roof Defender Fiber Glass Cap Sheet" is a suitable alternate to "PermaPly 28" in all applicable Classifications.

"DuraBoard" may be used in lieu of "Fesco" Board (in equivalent thickness) in all applicable Classifications.

"DynaWeld Base" may be used in lieu of "DynaBase" in all Classifications.

"DynaWeld Cap" may be used in lieu of "DynaGlas 30 FR" in all Classifications. "DynaGlas S" and "DynaLastic 250S" may be used in lieu of "DynaPly" in all applicable Classifications.

"DynaLastic 180" may be used in lieu of "DynaLastic 180S" in all applicable Classifications.

**SBS MODIFIED BITUMEN SYSTEMS WITH HOT ROOFING ASPHALT****Class A****1. Deck:** C-15/32**Incline:** 1

**Insulation (Optional):** Any thickness, one or more layers Johns Manville "Fesco", "Fesco-Foam", "Fiber Glass Roof Insulation", "ISO 1", "E'NRG'Y-2", 3/4 in. "Fesco" over polystyrene or any UL Classified polyisocyanurate insulation, mechanically fastened or hot mopped.

**Base Sheet:** One or more plies Type G1 "GlasPly IV", "GlasPly Premier" or Type G2 "PermaPly 28", "GlasBase" or "Ventsulation", ~~or~~ "DynaPly" or "DynaBase" (modified bitumen), mechanically fastened or hot mopped.

**Membrane:** "DynaLastic 180S", "DynaLastic 250S", "DynaLastic 250", "DynaKap", "DynaPly", "DynaGlas", "DynaMax FR", "DynaGlas FR 30", "DynaLastic 250FR" or "Roof Defender SBS Cap Sheet" (modified bitumen), hot mopped.

**Surfacing:** Gravel and hot roofing asphalt.

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

**Incline:** 2

**Insulation (Optional):** Any thickness, one or more layers Johns Manville "Fesco", "Fesco-Foam", "Fiber Glass Roof Insulation", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, in combination (optional) with 1/2 in. "Retro-Fit" cover board or 3/4 in. "Fesco" over "DynaBase XT" may be used in lieu of "DynaBase" and "DynaWeld Base" in all Classifications "DynaGlas 30 FR XT" may be used in lieu of "DynaGlas 30 FR" and "DynaWeld Cap FT" in all Classifications.

**Ply Sheet:** Two or more plies Type G1 "GlasPly IV", "GlasPly Premier" or Type G2 "PermaPly 28", "GlasBase" or "Ventsulation", ~~or~~ "DynaPly" or "DynaBase" (modified bitumen), nailed or hot mopped.

**Membrane:** "DynaLastic 180S", "DynaLastic 250S", "DynaLastic 250", "DynaKap", "DynaPly", "DynaGlas", "DynaMax FR", "DynaLastic 250FR" or "Roof Defender SBS Cap Sheet", (SBS modified bitumen), hot mopped.

**Surfacing:** Gravel and hot roofing asphalt.

3. **Deck:** NC

**Incline:** 3

**Insulation (Optional):** Any thickness, one or more layers Johns Manville "Fesco", "Fesco-Foam", "Fiber Glass Roof Insulation", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, in combination (optional) with 1/2 in. "Retro-Fit" cover board or 3/4 in. "Fesco" over polystyrene, mechanically fastened or hot mopped.

**Ply Sheet:** One or more plies "GlasPly IV", "GlasPly Premier" or Type G2 "PermaPly 28", "GlasBase" or "Ventsulation", "DynaPly", "DynaBase" or "*DynaLastic 180S*" (modified bitumen), nailed or hot mopped.

**Membrane:** "DynaLastic 180S", "DynaLastic 250S", "DynaLastic 250", "DynaKap", "DynaPly", "DynaGlas", "DynaMax FR", "DynaLastic 250FR" or "Roof Defender SBS Cap Sheet", (SBS modified bitumen) hot mopped.

**Surfacing:** Gravel and hot roofing asphalt.

4. **Deck:** NC

**Incline:** 3

**Insulation (Optional):** Any thickness, one or more layers Johns Manville "Fesco", "Fesco-Foam", "Fiber Glass Roof Insulation", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, mechanically fastened or hot mopped in combination (optional) with 1/2 in. "Retro-Fit" cover board or 3/4 in. "Fesco" over polystyrene.

**Ply Sheet:** One or more plies Type G1 "GlasPly IV", "GlasPly Premier" or Type G2 "PermaPly 28", "GlasBase" or "Ventsulation", ~~or~~ "DynaPly", "DynaBase" or "*DynaLastic 180S*" (SBS modified bitumen), mechanically fastened or hot mopped.

**Ply Sheet:** "DynaLastic 180S", "DynaLastic 250S", "DynaLastic 250", "DynaKap", "DynaPly", "DynaGlas", "DynaMax FR", "DynaLastic 250FR", "Roof Defender SBS Cap Sheet" or "DynaBase" (SBS modified bitumen), hot mopped.

**Surfacing:** Gravel and hot roofing asphalt.

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

**Incline:** 1

**Insulation (Optional):** Any thickness, one or more layers, Johns Manville "Fesco", "Fesco-Foam", "Fiber Glass Roof Insulation", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, mechanically fastened or hot mopped in combination (optional) with 1/2 in. "Retro-Fit" cover board, or 3/4 in. "Fesco" over polystyrene.

**Ply Sheet:** Two or more plies Type G1 "GlasPly IV", "GlasPly Premier" or Type G2 "PermaPly 28", "GlasBase" or "Ventsulation", ~~or~~ "DynaPly" or "DynaBase" (SBS modified bitumen), mechanically fastened or hot mopped.

**Ply Sheet:** "DynaLastic 180S", "DynaLastic 250S", "DynaLastic 250", "DynaKap", "DynaPly", "DynaGlas", "DynaMax FR", "DynaLastic 250FR", "Roof Defender SBS Cap Sheet" or "DynaBase" (SBS modified bitumen), hot mopped.

**Surfacing:** Gravel and hot roofing asphalt.

6. Deck: C-15/32

Incline: 2

**Insulation (Optional):** Any thickness, one or more layers, Johns Manville "Fesco", "Fesco Foam", "Fiber Glass Roof Insulation", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, mechanically fastened or hot mopped in combination (optional) with 1/2 in. "Retro-Fit" cover board, or 3/4 in. "Fesco" over polystyrene.

**Ply Sheet:** Three or more plies Type G1 "GlasPly IV", "GlasPly Premier" or Type G2 "PermaPly 28", "GlasBase" or "Ventsulation", ~~or~~ "DynaPly" or "DynaBase" (SBS modified bitumen), mechanically fastened or hot mopped.

**Ply Sheet:** "DynaLastic 180S", "DynaLastic 250S", "DynaLastic 250", "DynaKap", "DynaPly", "DynaGlas", "DynaMax FR", "DynaLastic 250FR", "Roof Defender SBS Cap Sheet" or "DynaBase" (SBS modified bitumen), hot mopped.

**Surfacing:** Gravel and hot roofing asphalt.

7. Deck: NC

Incline: 2

**Insulation (Optional):** Any UL Classified (except polystyrene), any thickness.

**Base Sheet:** One ply "DynaBase".

**Ply Sheet:** Two or more plies "DynaBase" (SBS modified bitumen), hot mopped.

**Surface Coating:** Gravel, embedded in hot roofing asphalt or any UL Classified emulsion applied at the rate of 4-5 gal/sq.

8. Deck: C-15/32

Incline: 1/2

**Insulation (Optional):** Any thickness, one or more layers, Johns Manville "Fesco", "Fesco-Foam", "DuraBoard", "ISO 1", "E'NRG'Y-2", hot mopped or mechanically fastened, in combination (optional) with 1/2 in. "Retro-Fit" cover board, or 3/4 in. "Fesco" over polystyrene, hot mopped or mechanically fastened. All insulation joints offset from plywood deck joints, 6 in. min.

**Base Sheet:** One or more plies Type G1 "GlasPly IV" or "GlasPly Premier" or Type G2 "PermaPly 28", "GlasBase" or "Ventsulation", "DynaPly" or "DynaBase" (SBS modified bitumen), hot mopped or "DynaWeld Base", heat welded.

**Membrane:** "DynaKap FR", "DynaGlas 30 FR", "DynaLastic 180FR", "DynaMax FR", "DynaLastic 250FR" or "DynaGlas FR" (SBS modified bitumen), hot mopped, or "DynaWeld Cap", heat welded..

9. Deck: NC

Incline: 1/2

**Insulation (Optional):** One or more layers, any thickness, Johns Manville "Fesco", "Fesco-Foam", "DuraBoard", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, mechanically fastened or hot mopped in combination (optional) with 1/2 in. "Retro-Fit" cover board or 3/4 in. "Fesco" over polystyrene, mechanically fastened or hot mopped.

**Base Sheet:** One or more plies Type G1 "GlasPly Premier", "GlasPly IV" or Type G2 "PermaPly 28", "GlasBase", "Ventsulation", "DynaPly", "DynaBase" or "*DynaLastic 180S*" (SBS modified bitumen), mechanically fastened or hot mopped, or "DynaWeld Base", heat welded.

**Membrane:** "DynaKap FR", "DynaGlas 30 FR", "DynaGlas FR", "DynaMax FR" or "DynaLastic 250FR" (SBS modified bitumen), hot mopped, or "DynaWeld Cap", heat welded.

10. Deck: NC

Incline: 1/2

**Insulation (Optional):** Any thickness, one or more layers, Johns Manville "Fesco", "Fesco-Foam", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, hot mopped or mechanically fastened in combination (optional) with 1/2 in. "Retro-Fit" cover board or 3/4 in. "Fesco" over polystyrene.

**Ply Sheet:** Two or more plies Type G1 "GlasPly Premier", "GlasPly IV" or Type G2 "PermaPly 28", "GlasBase" or "Ventsulation", ~~or~~ "DynaPly", "DynaBase" or "*DynaLastic 180S*" (SBS modified bitumen), hot mopped. First layer may be nailed.

**Membrane:** "DynaLastic 180 FR" or "DynaLastic 250 FR" (SBS modified bitumen), hot mopped, or "DynaWeld Cap", heat welded.

11. Deck: C-15/32

Incline: 1/2 in.

**Base Sheet:** "GlasBase", "Ventsulation" or "DynaBase", nailed.

**Ply Sheet:** One or two plies "DynaBase", "DynaPly", "GlasPly IV" or "GlasPly Premier", hot mopped.

**Membrane:** "DynaKap FR", "DynaGlas 30 FR", "DynaLastic 180FR", "DynaMax FR", "DynaLastic 250FR" or "DynaGlas FR" (SBS modified bitumen), hot mopped or "DynaWeld Cap", heat welded.

12. **Deck:** NC

**Incline:** 1/2

**Base Sheet (Optional):** Type G1 or G2, mechanically attached, spot or fully mopped.

**Ply Sheet:** "*DynaLastic 180S*", "DynaBase" or "DynaLastic 1805", mechanically fastened, spot or fully mopped, or "DynaWeld Base", heat welded.

**Membrane:** "DynaGlas FR" or "DynaMax FR" (SBS modified bitumen), hot mopped, or "DynaWeld Cap", heat welded.

13. **Deck:** NC

**Incline:** 1/2

**Insulation (Optional):** Polyisocyanurate, polyisocyanurate/perlite composite, wood fiber, glass fiber or perlite, any thickness, any combination.

**Base Sheet (Optional):** Type G1, G2 or G2 vented base sheet, mechanically attached, spot or fully mopped.

**Ply Sheet:** "*DynaLastic*", "DynaBase", mechanically fastened, spot or fully mopped, or "DynaWeld Base", heat welded.

**Membrane:** "DynaGlas FR" or "DynaMax FR" (SBS modified bitumen), hot mopped, or "DynaWeld Cap", heat welded.

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

**Incline:** 1/2

**Insulation:** Glass fiber, wood fiber or perlite, 1 in. thick min, joints in insulation offset 6 in. with joints in deck.

**Base Sheet:** Type G2, mechanically attached, spot or fully mopped.

**Ply Sheet:** "Nord Flex Duo Ply FR Base Sheet", hot mopped.

**Membrane:** "DynaGlas FR", "DynaMax FR" or "Nord Flex Duo Ply FR Cap Sheet" (SBS modified bitumen), hot mopped.

15. **Deck:** NC

**Incline:** 1

**Insulation (Optional):** Glass fiber or perlite, 1 in. max, mechanically fastened.

**Base Sheet:** One or more layers, Type G2, hot mopped or mechanically fastened.

**Membrane:** One layer "DynaClad" (SBS modified bitumen), heat fused or hot mopped.

16. **Deck:** NC

**Incline:** 1

**Insulation (Optional):** Glass fiber or perlite, 1 in. max, mechanically fastened.

**Membrane:** One layer "DynaClad" (SBS modified bitumen), heat fused or hot mopped.

17. **Deck:** NC

**Incline:** 3

**Insulation (Optional):** Polyisocyanurate, polyisocyanurate/perlite composite, glass fiber, wood fiber or perlite, any combination, any thickness, and/or EPS covered with min 1 in. perlite, wood fiber or 15/16 in. glass fiber.

**Base Sheet:** Type G2 or "DynaBase", one or more plies.

**Base/Ply Sheet (Optional):** "Johns Manville SBS 170" (SBS modified bitumen), hot mopped.

**Membrane:** "DynaClad" (SBS modified bitumen), heat fused.

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

**Incline:** Unlimited

**Base Sheet:** One or more plies Type G2 or "DynaBase", mechanically fastened, spot or fully mopped, or "DynaWeld Base", heat welded.

**Base/Ply Sheet:** One or more plies "DynaBase", hot mopped in place, or "DynaWeld Base", heat welded.

**Base/Ply Sheet (Optional):** "Johns Manville SBS 170" (SBS modified bitumen), hot mopped.

**Membrane:** "DynaClad" (SBS modified bitumen), heat fused.

19. **Deleted.**

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

**Incline:** 3

**Insulation:** Polyisocyanurate, 1-1/2 in. thick min, joints in insulation offset 6 in. with joints in deck.

**Base Sheet:** One or more plies Type G2 or "DynaBase", mechanically fastened, spot or fully mopped, or "DynaWeld Base", heat welded.

**Base/Ply Sheet (Optional):** "Johns Manville SBS 170" (SBS modified bitumen), hot mopped.

**Membrane:** "DynaClad" (SBS modified bitumen), heat fused.

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

**Incline:** 3

**Insulation:** Perlite or glass fiber, 1 in. thick min, joints in insulation offset 6 in. with joints in deck.

**Base Sheet:** One or more plies Type G2 or "DynaBase", mechanically fastened, spot or fully mopped, or "DynaWeld Base", heat welded.

**Base/Ply Sheet:** One or more plies Type G2 or "DynaBase", hot mopped in place, or "DynaWeld Base", heat welded.

**Base/Ply Sheet (Optional):** "Johns Manville SBS 170" (SBS modified bitumen), hot mopped.

**Membrane:** "DynaClad" (SBS modified bitumen), heat fused.

22. **Deck:** NC

**Incline:** 1/2

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

**Insulation:** Wood fiber, glass fiber or perlite, 1/2 in. thick.

**Base Sheet (Optional):** Type G1 or G2.

**Base Sheet:** "DynaBase" or "*DynaLastic 180S*", hot mopped.

**Membrane:** "DynaGlas FR" or "DynaMax FR" (SBS modified bitumen), hot mopped.

23. **Deck:** NC

**Incline:** 1/2

**Base Sheet (Optional):** One or more plies Type G1 or G2.

**Base Sheet:** "DynaBase" or "*DynaLastic 180S*", hot mopped.

**Membrane:** "DynaGlas FR" or "DynaMax FR" (SBS modified bitumen), hot mopped.

24. **Deck:** NC

**Incline:** 1/2

**Insulation (Optional):** One or more layers, any thickness, Johns Manville "Fesco", "Fesco-Foam", "ISO 1", "E'NRG'Y-2", mechanically fastened or hot mopped in combination (optional) with 1/2 in. "Retro-Fit" cover board or 3/4 in. "Fesco" over polystyrene, mechanically fastened in place.

**Base Sheet:** One or more layers "GlasBase", "GlasBase Plus", "Perma Ply 28", "Ventsulation", "DynaBase", "GlasPly IV", "GlasPly Premier", hot mopped in place.

**Ply Sheet (Optional):** One or more layers "GlasBase", "GlasBase Plus", "Perma Ply 28", "Ventsulation", "DynaBase", "GlasPly IV", "*DynaLastic 180S*" or "GlasPly Premier", hot mopped in place.

**Membrane:** "DynaLastic 180 FR", "DynaMax FR", "DynaGlas FR", "DynaKap FR" or "DynaLastic 250FR" (SBS modified bitumen), hot mopped in place.

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

**Incline:** 1/2

**Base Sheet:** One or more layers "GlasBase", "GlasBase Plus", "PermaPly 28", "Ventsulation", nailed in place.

**Insulation (Optional):** One or more layers Johns Manville "Fesco" (3/4 in min), "Fiber Glass Roof Insulation" (15/16 in. min thickness), wood fiber (1-1/2 in. min) or "ISO 1", "E'NRG'Y-2" (2 in. min thickness), hot mopped in place.

**Base Sheet:** One or more layers "GlasBase", "GlasBase Plus", "PermaPly 28", "Ventsulation", "DynaBase", "GlasPly IV" or "GlasPly Premier", hot mopped in place.

**Ply Sheet (Optional):** One or more layers "GlasBase", "GlasBase Plus", "Perma Ply 28", "Ventsulation", "DynaBase", "GlasPly IV" or "GlasPly Premier", hot mopped in place.

**Membrane:** "DynaLastic 180FR", "DynaMax FR", "DynaGlas FR", "DynaKap FR" or "DynaLastic 250FR" (SBS modified bitumen), hot mopped in place.

26. **Deck:** NC

**Incline:** 3

**Insulation:** Any UL Classified insulation except EPS, any thickness, mechanically fastened.

**Base Sheet:** Any UL Classified Type G1 or G2, mechanically fastened.

**Membrane:** "Dynaclad" SBS (modified bitumen), torched.

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

**Incline:** 1

**Insulation (Optional):** Any thickness, one or more layers Johns Manville "Fesco", "Fesco-Foam", "Fiber Glass Roof Insulation", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, in combination (optional) with 1/2 in. "Retro-Fit" cover board or 3/4 in. "Fesco" over polystyrene.

**Base Sheet:** Three or more plies Type G2, mechanically fastened or hot mopped.

**Surfacing:** "GlasKap Plus", hot mopped.

## Class B

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

**Incline:** 1

**Insulation (Optional):** Any thickness, one or more layers, Johns Manville "Fesco", "Fesco-Foam", "Fiber Glass Roof Insulation", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, mechanically fastened or hot mopped in combination (optional) with 1/2 in. "Retro-Fit" cover board or 3/4 in. "Fesco" over polystyrene.

**Base Sheet:** Two or more plies Type G1 "GlasPly IV", "GlasPly Premier" or Type G2 "PermaPly 28", "GlasBase" or "Ventsulation", or "DynaPly" or "DynaBase" (SBS modified bitumen), mechanically fastened, hot mopped.

**Ply Sheet:** "DynaKap", "DynaPly", "DynaGlas", "DynaMax FR", "DynaLastic 250FR", "Roof Defender SBS Cap Sheet" or "DynaBase" (SBS modified bitumen), hot mopped.

**Surfacing:** Gravel and hot roofing asphalt.

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

**Incline:** 2

**Insulation (Optional):** Any thickness, one or more layers, Johns Manville "Fesco", "Fesco-Foam", "Fiber Glass Roof Insulation", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, mechanically fastened or hot mopped in combination (optional) with 1/2 in. "Retro-Fit" cover board or 3/4 in. "Fesco" over polystyrene.

**Ply Sheet:** Two or more plies Type G1 "GlasPly IV", "GlasPly Premier" or Type G2 "PermaPly 28", "GlasBase" or "Ventsulation", or "DynaPly" or "DynaBase" (SBS modified bitumen), mechanically fastened or hot mopped.

**Ply Sheet:** "DynaKap", "DynaPly", "DynaGlas", "DynaMax FR", "DynaLastic 250FR", "Roof Defender SBS Cap Sheet" or "DynaBase" (SBS modified bitumen), hot mopped.

**Surfacing:** Gravel and hot roofing asphalt.

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

**Incline:** 1-1/2

**Insulation (Optional):** Any thickness, one or more layers Johns Manville "Fesco", "Fesco-Foam", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, in combination (optional) with 1/2 in. "Retro-Fit" cover board, or 3/4 in. "Fesco" over polystyrene, mechanically fastened or hot mopped.

**Ply Sheet:** One or more plies "GlasPly IV", "GlasPly Premier" or Type G2 "PermaPly 28", "GlasBase" or "Ventsulation", or "DynaPly" or "DynaBase" (SBS modified bitumen), nailed or hot mopped.

**Membrane:** "DynaKap FR", "DynaGlas FR", "DynaMax FR" or "DynaGlas FR 30" (SBS modified bitumen), hot mopped.

**Surfacing:** Gravel and hot roofing asphalt.

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

**Incline:** 1/2

**Insulation (Optional):** One or more layers, any thickness Johns Manville "Fesco", "DuraBoard", "Fesco-Foam", "ISO 1", "E'NRG'Y-2", mechanically fastened in combination (optional) with 1/2 in. "Retro-Fit" cover board or 3/4 in. "Fesco" over polystyrene or any UL Classified polyisocyanurate insulation.

**Base Sheet:** One or more plies Type G1 "GlasPly Premier" or "GlasPly IV", Type G2 "GlasBase" or "Ventsulation", or "DynaBase" or "DynaPly" (SBS modified bitumen), mechanically fastened or hot mopped, or "DynaWeld Base", heat welded.



**Membrane:** "DynaKap FR", "DynaGlas FR", "DynaMax FR", "DynaLastic 250FR", "DynaLastic 180FR" or "DynaGlas 30 FR" (SBS modified bitumen), hot mopped or "DynaWeld Cap", heat welded.

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

**Incline:** 1/2

**Insulation:** Wood fiber, glass fiber or perlite, 1 in. min, joints in deck offset 6 in. with joints in deck.

**Base Sheet:** "DynaBase", mechanically attached, spot or fully mopped.

**Membrane:** "DynaGlas FR" or "DynaMax FR" (SBS modified bitumen), hot mopped.

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

**Incline:** 1/2

**Base Sheet:** "Nord Flex Duo Ply FR Base Sheet", mechanically attached.

**Membrane:** "DynaGlas FR" or "DynaMax FR" (SBS modified bitumen), hot mopped.

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

**Incline:** Unlimited

**Base Sheet:** One or more plies Type G2 or "DynaBase", mechanically fastened, spot or fully mopped.

**Base/Ply Sheet:** One or more plies Type G2 or "DynaBase", hot mopped, or "DynaWeld Base", heat welded.

**Membrane:** "DynaClad" (SBS modified bitumen), torched.

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

**Incline:** 3

**Insulation:** "DuraBond", perlite or glass fiber, 3/4 in. thick min; joints in insulation offset 6 in. with joints in deck.

**Base Sheet:** One or more plies Type G2 or "DynaBase", mechanically fastened, spot or fully mopped, or "DynaWeld Base", heat welded.

**Membrane:** "DynaClad" (SBS modified bitumen), torched.

### Class C

1. **Deck:** NC

**Incline:** 1/2

**Insulation (Optional):** One or more layers, any thickness, Johns Manville "Fesco", "Fesco-Foam", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate roof insulation, hot mopped or mechanically fastened in combination (optional) with 1/2 in. "Retro-Fit" cover board, or 3/4 in. "Fesco" over polystyrene.

**Base/Ply Sheet:** One or more plies Type G2 "GlasBase", "GlasBasePlus", "Ventsulation", "DynaBase", Type G1 "GlasPly IV", "GlasPly Premier", hot mopped, or "DynaWeld Base", heat welded.

**Membrane :** "DynaKap", "DynaMax FR", "DynaLastic 250FR", "Roof Defender SBS Cap Sheet" or "DynaGlas" (SBS modified bitumen), hot mopped, or "DynaWeld Cap", heat welded.

## SBS MODIFIED BITUMEN COLD APPLIED SYSTEMS

### Class A

System components are fully adhered with "MBR Cold Application Adhesive" applied at 1-2 gal/sq.

1. **Deck:** NC

**Incline:** 3

**Insulation (Optional):** One or more layers, any thickness, Johns Manville "Fesco", "Fesco-Foam", "Fiber Glass Roof Insulation", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate roof insulation, in combination (optional) with 1/2 in. "Retro-Fit" cover board, first layer mechanically attached, subsequent layers adhered with "MBR Cold Application Adhesive" or 3/4 in. "Fesco" over polystyrene, mechanically attached.

**Base Sheet:** One or more plies Type G2 "PermaPly 28", "GlasBase", "GlasBase Plus", "Ventsulation", "DynaBase", "DynaPly" or "DynaLastic 180S", mechanically fastened or adhered

with "MBR Cold Application Adhesive".

**Membrane:** "DynaKap", "DynaGlas", "DynaPly", "DynaMax FR", "DynaLastic 250FR" or "DynaLastic 180" (SBS modified bitumen), adhered with "MBR Cold Application Adhesive".

**Surfacing:** Gravel or "MBR Cold Application Adhesive".

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

**Incline:** 1/2

**Base Sheet:** "GlasBase", "GlasBase Plus", "Ventsulation" or "DynaBase", nailed.

**Ply Sheet:** One or two plies Type G2 "PermaPly 28", "GlasBase", "GlasBase Plus", "DynaBase" or "DynaPly", adhered with "MBR Cold Application Adhesive".

**Membrane:** "DynaKap FR", "DynaGlas 30 FR", "DynaMax FR", "DynaLastic 250FR", "DynaLastic 180FR" or "DynaGlas FR" (SBS modified bitumen), adhered with "MBR Cold Application Adhesive".

**3. Deck:** NC

**Incline:** 1/2

**Insulation (Optional):** One or more layers, any thickness, Johns Manville "Fesco", "Fesco-Foam", "Fiber Glass Roof Insulation", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate roof insulation, in combination (optional) with 1/2 in. "Retro-Fit" cover board, first layer mechanically attached, subsequent layers adhered with "MBR Cold Application Adhesive" or 3/4 in. "Fesco" over polystyrene, mechanically attached.

**Base Sheet:** One or more plies Type G2 "PermaPly 28", "GlasBase", "GlasBase Plus", "Ventsulation", "DynaBase", "*DynaLastic 180S*" or "DynaPly", mechanically fastened or adhered with "MBR Cold Application Adhesive".

**Membrane:** "DynaKap FR", "DynaGlas FR", "DynaGlas 30 FR", "DynaMax FR", "DynaLastic 250FR" or "DynaLastic 180FR" (SBS modified bitumen), adhered with "MBR Cold Application Adhesive".

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

**Incline:** 1/2

**Insulation (Optional):** Any thickness, one or more layers, Johns Manville "Fesco", "Fesco-Foam", "Fiber Glass Roof Insulation", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate roof insulation, in combination (optional) with 1/2 in. "Retro-Fit" cover board, first layer mechanically attached, subsequent layers adhered with "MBR Cold Application Adhesive" or 3/4 in. "Fesco" over polystyrene, mechanically attached. All insulation joints offset from plywood deck joints, 6 in. min.

**Base Sheet:** One or more plies Type G2 "PermaPly 28", "GlasBase", "GlasBase Plus", "DynaBase" or "DynaPly", adhered with "MBR Cold Application Adhesive".

**Membrane:** "DynaKap FR", "DynaGlas 30 FR", "DynaMax FR", "DynaLastic 250FR", "DynaLastic 180FR" or "DynaGlas FR" (SBS modified bitumen), adhered with "MBR Cold Application Adhesive".

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

**Incline:** 2

**Insulation (Optional):** One or more layers, any thickness, Johns Manville "Fesco", "Fesco-Foam", "Fiber Glass Roof Insulation", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate roof insulation, in combination (optional) with 1/2 in. "Retro-Fit" cover board, first layer mechanically attached, subsequent layers adhered with "MBR Cold Application Adhesive" or 3/4 in. "Fesco" over polystyrene, mechanically attached.

**Base Sheet:** Two or more plies Type G2 "PermaPly 28", "GlasBase", "GlasBase Plus", "Ventsulation", "DynaBase", or "DynaPly", mechanically fastened or adhered with "MBR Cold Application Adhesive".

**Membrane:** "DynaKap", "DynaGlas", "DynaPly", "DynaMax FR", "DynaLastic 250FR" or "Roof Defender SBS Cap Sheet" (SBS modified bitumen), adhered with "MBR Cold Application Adhesive".

**Surfacing:** Gravel and "MBR Cold Application Adhesive".

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

**Incline:** 1

**Insulation (Optional):** One or more layers, any thickness, Johns Manville "Fesco", "Fesco-Foam", "Fiber Glass Roof Insulation", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate roof insulation, in combination (optional) with 1/2 in. "Retro-Fit" cover board, first layer mechanically



attached, subsequent layers adhered with "MBR Cold Application Adhesive" or 3/4 in. "Fesco" over polystyrene, mechanically attached.

**Base Sheet:** One or more plies Type G2 "PermaPly 28", "GlasBase", "GlasBase Plus", "Ventsulation", "DynaBase" or "DynaPly", mechanically fastened or adhered with "MBR Cold Application Adhesive".

**Membrane:** "DynaKap", "DynaGlas", "DynaPly", "DynaMax FR", "DynaLastic 250FR" or "Roof Defencer SBS Cap Sheet" (SBS modified bitumen), adhered with "MBR Cold Application Adhesive".

**Surfacing:** Gravel and "MBR Cold Application Adhesive".

7. **Deck:** NC

**Incline:** 1/2

**Insulation (Optional):** Polyisocyanurate, polyisocyanurate/perlite composite, wood fiber, glass fiber or perlite, any thickness, any combination.

**Base Sheet (Optional):** Type G1, G2 or G2 vented base sheet.

**Ply Sheet:** "DynaBase".

**Membrane:** "DynaGlas FR" or "DynaMax FR" (modified bitumen).

8. **Deck:** NC

**Incline:** 1/2

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

**Insulation:** Wood fiber, glass fiber or perlite, 1/2 in. thick.

**Base Sheet (Optional):** Type G1 or G2.

**Base Sheet:** "DynaBase" (SBS modified bitumen).

**Membrane:** "DynaGlas FR" or "DynaMax FR" (SBS modified bitumen).

## SBS MODIFIED BITUMEN MAINTENANCE AND REPAIR SYSTEMS

### Class A

Unless otherwise specified, min insulation thicknesses shall be Johns Manville "Fesco" 3/4 in., "DuraBoard" 3/4 in., "UltraGard" 1.3 in., "E'NRG'Y-2" 1.4 in. or "Fesco-Foam" 1.5 in.

"Fesco-Foam" 1.5 in. min placed foam side down over min 3.4 in. thick "Fesco", mechanically fastened to the deck, is a suitable alternate for 1.5 in. min "Fesco-Foam".

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

"DynaGlas FR 30" is a suitable alternate to any of the following membranes used in Maintenance and Repair Systems.

"Nord Flex Duo Ply FR Cap Sheet" may be used in lieu of "DynaGlas FR" in all applicable Classifications.

"Fiber Glass Roof Insulation" is a suitable alternate to any of the following insulations used in Maintenance and Repair Systems.

"GlasBase Plus" or "PermaPly 28" are suitable alternates to "GlasBase". "DynaGlas S" and "DynaLastic 250S" may be used in lieu of "DynaPly" in all applicable Classifications.

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

**Incline:** 3

**Existing Roof System:** Class A, B or C, gravel or smooth surfaced, covered with:

**Insulation (Optional):** Any thickness, one or more layers Johns Manville "Retro-Fit Board", "Fesco", "Fesco-Foam", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, or 3/4 in. "Fesco" over polystyrene, mechanically fastened or hot mopped.

**Base Sheet:** One or more plies Type G1 "GlasPly IV" or "GlasPly Premier" or Type G2 "GlasBase" or "Ventsulation", or "DynaBase" or "DynaPly" (modified bitumen), mechanically fastened or hot mopped.

**Membrane:** "DynaKap", "DynaPly", "DynaGlas", "DynaMax FR", "DynaLastic 250FR" or "Roof Defender SBS Cap Sheet" (SBS modified bitumen), hot mopped.

**Surfacing:** Gravel and hot roofing asphalt.

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

**Incline:** 1/2

**Existing Roof System:** Class A, B or C, gravel or smooth surfaced, covered with:

**Insulation:** Any thickness, one or more layers Johns Manville "Retro-Fit Board", "Fesco", "DuraBoard", "Fesco-Foam", "ISO 1", "E'NRG'Y-2", 3/4 in. "Fesco" over polystyrene or any UL Classified polyisocyanurate insulation, mechanically fastened or hot mopped.

**Ply Sheet:** One or more plies Type G1 "GlasPly IV" or "GlasPly Premier", or Type G2 "GlasBase", "Ventsulation", "DynaPly" or "DynaBase" (SBS modified bitumen), hot mopped, or "DynaWeld Base", heat welded.

**Membrane:** "DynaKap FR", "DynaGlas 30 FR", "DynaMax FR", "DynaLastic 250FR", "DynaLastic 180 FR" or "DynaGlas FR" (SBS modified bitumen), hot mopped, or "DynaWeld Cap", heat welded.

**3. Deck:** NC

**Incline:** 1/2

**Existing Roof System:** Class A, B or C, gravel or smooth surfaced, covered with:

**Insulation (Optional):** Any thickness, one or more layers Johns Manville "Retro-Fit Board", "Fesco", "DuraBoard", "Fesco-Foam", "ISO 1", "E'NRG'Y-2", 3/4 in. "Fesco" over polystyrene or any UL Classified polyisocyanurate insulation, mechanically fastened or hot mopped.

**Base Sheet:** One or more plies Type G1 "GlasPly IV" or "GlasPly Premier", or Type G2 "GlasBase" or "Ventsulation", "DynaPly", "DynaBase" or "*DynaLastic 180S*" (SBS modified bitumen), hot mopped, or "DynaWeld Base", heat welded.

**Membrane:** "DynaKap FR", "DynaGlas 30 FR", "DynaGlas FR" or "DynaMax FR" (SBS modified bitumen), hot mopped, or "DynaWeld Cap", heat welded.

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

**Incline:** 1/2

**Existing Roof System:** Class A, B or C, gravel or smooth surfaced, covered with:

**Insulation:** One or more layers, any thickness, Johns Manville "Fesco", "Fesco-Foam", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, in combination (optional) with 1/2 in. "Retro-Fit" cover board, first layer mechanically attached, subsequent layers adhered with "MBR Cold Application Adhesive", or 3/4 in. "Fesco" over polystyrene, mechanically attached.

**Base Sheet:** One or more plies Type G2 "GlasBase", "GlasBase Plus", "Ventsulation", "DynaBase" or "DynaPly", mechanically fastened or adhered with "MBR Cold Application Adhesive".

**Membrane:** "DynaKap FR", "DynaGlas FR", "DynaGlas 30 FR", "DynaMax FR", "DynaLastic 250FR" or "DynaLastic 180 FR" (SBS modified bitumen), adhered with "MBR Cold Application Adhesive".

**5. Deck:** NC

**Incline:** 1/2

**Existing Roof System:** Class A, B or C, gravel or smooth surfaced, covered with:

**Insulation (Optional):** One or more layers, any thickness, Johns Manville "Fesco", "DuraBoard", "Fesco-Foam", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, in combination (optional) with 1/2 in. "Retro-Fit" cover board, first layer mechanically attached, subsequent layers adhered with "MBR Cold Application Adhesive", or 3/4 in. "Fesco" over polystyrene, mechanically attached.

**Base Sheet:** One or more plies Type G2 "GlasBase", "GlasBase Plus", "Ventsulation", "DynaBase", "*DynaLastic 180S*" or "DynaPly", mechanically fastened or adhered with "MBR Cold Application Adhesive", or "DynaWeld Base", heat welded.

**Membrane:** "DynaKap FR", "DynaGlas 30 FR", "DynaGlas FR" or "DynaMax FR" (SBS modified bitumen), adhered with "MBR Cold Application Adhesive", or "DynaWeld Cap", heat welded.

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

**Incline:** 1/2

**Existing Roof System:** Class A, B or C, gravel or smooth surfaced, covered with:

**Insulation (Optional):** One or more layers, any thickness, Johns Manville "Fesco", "Fesco-Foam", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, in combination (optional) with 1/2 in. "Retro-Fit" cover board, first layer mechanically attached, subsequent layers adhered with "MBR Cold Application Adhesive" or 3/4 in. "Fesco" over polystyrene, mechanically attached.  
**Base Sheet:** One or more plies Type G2 "GlasBase", "GlasBase Plus", "Ventsulation", "DynaBase" or "DynaPly", mechanically fastened or adhered with "MBR Cold Application Adhesive".  
**Membrane:** "DynaKap FR", "DynaGlas 30 FR", "DynaLastic 180 FR", "DynaMax FR", "DynaLastic 250FR" or "DynaGlas FR" (SBS modified bitumen), adhered with "MBR Cold Application Adhesive".

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

**Incline:** 3

**Existing Roof System:** Class A, B or C, gravel or smooth surfaced, covered with:

**Insulation (Optional):** One or more layers, any thickness, Johns Manville "Fesco", "Fesco-Foam", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, in combination (optional) with 1/2 in. "Retro-Fit" cover board, first layer mechanically attached, subsequent layers adhered with "MBR Cold Application Adhesive", or 3/4 in. "Fesco" over polystyrene, mechanically attached.

**Base Sheet:** One or more plies Type G2 "GlasBase", "GlasBase Plus", "Ventsulation", "DynaBase" or "DynaPly", mechanically fastened or adhered with "MBR Cold Application Adhesive".

**Membrane:** "DynaKap", "DynaGlas", "DynaPly", "DynaMax FR", "DynaLastic 250FR" or "Roof Defender SBS Cap Sheet" (SBS modified bitumen), adhered with "MBR Cold Application Adhesive."

**Surfacing:** Gravel and "MBR Cold Application Adhesive".

8. **Deck:** NC

**Incline:** 1/2

**Existing Roof System:** Class A, B or C, gravel or smooth surfaced, covered with:

**Insulation (Optional):** Any thickness, one or more layers Johns Manville "Retro-Fit Board", "DuraBoard", "Fesco", "Fesco-Foam", "ISO 1", "E'NRG'Y-2", 3/4 in. "Fesco" over polystyrene or any UL Classified polyisocyanurate insulation, mechanically fastened or hot mopped.

**Base Sheet:** One or more plies Type G1 "GlasPly IV" or "GlasPly Premier", or Type G2 "GlasBase", "Ventsulation", "DynaPly", "*DynaLastic 180S*" or "DynaBase" (SBS modified bitumen), hot mopped, or "DynaWeld Base", heat welded.

**Membrane:** "DynaLastic 180 FR", "DynaLastic 250FR" (SBS modified bitumen), hot mopped, or "DynaWeld Cap", heat welded.

9. **Deck:** NC

**Incline:** 1/2

**Existing:** Class A, B or C, gravel or smooth surfaced, covered with:

**Insulation (Optional):** One or more layers, any thickness, Johns Manville "Fesco", "Fesco-Foam", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, in combination (optional) with 1/2 in. "Retro-Fit" cover board, first layer mechanically attached, subsequent layers adhered with "MBR Cold Application Adhesive" or 3/4 in. "Fesco" over polystyrene, mechanically attached.

**Base Sheet:** One or more plies Type G2 "GlasBase", "GlasBase Plus", "Ventsulation", "DynaBase", "*DynaLastic 180S*" or "DynaPly", mechanically fastened or adhered with "MBR Cold Application Adhesive".

**Membrane:** "DynaLastic 250FR", "DynaLastic 180 FR" (SBS modified bitumen), adhered with "MBR Cold Application Adhesive".

10. **Deck:** NC

**Incline:** 3

**Existing Roof System:** Class A, B or C, gravel or smooth surfaced, covered with:

**Insulation (Optional):** Any thickness, one or more layers, Johns Manville "Fesco", "Fesco-Foam", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, mechanically fastened or hot mopped in combination (optional) with 1/2 in. "Retro-Fit" cover board, or 3/4 in. "Fesco" over polystyrene.

**Ply Sheet:** One or more plies Type G1 "GlasPly IV", "GlasPly Premier" or Type G2 "GlasBase" or "Ventsulation", "DynaPly", "DynaBase" or "*DynaLastic 180S*" (SBS modified bitumen), mechanically fastened or hot mopped.

**Ply Sheet:** "DynaKap", "DynaPly", "DynaGlas" or "DynaBase" (SBS modified bitumen), hot mopped.

**Surfacing:** Gravel and hot roofing asphalt.

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

**Incline:** 3

**Existing Roof System:** Class A, B or C, gravel or smooth surfaced, covered with:

**Insulation (Optional):** Any thickness, one or more layers, Johns Manville "Fesco", "Fesco-Foam", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, mechanically fastened or hot mopped in combination (optional) with 1/2 in. "Retro-Fit" cover board, or 3/4 in. "Fesco" over polystyrene.

**Base Sheet:** One or more plies Type G1 "GlasPly IV", "GlasPly Premier" or Type G2 "GlasBase" or "Ventsulation", or "DynaPly" or "DynaBase" (SBS modified bitumen), mechanically fastened or hot mopped.

**Ply Sheet:** "DynaKap", "DynaPly", "DynaGlas" or "DynaBase" (SBS modified bitumen), hot mopped.

**Surfacing:** Gravel and hot roofing asphalt.

12. **Deck:** NC

**Incline:** 1

**Existing Roof System:** Class A, B or C covered with:

**Base/Ply Sheet (Optional):** One or more layers Type G2, hot mopped or mechanically fastened, or "DynaWeld Base", heat welded.

**Membrane:** One layer "DynaClad" (SBS modified bitumen), heat fused or hot mopped.

## Class B

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

**Incline:** 1/2

**Existing Roof System:** Class A, B or C, gravel or smooth surfaced, covered with:

**Insulation (Optional):** Any thickness, one or more layers Johns Manville "Retro-Fit Board", "Fesco", "DuraBoard", "Fesco-Foam", "ISO 1", "E'NRG'Y-2", 3/4 in. "Fesco" over polystyrene or any UL Classified polyisocyanurate insulation, mechanically fastened or hot mopped.

**Ply Sheet:** One or more plies Type G1 "GlasPly Premier" or "GlasPly IV"; Type G2 "GlasBase", "Ventsulation", "DynaPly" or "DynaBase" (SBS modified bitumen), nailed or hot mopped, or "DyanWeld Base", heat welded.

**Membrane:** "DynaKap FR", "DynaGlas 30 FR", DynaMax FR, "DynaLastic 250FR", "DynaLastic 180FR" or "DynaGlas FR" (SBS modified bitumen), hot mopped, or "DynaWeld Cap", heat welded.

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

**Incline:** 2

**Existing Roof System:** Class A, B or C, gravel or smooth surfaced, covered with:

**Insulation (Optional):** Any thickness, one or more layers Johns Manville "Fesco", "Fesco-Foam", "ISO 1", "E'NRG'Y-2" or any UL Classified polyisocyanurate insulation, mechanically fastened or hot mopped in combination (optional) with 1/2 in. "Retro-Fit" cover board, or 3/4 in. "Fesco" over polystyrene.

**Ply Sheet:** One or more plies Type G1 "GlasPly IV", "GlasPly Premier" or Type G2 "GlasBase" or "Ventsulation", or "DynaPly" or "DynaBase" (SBS modified bitumen), mechanically fastened or hot mopped.

**Ply Sheet:** "DynaKap", "DynaPly", "DynaGlas" or "DynaBase" (SBS modified bitumen), hot mopped.

**Surfacing:** Gravel and hot roofing asphalt.