Roofing Systems, Membrane, Dynamic Wind Uplift Resistance Certified for Canada

COMPANY
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R10128

SINGLE-PLY MEMBRANE SYSTEMS

Example text describing the following items:

1. **Uplift Resistance —** 88 psf

Deck — Steel, min. 22 MSG and min. yield strength 40 ksi.
Thermal Barrier*: — United States Gypsum Co. Securock® Gypsum-Fiber Roof Board (Type FRX-G), 5/8 in. thick, adhered with Royal Adhesives & Sealants Inc. "Millennium One Step™ Foamable Adhesive", applied in continuous ribbons atop deck flanges, max 6 in. OC.
Primer: — Soprema Inc. "Elastocol Stick", applied at a rate of 0.5 gal/sq.
Vapor Barrier: — "Duro-Last Vapor Barrier" (not UL Certified), self-adhered.
Insulation*: — One or more layers of "Duro-Guard ISO II-A", "Duro-Guard ISO II-G" or "Duro-Guard ISO II-H". Top layer shall be min. 1 in. thick and adhered with "Duro-Grip CR-20, The Dow Chemical Co. "Insta-Stik", OMG Inc. "Olybond 500" or Royal Adhesives & Sealants Inc. "Millennium One Step™ Foamable Adhesive", applied in continuous ribbons, max 12 in. OC.
Coverboard*: — Georgia-Pacific Gypsum LLC "DensDeck Prime® Roofboard", min. 1/4 in. thick, adhered with "Duro-Grip CR-20", The Dow Chemical Co. "Insta-Stik", OMG Inc. "Olybond 500" or Royal Adhesives & Sealants Inc. "Millennium One Step™ Foamable Adhesive", applied in continuous ribbons, max 12 in. OC.
Membrane*: — "Duro-Fleece" or "Duro-Fleece Plus", min. 50 mil, adhered with "Duro-Grip CR-20", splatter-applied at 5 lbs/sq

2. **Uplift Resistance —** 88 psf

Deck: — Structural concrete, min. 2,500 psi.
Primer: — Soprema Inc. "Elastocol Stick", applied at a rate of 0.5 gal/sq.
Vapor Barrier: — "Duro-Last Vapor Barrier" (not UL Certified), self-adhered.
Insulation*: — One or more layers of "Duro-Guard ISO II-A", "Duro-Guard ISO II-G" or "Duro-Guard ISO II-H". Top layer shall be min. 1 in. thick and adhered with "Duro-Grip CR-20, The Dow Chemical Co. "Insta-Stik", OMG Inc. "Olybond 500" or Royal Adhesives & Sealants Inc. "Millennium One Step™ Foamable Adhesive", applied in continuous ribbons, max 12 in. OC.
Coverboard*: — Georgia-Pacific Gypsum LLC "DensDeck Prime® Roofboard", min. 1/4 in. thick, adhered with "Duro-Grip CR-20", The Dow Chemical Co. "Insta-Stik", OMG Inc. "Olybond 500" or Royal Adhesives & Sealants Inc. "Millennium One Step™ Foamable Adhesive", applied in continuous ribbons, max 12 in. OC.

Membrane*: — "Duro-Fleece" or "Duro-Fleece Plus", min. 50 mil, adhered with "Duro-Grip CR-20", splatter-applied at 5 lbs/sq.

3. **Uplift Resistance —** 64 psf

Deck: — Steel, min. 22 MSG and min. yield strength 40 ksi.
Thermal Barrier* (Optional) — — Any UL Classified, any thickness, loose-laid, adhered or mechanically attached.
Insulation*: — One or more layers of "Duro-Guard ISO II-A", "Duro-Guard ISO II-G", "Duro-Guard ISO II-H", "Duro-Guard ISO III-A" or "Duro-Guard ISO III-H"; top layer shall be min. 1.5 in. thick. Top insulation layer to be mechanically attached with Duro-Last HD Screws (#14) and Duro-Last 3-Inch Metal Plates, min. 5 fasteners per 4 x 8 ft. board (1 fastener per max 6.4 ft^2). Minimum 3/4 in. fastener penetration through deck.
Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of insulation fasteners shall yield a minimum of 614 lbf.
Membrane*: — "Duro-Last" (PVC), min. 40 mil or “Duro-Last X”, min. 50 mil, mechanically attached with Duro-Last EHD Screws (#15) and Duro-Last Poly-Plates or Duro-Last Cleat Plates. Fasteners to be spaced 12 in. OC within 3 in. wide factory seamed fastening tabs, spaced 60 in. OC. Minimum 3/4 in. fastener penetration through deck.
Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of roof covers fasteners shall yield a minimum of 480 lbf.

4. **Uplift Resistance —** 85 psf

Deck: — Steel, min. 22 MSG and min. yield strength 40 ksi.
Thermal Barrier* (Optional) — Any UL Classified, any thickness, loose-laid, adhered or mechanically attached.
Vapor Barrier: — "Duro-Blue" (not UL Certified), loose-laid with joints taped.
Insulation*: — One or more layers of "Duro-Guard ISO II-A", "Duro-Guard ISO II-G", "Duro-Guard ISO II-H", "Duro-Guard ISO III-A" or "Duro-Guard ISO III-H"; top layer shall be min. 1.5 in. thick. Top insulation layer to be mechanically attached with Duro-Last HD Screws (#14) and Duro-Last 3-Inch Metal Plates, min. 6 fasteners per 4 x 8 ft. board (1 fastener per max 5.3 ft^2). Minimum 3/4 in. fastener penetration through deck.
Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of insulation fasteners shall yield a minimum of 678 lbf.
Membrane*: — "Duro-Last" (PVC), min. 40 mil or “Duro-Last X”, min. 50 mil, mechanically attached with Duro-Last EHD Screws (#15) and Duro-Last Poly-Plates or Duro-Last Cleat Plates. Fasteners to be spaced 12 in. OC within 3 in. wide factory seamed fastening tabs, spaced 60 in. OC. Minimum 3/4 in. fastener penetration through deck.
Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of roof covers fasteners shall yield a minimum of 640 lbf.

5. **Uplift Resistance —** 85 psf

Deck: — Structural concrete, min. 2,500 psi.
Vapor Barrier (Optional): — "Duro-Blue" (not UL Certified), loose-laid with joints taped; or "Duro-Last Vapor Barrier" (not UL Certified), self-adhered.
Insulation*: — One or more layers of "Duro-Guard ISO II-A", "Duro-Guard ISO II-G", "Duro-Guard ISO II-H", "Duro-Guard ISO III-A" or "Duro-Guard ISO III-H"; top layer shall be min. 1.5 in. thick. Top insulation layer to be mechanically attached with Duro-Last Concrete Screws and Duro-Last 3-Inch Metal Plates, min. 6 fasteners per 4 x 8 ft. board (1 fastener per max 5.3 ft^2). Minimum 1 in. fastener penetration into deck.

Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of insulation fasteners shall yield a minimum of 678 lbf.
Membrane*: — "Duro-Last" (PVC), min. 40 mil or “Duro-Last X”, min. 50 mil, mechanically attached with Duro-Last Concrete Screws and Duro-Last Poly-Plates or Duro-Last Cleat Plates. Fasteners to be spaced 12 in. OC within 3 in. wide factory seamed fastening tabs, spaced 60 in. OC. Minimum 1 in. fastener penetration into deck.
Maintenance and Repair Applications (Recover): — — The field withdrawal resistance testing of roof covers fasteners shall yield a minimum of 640 lbf.

6. **Uplift Resistance —** 75 psf

Deck: — Steel, min. 22 MSG and min. yield strength 40 ksi.
Thermal Barrier* (Optional) — Any UL Classified, any thickness, loose-laid, adhered or mechanically attached.
Vapor Barrier (Optional): — "Duro-Blue" (not UL Certified), loose-laid with joints taped; or "Duro-Last Vapor Barrier" (not UL Certified), self-adhered.
Insulation*: — Two or more layers of "Duro-Guard ISO II-A", "Duro-Guard ISO II-G", "Duro-Guard ISO II-H", "Duro-Guard ISO III-A" or "Duro-Guard ISO III-H"; each layer shall be min. 1 in. thick with joints staggered. Top insulation layer to be mechanically attached with Duro-Last HD Screws (#14) and Duro-Last 3-Inch Metal Plates, min. 6 fasteners per 4 x 8 ft. board (1 fastener per max 5.3 ft2). Minimum 3/4 in. fastener penetration through deck.
Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of insulation fasteners shall yield a minimum of 594 lbf.
Membrane*: — "Duro-Last" (PVC), min. 40 mil or “Duro-Last X”, min. 50 mil, mechanically attached with Duro-Last EHD Screws (#15) and Duro-Last Poly-Plates or Duro-Last Cleat Plates. Fasteners to be spaced 12 in. OC within 3 in. wide factory seamed fastening tabs, spaced 60 in. OC. Minimum 3/4 in. fastener penetration through deck.
Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of roof covers fasteners shall yield a minimum of 560 lbf.

7. **Uplift Resistance —** 43 psf

Deck: — Steel, min. 22 MSG and min. yield strength 40 ksi.
Thermal Barrier* — Georgia-Pacific Gypsum LLC "DensDeck Prime® Roofboard", min. 1/4 in. thick, loose-laid, adhered or mechanically attached.
Vapor Barrier: — "Duro-Last Vapor Barrier" (not UL Certified), self-adhered.
Insulation*: — "Duro-Guard EPS Type II" or "Duro-Guard EPS FGF", min. 0.5 in. thick; can be optionally over one or more layers of "Duro-Guard ISO II-A", "Duro-Guard ISO II-G", "Duro-Guard ISO II-H", "Duro-Guard ISO III-A", "Duro-Guard ISO III-H", "Duro-Guard EPS Type II-C" or "Duro-Guard EPS FGF", loose laid. Top insulation layer to be mechanically attached with Duro-Last HD Screws (#14) and Duro-Last 3-Inch Metal Plates, min. 6 fasteners per 4 x 8 ft. board (1 fastener per max 5.3 ft^2). Minimum 3/4 in. fastener penetration through deck.
Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of insulation fasteners shall yield a minimum of 339 lbf.
Membrane*: — Any of the following:

• "Duro-Last" (PVC), min. 40 mil or “Duro-Last X”, min. 50 mil, mechanically attached with Duro-Last EHD Screws (#15) and Duro-Last Poly-Plates or Duro-Last Cleat Plates. Fasteners to be spaced 12 in. OC within 3 in. wide factory seamed fastening tabs, spaced 60 in. OC. Minimum 3/4 in. fastener penetration through deck.

Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of roof covers fasteners shall yield a minimum of 320 lbf.

• "Duro-Tuff", min. 50 mil, mechanically attached with Duro-Last EHD Screws (#15) and Duro-Last Poly-Plates or Duro-Last Cleat Plates. Fasteners to be spaced 12 in. OC within 6 in. wide side laps, spaced 54 in. OC. Side laps to be sealed with 1.5 in wide heat weld. Minimum 3/4 in. fastener penetration through deck.

Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of roof covers fasteners shall yield a minimum of 288 lbf.

8. **Uplift Resistance —** 53 psf

Deck: — Minimum 19/32 in. APA Rated plywood.
Thermal Barrier* (Optional) — Any UL Classified, any thickness, loose-laid, adhered or mechanically attached.
Vapor Barrier (Optional): — "Duro-Blue" (not UL Certified), loose-laid with joints taped; or "Duro-Last Vapor Barrier" (not UL Certified), self-adhered.
Insulation*: — One or more layers of "Duro-Guard ISO II-A", "Duro-Guard ISO II-G", "Duro-Guard ISO II-H", "Duro-Guard ISO III-A" or "Duro-Guard ISO III-H"; top layer shall be min. 1.5 in. thick. Top insulation layer to be mechanically attached with Duro-Last HD Screws (#14) and Duro-Last 3-Inch Metal Plates, min. 5 fasteners per 4 x 8 ft. board (1 fastener per max 6.4 ft^2). Minimum 3/4 in. fastener penetration through deck.
Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of insulation fasteners shall yield a minimum of 512 lbf.
Membrane*: — Any of the following:

• "Duro-Last" (PVC), min. 40 mil or “Duro-Last X”, min. 50 mil, mechanically attached with Duro-Last EHD Screws (#15) and Duro-Last Poly-Plates or Duro-Last Cleat Plates. Fasteners to be spaced 12 in. OC within 3 in. wide factory seamed fastening tabs, spaced 60 in. OC. Minimum 3/4 in. fastener penetration through deck.

Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of roof covers fasteners shall yield a minimum of 400 lbf.

• "Duro-Tuff", min. 50 mil, mechanically attached with Duro-Last EHD Screws (#15) and Duro-Last Poly-Plates or Duro-Last Cleat Plates. Fasteners to be spaced 12 in. OC within 6 in. wide side laps, spaced 54 in. OC. Side laps to be sealed with 1.5 in wide heat weld. Minimum 3/4 in. fastener penetration through deck.

Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of roof covers fasteners shall yield a minimum of 360 lbf.

9. **Uplift Resistance —** 53 psf

Deck: — Steel, min. 22 MSG and min. yield strength 40 ksi.
Thermal Barrier* (Optional) — Any UL Classified, any thickness, loose-laid, adhered or mechanically attached.
Vapor Barrier (Optional): — "Duro-Blue" (not UL Certified), loose-laid with joints taped.

Insulation*: — One or more layers of "Duro-Guard ISO II-A", "Duro-Guard ISO II-G", "Duro-Guard ISO II-H", "Duro-Guard ISO III-A" or "Duro-Guard ISO III-H"; either the top layer shall be min. 1.5 in. thick, or (if multiple layers are used) all layers can be min. 1 in. thick with joints staggered. Top insulation layer to be mechanically attached with Duro-Last HD Screws (#14) and Duro-Last 3-Inch Metal Plates, min. 6 fasteners per 4 x 8 ft. board (1 fastener per max 5.3 ft^2). Minimum 3/4 in. fastener penetration through deck.
Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of insulation fasteners shall yield a minimum of 424 lbf.
Membrane*: — "Duro-Tuff", min. 50 mil, mechanically attached with Duro-Last EHD Screws (#15) and Duro-Last Poly-Plates or Duro-Last Cleat Plates. Fasteners to be spaced 12 in. OC within 6 in. wide side laps, spaced 54 in. OC. Side laps to be sealed with 1.5 in wide heat weld. Minimum 3/4 in. fastener penetration through deck.
Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of roof covers fasteners shall yield a minimum of 360 lbf.

10. **Uplift Resistance —** 53 psf

Deck: — Structural concrete, min. 2,500 psi.
Vapor Barrier (Optional): — "Duro-Blue" (not UL Certified), loose-laid with joints taped; or "Duro-Last Vapor Barrier" (not UL Certified), self-adhered.
Insulation*: — One or more layers of "Duro-Guard ISO II-A", "Duro-Guard ISO II-G", "Duro-Guard ISO II-H", "Duro-Guard ISO III-A" or "Duro-Guard ISO III-H"; either the top layer shall be min. 1.5 in. thick, or (if multiple layers are used) all layers can be min. 1 in. thick with joints staggered. Top insulation layer to be mechanically attached with Duro-Last Concrete Screws and Duro-Last 3-Inch Metal Plates, min. 6 fasteners per 4 x 8 ft. board (1 fastener per max 5.3 ft^2). Minimum 1 in. fastener penetration into deck.
Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of insulation fasteners shall yield a minimum of 424 lbf.
Membrane*: — "Duro-Tuff", min. 50 mil, mechanically attached with Duro-Last Concrete Screws and Duro-Last Poly-Plates or Duro-Last Cleat Plates. Fasteners to be spaced 12 in. OC within 6 in. wide side laps, spaced 54 in. OC. Side laps to be sealed with 1.5 in wide heat weld. Minimum 1 in. fastener penetration into deck.
Maintenance and Repair Applications (Recover): — The field withdrawal resistance testing of roof covers fasteners shall yield a minimum of 360 lbf.

INDUCTION WELD SYSTEMS

1. **Uplift Resistance —** 47 psf

Deck: — Steel, minimum 22 MSG and minimum yield strength 40 ksi.
Vapor Barrier (Optional): — "Duro-Blue" (not UL Certified), loose-laid with joints taped.
Thermal Barrier (Optional): — Any UL Classified, any thickness, loose-laid, adhered or mechanically attached.
Insulation: — Two or more layers, minimum 1 inch thick each, "Duro-Guard ISO II-H", "Duro-Guard ISO II-G", "Duro-Guard ISO II-A", "Duro-Guard ISO III-H", or "Duro-Guard ISO III-A", mechanically fastened. Layered insulation board joints to be staggered a minimum of 6 inches.
Insulation Fasteners: — Top insulation layer to be mechanically attached with SFS intec Dekfast™ #15 fasteners and SFS intec 3-inch isoweld® metal plates in a 24-inch by 24-inch staggered grid pattern, resulting in 8 fasteners per 4 x 8 foot board (1 fastener per 4 $ft.^2$). Minimum 3/4-inch fastener penetration into deck. Allowable alternate insulation fasteners include:

- Duro-Last #15 Extra Heavy Duty Drill Point Fastener with Duro-Bond ISO WELD 1302-1 plates

- OMG Extra Heavy Duty Roofing Fastener (#15) with RHINOBOND Insulation Plate

- Duro-Last #15 Extra Heavy Duty Drill Point Fastener with Duro-Bond ISO WELD 1302

- Trufast® #15 EHD Roofing Fasteners with Trufast® PVC IW Plate

- Duro-Last #15 Extra Heavy Duty Drill Point Fastener with Duro-Bond PVC IW Plates

Maintenance and Repair Application (Recover): — The field withdrawal resistance testing of insulation fasteners shall yield a minimum of 280 lbf.

Membrane: — "Duro-Last" (PVC), minimum 40 mil, or “Duro-Last X”, min. 50 mil, "Duro-Last EV", minimum 50 mil, or "Duro-Tuff", minimum 50 mil, induction welded.

2. **Uplift Resistance —** 100 psf

Deck: — Steel, minimum 22 MSG and minimum yield strength 40 ksi.
Vapor Barrier (Optional): — "Duro-Blue" (not UL Certified), loose-laid with joints taped.
Thermal Barrier (Optional): — Any UL Classified, any thickness, loose-laid, adhered or mechanically attached.
Insulation: — Two or more layers, minimum 1-inch thick, "Duro-Guard ISO II-H", "Duro-Guard ISO II-G", "Duro-Guard ISO II-A", "Duro-Guard ISO III-H", or "Duro-Guard ISO III-A", mechanically fastened. Layered insulation board joints to be staggered a minimum 6 inches.
Insulation Fasteners: — Top insulation layer to be mechanically attached with SFS intec Dekfast™ #15 fasteners and SFS intec 3-in. isoweld® metal plates, attached in a 12-in. by 24-in. staggered grid pattern, resulting in 16 fasteners per 4 x 8 foot board (1 fastener per 2 $ft.^2$). Minimum 3/4-in. fastener penetration into deck. Alternate insulation fasteners include:

- Duro-Last #15 Extra Heavy Duty Drill Point Fastener with Duro-Bond ISO WELD 1302-1 plates

- OMG Extra Heavy Duty Roofing Fastener (#15) with RHINOBOND Insulation Plate

- Duro-Last #15 Extra Heavy Duty Drill Point Fastener with Duro-Bond ISO WELD 1302

- Trufast® #15 EHD Roofing Fasteners with Trufast® PVC IW Plate

- Duro-Last #15 Extra Heavy Duty Drill Point Fastener with Duro-Bond PVC IW Plates

Maintenance and Repair Application (Recover): — The field withdrawal resistance testing of insulation fasteners shall yield a minimum of 300 lbf.

Membrane: — "Duro-Last" (PVC), minimum 40 mil, or “Duro-Last X”, min. 50 mil, "Duro-Last EV", minimum 50 mil, or "Duro-Tuff", minimum 50 mil, induction welded.

3. **Uplift Resistance —** 59 psf

Deck: — Steel, minimum 22 MSG and minimum yield strength 40 ksi.
Vapor Barrier (Optional): — "Duro-Blue" (not UL Certified), loose-laid with joints taped.
Thermal Barrier* (Optional): — Any UL Classified, any thickness, loose-laid, adhered or mechanically attached.
Insulation: — Two or more layers of "Duro-Guard ISO II-H", "Duro-Guard ISO II-G", "Duro-Guard ISO II-A", "Duro-Guard ISO III-H", or "Duro-Guard ISO III-A", mechanically fastened. Layered insulation board joints to be staggered a minimum of 6 inches.
Insulation Fasteners: — Top insulation layer to be mechanically attached with SFS intec Dekfast™ #15 fasteners and SFS intec 3-in. isoweld® metal plates, attached in a 24-inch by 24-inch staggered grid pattern, resulting in 8 fasteners per 4 x 8 foot board (1 fastener per 4 ft.^{2}). Minimum 3/4-in. fastener penetration into deck. Alternate insulation fasteners include:

- Duro-Last #15 Extra Heavy Duty Drill Point Fastener with Duro-Bond ISO WELD 1302-1 plates

- OMG Extra Heavy Duty Roofing Fastener (#15) with RHINOBOND Insulation Plate

- Duro-Last #15 Extra Heavy Duty Drill Point Fastener with Duro-Bond ISO WELD 1302

- Trufast® #15 EHD Roofing Fasteners with Trufast® PVC IW Plate

- Duro-Last #15 Extra Heavy Duty Drill Point Fastener with Duro-Bond PVC IW Plates

Maintenance and Repair Application (Recover): — The field withdrawal resistance testing of insulation fasteners shall yield a minimum of 350 lbf.

Membrane: — "Duro-Last" (PVC), minimum 40 mil, or “Duro-Last X”, min. 50 mil, "Duro-Last EV", minimum 50 mil, or "Duro-Tuff", minimum 50 mil, induction welded.

* Indicates such products shall bear the cUL, ULC, or Enhanced Certification Mark

Tradename and/or Trademark: Gaco, GENFLEX, DURO-LAST THE WORLD'S BEST ROOF®, ELEVATE, OX Engineered Products, ENVERGE

Last Updated on 2025-11-04

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