

TGFY7.R10128 - Roofing Systems, Membrane, Dynamic Wind Uplift Resistance Certified for Canada

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

Duro-Last Inc

525 W Morley Dr
Saginaw, MI 48601 United States

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 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 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 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 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 ft²). 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 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 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 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 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 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 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 ft²). 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 RHINO BOND 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

Last Updated on 2022-08-30

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product.

UL Solutions permits the reproduction of the material contained in Product iQ subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from Product iQ with permission from UL Solutions" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "©2022 UL LLC."