Elevate PVC Roof Systems

Tested Assembly Guide

Canadian Standards Association

September 2022

NOTE: The contents of this guide are considered accurate at time of posting. All information contained within should be validated for accuracy as it relates to specific project conditions or requirement. Specific codes, uplifts or other factors may result in changes to the information contained within this document. Validate all specific conditions with a Holcim Regional Technical Coordinator prior to its use.

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Allowable Products

Only equivalent products included into the roofing system's report are admissible.

Optional Components

Components of the roofing system designated as optional may be included or excluded from the roofing system which will not change the published dynamic uplift resistance (DUR).

Safety Factor

As required by the CSA A123.21 Standard, the published dynamic uplift resistance (DUR) are reduced by a safety factor of 1.5 (SF of 1.5).

Admissible Wind Uplift Load Calculation

An online calculator is available at www.sigders.ca.

The user will have to provide the following information:

- Building Location
- Building Geometry
- Building Exposure
- Building Openings
- Building Importance Factor

The calculator will display the allowable design load of the roof's field surface, edges and corners as well as the dimensions of the edge and corner zones.

Technical Advisories

Assessment reports must be read in conjunction with technical advisories issues by Exp Services Inc.

Values

A For the listing in this section the metric values are the standard and values in parentheses are for information only.

Notice

Exp Services Inc. reserve their right to withdraw, without prior notice, the test report performed as per CSA A123.21 Standard.

Decking

Galvanized construction steel or coated with aluminum/zinc allow or PVC in accordance with ASTM A653, ASTM A792, ASTM A1008 or CSSBI 10M Standards. Supplier is listed as Generic. The deck's fastening to the supporting structure must be strong enough to resist the wind uplift loads (adjusted as per NBC requirements). Contact a Holcim Technical Representative for additional deck availability. Alternate deck types will require the deck to have a pullout resistance equal to or higher than the fastening uplift resistance specified in the given listing.

- Deck used for testing: 22 gauge, Yield Strength (Y) 33 ksi, Tensile Strength (T) 45 ksi – Type B

PVC Single-Ply Adhered Membrane

PVC Single-Ply Membrane - Dynamic Uplift Resistance (DUR) as per CSA A123.21

Deck Type & Uplift with SF of 1.5	Vapor Barrier/ Thermal Barrier	Insulation and Attachment	Cover Board and Attachment	Membrane and Attachment
Steel 22 ga RD938 230 MPa (33.4 ksi) 2.693 kPa (-37.5 psf) Project No:	**Vapor Barrier:** V-Force BaseGard SA Polyethylene Kraft paper ***Thermal Barrier (Optional):*** *6 mm – 15.9 mm* *(¼" - ⅝") thick,* *DensDeck*	**Insulation:** 50.8 mm (2") thick, ISO 95+ GL/ISOGARD GL, Resista/ISOGARD CG, HailGard/ISOGARD HG ISOGARD HD Composite **Attachment**: 8 HD Fasteners	**Cover Board (Optional):** Min. 6.4 mm (¼") Securock, DensDeck or DensDeck Prime -or- 12.7 mm (½") thick ISOGARD HD -or- Min. 11.1 mm (7/16") APA rated OSB	**Membrane:** PVC or PVC KEE* 1.3 mm (50 mil) **Attachment**: Full Coverage PVC Water Based Bonding Adhesive, PVC LVOC Bonding Adhesive

20-06- B0122-5	*DensDeck Prime* *Securock* ***Attachment**:* *Loose Laid*	per 1219 mm x 2438 mm (4′x8′) board	**Attachment:** 12 HD Fasteners/Plates per 1219 mm x 2438 mm (4′x8′) board	**Note**: Do not use PVC WBBA with PVC KEE Membrane
Steel 22 ga RD938 230 MPa (33.4 ksi) 2.235 kPa (-46.67 psf) Project No: 20-06- B0122-6	**Vapor Barrier:** V-Force BaseGard SA Polyethylene Kraft paper **Thermal Barrier** 6 mm – 15.9 mm (¼" - ⅝") thick, DensDeck DensDeck Prime Securock **Attachment**: Loose Laid	**Insulation**: 38.1 mm (1.5") thick, ISO 95+ GL/ISOGARD GL, Resista/ISOGARD CG, ISOGARD HD Composite -or- 50.8 mm 50.8 mm (2") thick, HailGard/ISOGARD HG **Attachment:** 8 HD Fasteners per 1219 mm x 2438 mm (4′x8′) board	**Cover Board:** Min. 6.4 mm (¼") Securock, DensDeck or DensDeck Prime -or- 12.7 mm (½") thick ISOGARD HD -or- Min. 11.1 mm (7/16") APA rated OSB **Attachment:** 12 HD Fasteners/Plates per 1219 mm x 2438 mm (4′x8′) board	**Membrane:** PVC XR, PVC KEE XR 1.5 mm (60 mil) **Attachment:** Full Coverage PVC Water Based Bonding Adhesive
Steel 22 ga RD938 230 MPa (33.4 ksi) 1.795 kPa (-37.5 psf) Project No: 20-06- B0122-4	**Vapor Barrier:** V-Force BaseGard SA Polyethylene Kraft paper ***Thermal Barrier (Optional):*** *6 mm – 15.9 mm* *(¼" - ⅝") thick,* *DensDeck* *DensDeck Prime* *Securock* ***Attachment:*** *Loose Laid*	**Insulation**: 50.8 mm (2") thick, ISO 95+ GL/ISOGARD GL, Resista/ISOGARD CG, ISOGARD HD Composite **Attachment**: 8 HD Fasteners per 1219 mm x 2438 mm (4′x8′) board	**Cover Board:** N/A **Attachment**: N/A	**Membrane**: PVC XR or PVC KEE XR 1.5 mm (60 mil) **Attachment**: ISO Spray R, Twin Jet or XR Stick Membrane Adhesive ribbon applied 305 mm (12" o.c.)
Steel 22 ga RD938 230 MPa (33.4 ksi) 3.59 kPa (-75 psf) Project No: 21-06-B0123-1	**Vapor Barrier**: V-Force BaseGard SA Polyethylene Kraft paper ***Thermal Barrier (Optional):*** *6 mm – 15.9 mm* *(¼" - ⅝") thick,* *DensDeck* *DensDeck Prime* *Securock* ***Attachment**:* *Loose Laid or Tacked In Place*	**Insulation:** 50.8 mm (2") thick, ISO 95+ GL/ISOGARD GL, Resista/ISOGARD CG **Attachment**: 8 HD Fasteners per 1219 mm x 2438 mm (4′x8′) board	**Cover Board:** N/A **Attachment:** N/A	**Membrane**: PVC 1.3 mm (50 mil) **Attachment**: Full Coverage Jet Bond PVC Spray Adhesive
Steel 22 ga RD938 230 MPa (33.4 ksi) 1.795 kPa (-37.5 psf) Project No: 21-06-B0123-2	**Vapor Barrier**: V-Force BaseGard SA Polyethylene Kraft paper ***Thermal Barrier (Optional):*** *6 mm – 15.9 mm* *(¼" - ⅝") thick,* *DensDeck* *DensDeck Prime* *Securock* ***Attachment**:* *Loose Laid or Tacked In Place*	**Insulation**: 50.8 mm (2") thick, ISO 95+ GL/ISOGARD GL, Resista/ISOGARD CG **Attachment**: 8 HD Fasteners per 1219 mm x 2438 mm (4′x8′) board	**Cover Board**: Min. 6.4 mm (¼") Securock, DensDeck, DensDeck Prime or DensDeck StormX -or- 12.7 mm (½") thick ISOGARD HD -or- 1.5" (38.1 mm) ISOGARD HD COMP. HailGard/ISOGARD HG -or- Min. 11.1 mm (7/16") APA rated OSB **Attachment**: 12" (304.8 mm) o.c. beads ISO Spray R, ISO Twin Pack or ISO Stick Insulation Adhesive	**Membrane**: PVC 1.3 mm (50 mil) **Attachment**: Full Coverage PVC Water Based Bonding Adhesive

PVC Single-Ply Attached Membrane

PVC Single-Ply Membrane - Dynamic Uplift Resistance (DUR) as per CSA A123.21				
Deck Type & Uplift with SF of 1.5	**Vapor Barrier/ Thermal Barrier**	**Insulation and Attachment**	**Cover Board and Attachment**	**Membrane and Attachment**
Steel 22 ga Y : 40 ksi 2.544 kPa (-53 psf) Project No: 2b-FBP-21- LSWUD-01.A	Vapor Barrier: V-Force BaseGard SA Polyethylene Kraft paper *Thermal Barrier (Optional):* *6mm – 15.9 mm* *(¼" - ⅝") thick* *DensDeck* *DensDeck Prime* *Securock* *Attachment:* *Loose Laid*	Insulation: Cover Board Used: Min. 1.5" ISO 95+ GL/ISOGARD GL, Resista/ISGOARD CG, HailGard/ISOGARD HG, ISOGARD HD Composite No Cover Board: 50.8 mm (2") thick, ISO 95+ GL/ISOGARD GL, Resista/ISOGARD CG, HailGard/ISOGARD HG ISOGARD HD Composite Attachment: 8 HD Fasteners and plates per 1219 mm x 2438 mm (4 ' x8 ') board	*Cover Board (Optional):* *Min. 6.4 mm (¼")* *Securock, DensDeck or* *DensDeck Prime* *-or-* *12.7 mm (½") thick* *ISOGARD HD* *-or-* *Min. 11.1 mm (7/16")* *APA rated OSB* *Attachment:* *8 HD Fasteners and* *plates per* *1219 mm x 2438 mm* *(4 ' x8 ') board*	Membrane: PVC or PVC KEE 1.3 mm (50 mil) Attachment: Heavy Duty Fasteners and HD Seam Plates or HD Plus Fasteners and Plates 114" rows, 12" o.c.

PVC Single-Ply Plate Bonded Membrane

PVC Single-Ply Membrane - Dynamic Uplift Resistance (DUR) as per CSA A123.21				
Deck Type & Uplift with SF of 1.5	**Vapor Barrier/ Thermal Barrier**	**Insulation and Attachment**	**Cover Board and Attachment**	**Membrane and Attachment**
Steel 22 ga RD938 230 MPa (33.4 ksi) 2.394 kPa (-50 psf) Project No: 20-06- B0122-3	Vapor Barrier: V-Force BaseGard SA Polyethylene Kraft paper *Thermal Barrier* *(Optional):* *6mm – 15.9 mm* *(¼" - ⅝") thick* *DensDeck* *DensDeck Prime* *Securock* *Attachment:* *Loose Laid*	Insulation: Cover Board Used: Min. 1.5" ISO 95+ GL/ISOGARD GL, Resista/ISGOARD CG, HailGard/ISOGARD HG, ISOGARD HD Composite No Cover Board: 50.8 mm (2") thick, ISO 95+ GL/ISOGARD GL, Resista/ISOGARD CG, HailGard/ISOGARD HG ISOGARD HD Composite Attachment: 6 HD Fasteners and PVC InvisiWeld Plates per 1219 mm x 2438 mm (4 ' x8 ') board	*Cover Board (Optional):* *Min. 6.4 mm (¼")* *Securock, DensDeck or* *DensDeck Prime* *-or-* *12.7 mm (½") thick* *ISOGARD HD* *-or-* *Min. 11.1 mm (7/16")* *APA rated OSB* *Attachment:* *6 PVC InvisiWeld Plates* *and Heavy Duty* *Fasteners per* *1219 mm x 2438 mm* *(4 ' x8 ') board*	Membrane: PVC or PVC KEE 1.3 mm (50 mil) Attachment: Welded to plates used to secure insulation/cover board.