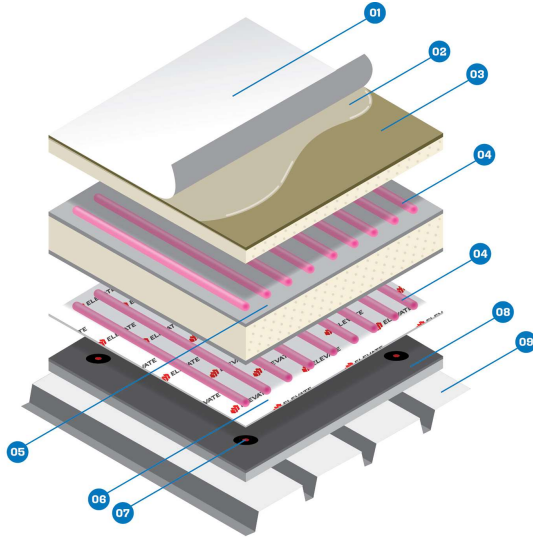


# QuickSpec

**Data Center – Adhered Single-Ply Membrane  
Various Decks**

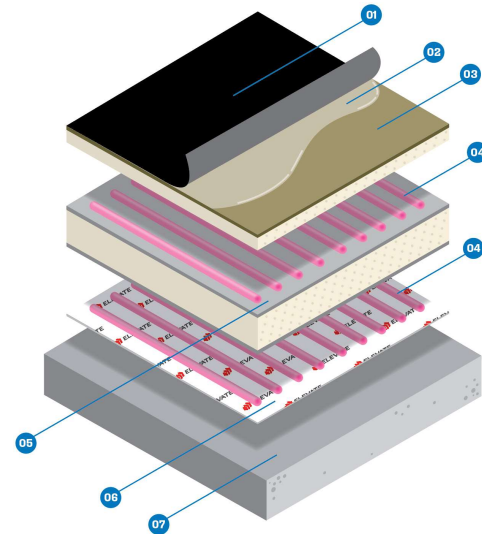
**Red Shield™ Warranty:  
Up to 20 Years, 55 mph**

## Examples of Typical Data Center Assemblies



### ASSEMBLY EXAMPLE

- 01 Elevate™ UltraPly™ TPO
- 02 Appropriate Membrane Adhesive
- 03 ISOGARD™ HD Insulation
- 04 Approved Elevate Insulation Adhesive
- 05 ISOGARD™ GL Insulation
- 06 Elevate V-Force™ Vapor Barrier
- 07 Appropriate Plates and Fasteners
- 08 Appropriate Thermal Barrier
- 09 Steel Roof Deck



### ASSEMBLY EXAMPLE

- 01 RubberGard™ EPDM
- 02 Appropriate Membrane Adhesive
- 03 ISOGARD HD Insulation
- 04 Approved Elevate Insulation Adhesive
- 05 ISOGARD GL Insulation
- 06 Elevate V-Force Vapor Barrier
- 07 Concrete Roof Deck

**Slope Requirement:** Positive drainage required for warranty.

### Construction Type:

☐ New Construction    ☐ Re-Roof    ☐ Re-Cover (Any wet or damaged materials removed prior to installation)

**Building Height Limitation:** Elevate Single-Ply Membrane Adhered Systems are limited to buildings 250' (76.2 m) or less.

**Air Barrier:** An air barrier is recommended for projects with large wall openings greater than 10% of the total wall area.

**NOTE:** The inclusion and placement of air and vapor control layers is the responsibility of a design professional. Terminating control layers within the roofing assembly is consistent with industry best practices and is represented solely for illustration purposes.

### Vapor Barrier:

☐ V-Force and Thermal Barrier    ☐ V-Force w/o Thermal Barrier\*    ☐ SBS    ☐ APP    ☐ Other (by designer)

\*Thermal barrier required when using V-Force over a Steel Deck on FM Insured or FM Specified projects.

**NOTE:** The inclusion and placement of air and vapor control layers is the responsibility of a design professional.

**Base Tie-Ins:** Must be attached to substrates which provide a minimum of 200 lbf (1 kN) in any direction.

☐ Deck Termination    ☐ Wall Termination

**Increased Wind Speed and Codes:** Any wind speed coverage exceeding 55 mph (88 km/h) or projects with code requirements must be reviewed by a Elevate Regional Technical Coordinator.

**Hail Coverage:** Appropriate membrane thickness, cover board and securement methods required for hail coverage up to 2" (50.8 mm) diameter. See below.

**NOTE:** Very Severe Hail (VSH) ratings from FM Approvals may require a specific cover board to be used. See FM RoofNav approval for full FM assembly requirements.

**Deck Requirement:**

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Minimum ½" (12.7 mm) Plywood  | <input type="checkbox"/> Minimum 7/16" (11.1 mm) OSB   | <input type="checkbox"/> Minimum 1" (25.4 mm) Wood Plank |
| <input type="checkbox"/> Minimum 2" (50.8 mm) Poured Gypsum  | <input type="checkbox"/> Minimum 2" (50.8 mm) Cementitious Wood Fiber                              |  |
| <input type="checkbox"/> Minimum 22 Gauge Steel  | <input type="checkbox"/> Minimum 2,500 psi (17.2 MPa) Structural Concrete, min. 3" (76.2 mm) thick |  |
| <input type="checkbox"/> Minimum 2" (50.8 mm) Lightweight Concrete:  |  |  |
| <input type="checkbox"/> over 22 Gauge Steel Pan <input type="checkbox"/> over Structural Concrete <input type="checkbox"/> with Fastened Base Sheet |  |  |

**Insulation Fasteners and Plates (Based on Appropriate Deck Type):**

- |  |   |
|--|---|
| <input type="checkbox"/> Heavy Duty Fasteners and Insulation Plates  | <input type="checkbox"/> HailGard™ Fastener (with HailGard Composite Board or OSB only) |
| <input type="checkbox"/> All Purpose Fasteners and Insulation Plates | <input type="checkbox"/> Elevate #12 Fasteners and Insulation Plates                    |
| <input type="checkbox"/> Pre-Assembled #12 Fastener and Plate        | <input type="checkbox"/> IsoFast #12 Belted Fasteners and Insulation Plates             |
| <input type="checkbox"/> AP AccuTrac Kit                             | <input type="checkbox"/> Polymer Fastener   |

**NOTE:** When mechanical attachment is used it is recommended to secure the base layer or lower layer of insulation then adhere the remaining insulations to decrease thermal bridging.

**Insulation Adhesive\*:**

- ☐
- I.S.O. Twin Pack™
- ☐
- I.S.O. Spray™ R
- ☐
- I.S.O. Stick™
- ☐
- Twin Jet
- ☐
- Twin Jet Y
- ☐
- Hot Asphalt

**\*NOTE:** Max. 4' x 4' boards must be used when attaching insulation with adhesives. Cleaning of the metal deck may be required to remove processing oils.

**Insulation Adhesive Attachment:**
**Max. 15 Year Warranty:**

- ☐
- Bead Spacing: F: 12", P: 12", C: 12"
- 
- (F: 304.8 mm, P: 304.8 mm, C: 304.8 mm)

**20 Year Warranty:**

- ☐
- Bead Spacing: F: 12", P: 6", C: 6"
- ☐
- Twin Jet Y (Bead or Spatter)
- ☐
- Full Coverage
- 
- (F: 304.8 mm, P: 152.4 mm, C: 152.4 mm)

**NOTE:** Adhesion direct to steel decking is acceptable but may not meet building code or allow for performance validation. FM Approvals does not allow direct to steel deck application of adhesives for insulation. When used ensure application of adhesive is on the top flute of deck. Bead spacing may be adjusted (decreased) for flute spacing, never increase spacing.

**Membrane:**
**Appropriate Membrane Adhesive:**

**NOTE:** See Technical Information Sheet for appropriate membrane and membrane adhesive combinations.

**UltraPly TPO Membrane Options:**

- ☐
- UltraPly TPO, 45 mil
- 
- ☐
- UltraPly TPO, 60 mil
- 
- ☐
- UltraPly Platinum TPO, 80 mil
- 
- ☐
- UltraPly TPO SA, 60 mil
- 
- ☐
- UltraPly TPO XR 100, 45 mil\* (max 15-Year Warranty)
- 
- \*NOTE:**
- When adhered direct to existing asphalt, mod-bit or built-up products.
- 
- ☐
- UltraPly TPO XR, 100, 115 or 135 Thickness

- ☐
- Jet Bond Spray Adhesive
- 
- ☐
- Single-Ply LVOC Bonding Adhesive
- 
- ☐
- Single-Ply LVOC Bonding Adhesive-1168
- 
- ☐
- UltraPly Bonding Adhesive
- 
- ☐
- XR Stick (Bead Attached)
- 
- ☐
- I.S.O. Spray R (Full Coverage, Spatter or Bead)
- 
- ☐
- Twin Jet or Twin Jet Y (Bead or Spatter)
- 
- ☐
- Asphalt (III) (Max 15-year) (Full Coverage)
- 
- ☐
- Asphalt (IV or SEBS) (Full Coverage)
- 
- ☐
- Self-Adhered

**PVC and PVC KEE Membrane Options:**

- ☐
- Elevate PVC or PVC KEE, 50 mil (Max. 15-Year Warranty)
- 
- ☐
- Elevate PVC or PVC KEE, 60 mil
- 
- ☐
- Elevate PVC or PVC KEE, 80 mil
- 
- ☐
- Elevate PVC KEE XR, 50 mil (Max. 15-Year Warranty)
- 
- ☐
- Elevate PVC XR or PVC KEE XR, 60 mil
- 
- ☐
- Elevate PVC XR or PVC KEE XR, 80 mil
- 
- ☐
- Elevate MAX PVC, 50 mil (Max. 15-Year Warranty)
- 
- ☐
- Elevate MAX PVC, 60 mil
- 
- ☐
- Elevate MAX PVC, 80 mil
- 
- ☐
- Elevate MAX PVC XR, 50 mil (Max. 15-Year Warranty)
- 
- ☐
- Elevate MAX PVC XR, 60 mil
- 
- ☐
- Elevate MAX PVC XR, 80 mil

- ☐
- Jet Bond PVC Spray Adhesive (Elevate PVC & PVC MAX Membrane
- ONLY**
- )
- 
- ☐
- Elevate PVC LVOC Bonding Adhesive
- 
- ☐
- Elevate PVC Water Based Bonding Adhesive\*
- 
- NOTE:**
- Max 15-year warranty (Not to be used with PVC KEE non-fleece membrane)
- 
- ☐
- Twin Jet or Twin Jet Y (Bead or Spatter)
- 
- ☐
- I.S.O. Spray R (Full Coverage, Spatter or Bead)
- 
- ☐
- XR Stick (Bead Attached)

**RubberGard EPDM Membrane Options:**

- ☐
- RubberGard EPDM, 45 mil (15-year max)
- 
- ☐
- RubberGard EPDM, 60 mil
- 
- ☐
- RubberGard Platinum EPDM, 90 mil
- 
- ☐
- RubberGard MAX EPDM, 45 mil
- 
- ☐
- RubberGard MAX EPDM, 60 mil
- 
- ☐
- RubberGard MAX EPDM, 75 mil
- 
- ☐
- RubberGard EPDM SA, 60 mil

- ☐
- Jet Bond Spray Adhesive
- 
- ☐
- Single-Ply LVOC Bonding Adhesive
- 
- ☐
- Single-Ply LVOC Bonding Adhesive-1168
- 
- ☐
- EPDM Bonding Adhesive BA-2004(T)
- 
- ☐
- EPDM Solvent Free Bonding Adhesive (Non-Reinforced Membrane Only. 15-year with 45 mil, 20-year with ≥ 60 mil)
- 
- ☐
- Self-Adhered

**Leak Detection:**

**NOTE:** Non-Elevate products are not included in the Elevate Red Shield Warranty.

- ☐
- Detec TruGround Conductive Primer (By others)
- 
- ☐
- Low Voltage Electronic Leak Detection (ELD) Wire Grid System (By Others) (Must be placed under top cover board/insulation layer.)

**Elevate Factory Formed Edge Metal System:**

- ☐ Coping System (QS-EDGE METAL-901)      ☐ Fascia System (QS-EDGE METAL-902)  
☐ Water Control (QS-EDGE METAL-903)      ☐ Wood Nailer Alternative (QS-EDGE METAL-904)

**Elevate ES-1 Cleat Program Metal Offering (5 – 20 Year Warranty):**

- ☐ Drip Edge    ☐ Gravel Stop    ☐ Flat Coping    ☐ Snap-On Coping    ☐ Snap-On Fascia    ☐ Tapered Coping

**Non-Factory Formed Edge Conditions:**

- ☐ Elevate Drain Bar    ☐ Elevate Termination Bar    ☐ Elevate Thermoplastic Coated Metal    ☐ Elevate Approved Detail

**Substrate Attachment Rates for Standard 55 mph Wind Speed (Top Layer, 4' x 8' Board)**

Thickness	Substrate Material	Minimum Fasteners
		20-Year
<input type="checkbox"/> 1.0" – 1.4" (25.4 mm – 35.6 mm)	<input type="checkbox"/> ISOGARD GL / ISO 95+ GL or <input type="checkbox"/> ISOGARD CG / Resista	16
<input type="checkbox"/> 1.5" – 1.9" (38.1 mm – 48.3 mm)		12
<input type="checkbox"/> 2.0" – 4.0" (50.8 mm – 101.6 mm)		8
<input type="checkbox"/> 1.5" – 1.9" (38.1 mm – 48.26 mm)	<input type="checkbox"/> ISOGARD HG / HailGard Composite / <input type="checkbox"/> OSB / <input type="checkbox"/> Plywood (Plate and Fastener)	12
<input type="checkbox"/> 2.0" – 4.0" (50.8 mm – 101.6 mm)		8
<input type="checkbox"/> ISOGARD HG / HailGard Composite / OSB / Plywood (HailGard Fastener)		16
<input type="checkbox"/> ISOGARD HD Composite		12
<input type="checkbox"/> ISOGARD HD Cover Board		12
<input type="checkbox"/> 1/4" (6.35 mm)	<input type="checkbox"/> SECUROCK® Brand Gypsum-Fiber Roof Board	10
<input type="checkbox"/> 1/2" (12.7 mm)		8
<input type="checkbox"/> 5/8" (15.88 mm)		8
<input type="checkbox"/> 1/4" (6.35 mm)	DensDeck® Prime Roof Board	12
<input type="checkbox"/> 1/2" (12.7 mm)		8
<input type="checkbox"/> 5/8" (15.88 mm)		8
<input type="checkbox"/> 5/8" (15.88 mm)	DensDeck Prime StormX™ Roof Board	8
<input type="checkbox"/> 1/2" (12.7 mm)	Structodek® High Density Wood Fiber Board	16
<input type="checkbox"/> 1/4" (6.35 mm)	DEXcell® FA® Glass Mat Roof Board	12
<input type="checkbox"/> 1/2" (12.7 mm)		8
<input type="checkbox"/> 5/8" (15.88 mm)		8
<input type="checkbox"/> 7/16" (11.11 mm)	DEXcell Cement Roof Board	10
<input type="checkbox"/> 5/8" (15.88 mm)		8
<input type="checkbox"/> 5/8" (15.88 mm)	DEXcell FA VSH® Glass Mat Roof Board	8

**NOTE:**

- Only Elevate brand products are covered in a Red Shield warranty.
- Refer to the Elevate Technical Database at [www.elevatecommercialbp.com](http://www.elevatecommercialbp.com) for additional information regarding appropriate Roof Systems.
- It is the installing contractor's responsibility to follow all applicable building codes.
- Contact Elevate Technical Services for full warranty requirements.
- DensDeck is a registered trademark of Georgia-Pacific Gypsum LLC, SECUROCK is a registered trademark of USG Corporation, and Structodek is a registered trademark of Blue Ridge Fiberboard, Inc., and DEXcell is a registered trademark of National Gypsum Company.
- Appropriate flashing details required. See specific flashing details and guides as needed for the applicable system.
- The inclusion and placement of air and vapor control layers is the responsibility of a design professional. Terminating control layers within the roofing assembly is consistent with industry best practices and is represented solely for illustration purposes.
- Hail coverage requires the use of adhered membrane and adhered cover board. Approved cover boards include ISOGARD HD, ISOGARD HG as well as appropriate DensDeck Prime, Securock and DEXcell products.

This sheet is meant to highlight Elevate products and specifications and is subject to change without notice. Amrize takes responsibility for furnishing quality materials that meet published Elevate product specifications or other technical documents, subject to normal manufacturing tolerances. Neither Amrize nor its representatives practice architecture. Amrize offers no opinion on and expressly refuses any responsibility for the soundness of any structure. Amrize accepts no liability for structural failure or resultant damages. Consult a competent structural engineer prior to installation if the structural soundness or structural ability to properly support a planned installation is in question. No Amrize representative is authorized to vary this disclaimer.

QS-DC-ADHERED

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