MIAMI-DADE

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

Johns Manville Corporation
717 17th Street
Denver, CO 80202

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Johns Manville PVC Single Ply Roof Systems over Steel Decks

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews NOA No. 03-0421.04 and consists of pages 1 through 18.
The submitted documentation was reviewed by Jorge L. Acebo.

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply
Material:	PVC
Deck Type:	Steel
Maximum Design Pressure	-97.5 psf
Fire Classification:	See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

Product	Dimensions	Test Specification	Product Description
UltraGard SR-50, SR-60 and SR-80	37.5" - 81" wide	ASTM D 4434	Polyester reinforced PVC membrane 50, 60 or 80 mils thickness used in mechanically fastened and adhered roofing assemblies, and as membrane flashing for walls, curbs, etc.
UltraGard Plus 50 Plus 60	53" - 81" wide	ASTM D 4434	Polyester reinforced PVC membrane 50 mils and 60 mils thick with a 7.5 ounce polyester fleece laminated to the underside. UltraGard Plus may be mechanically attached or adhered to acceptable substrates.
UltraGard V-2/50 and V-2/60	37.5" - 81" wide	ASTM D 4434	Polyester reinforced PVC polymer based, 50 or 60 mil membrane used in mechanically fastened and adhered roofing assemblies, and as membrane flashing for walls, curbs, etc.
Seekure Paper Slipsheet	96" x 300'		A laminated Kraft paper slipsheet with a fiberglass scrim reinforcement intended for use with mechanically attached systems as a separating slipsheet over smooth substrates. It is not intended for use over smooth surface BURs.
CTP Foil Slipsheet	6' - 300'		A laminated foil/Kraft paper slip sheet with a polyethylene coating on both sides of the foil intended for use with mechanically attached systems as a separation layer.
DN Flameguard Slipsheet	71" x 700'		A laminated aluminum foil/Kraft paper slipsheet with proprietary flame extinguishing adhesive and a fiberglass scrim reinforcement for use with mechanically attached systems as a fire-retardant slipsheet in certain UL and FM assemblies.

Product	Dimensions	Test Specification	Product Description
Polyester Protection Mat	12' x 100'		A 9 ounce needle-punched polyester fabric that is used as a cushioning layer in certain applications.
Detail Membrane 80	35" x 75'	ASTM D 4434	35" wide, 80 mil thick PVC membrane used in field-formed flashing where heat forming is required. Available in white, grey, pearl or black.
Detail Strip 80	6" x 150'		6" wide 80 mil thick unreinforced PVC membrane strips used to waterproof joints of UltraGard metal. Available in white, grey, pearl and black.
Inside Corner	various		Pre-manufactured corners available in white or grey used to waterproof the corners of walls, parapets, etc..
Outside Corner	various		Pre-manufactured corners available in white or grey used to waterproof the corners of walls, parapets, curbs, pitch pockets, etc.
Coated Metal Sheets	4' x 8' 4' x 10'		Available in white, grey and black. 4' x 8' and 4' x 10' sheet sizes. UltraGard metal is a laminate of UltraGard PVC membrane and galvanized steel field fabricated into metal base flashings, edge details, and pitch pockets.
Coated Metal 3" strip	3" x 8' 3" x 10'		Pre-cut UltraGard metal strips are used for base securement and membrane flashing securement in specific details.
Pipe Boots	various		Pre-manufactured membrane boots used to flash round penetrations from 1" to 12" in diameter.
¼" Microfoam	6' x 225'		A multi-ply polypropylene foam intended for use with mechanically attached systems as a cushioning slipsheet over rough, uneven substrates. It is not intended for use over existing gravel surfaced built-up roofs.
Termination Bar	1.35" x 10'		An extruded aluminum (0.93" thick) bar slotted 6" on center used to terminate adhered "SR" and "FAS" membrane flashings in certain details.
7" Round Disk Caps	7" round		Round membrane caps used to waterproof fastening discs in certain applications. Available in white and grey.
UltraGard PVC Membrane Adhesive (Latex)	5 Gal. Pail	Proprietary	Designed for bonding UltraGard PVC membrane to concrete, cellular concrete, and specific wood fiber roof insulations in horizontal applications only.

Product	Dimensions	Test Specification	Product Description
UltraGard PVC Membrane Adhesive (Solvent)	5 Gal. Pail	Proprietary	Designed for bonding UltraGard PVC membrane to metal, wood, concrete, cellular concrete and specific roof insulations in both horizontal and vertical applications.
UltraGard PVC Membrane One-Step Adhesive	5 Gal. Pail		Designed for bonding UltraGard PVC membrane to various vertical and horizontal surfaces.
UltraGard Sealant	30 Tube box		A single component, gun grade elastomeric polyurethane sealant used to seal UltraGard termination bar, counter flashings, etc.. UltraGard caulk is not used to caulk field seams. UltraGard caulk is available in white and grey.
UltraGard Pourable Sealer	1 Gal. Can		A two part polyurethane sealant used as a pitch pocket filler.
UltraGard PVC Round Pitch Pocket	6.5" Round		Rigid PVC flashing with an opening 6.5" in diameter used to waterproof irregularly shaped penetrations.
UltraGard PVC Sealant	1 Gal.	Proprietary	A liquid PVC compound used to seal non-encapsulated edges of completed seams.
UltraGard Solvent Welding Solution	1 Gal.		May be used to weld UltraGard PVC membrane to UltraGard metal in certain detail applications.
UltraGard Roof Systems Membrane Cleaner	1 Gal. Can		May be used to clean small areas of the membrane where asphalt, roofing cement, etc. must be removed.
Type R Tie-in Membrane	24" x 82'		An asphalt compatible PVC membrane used as a tie-in material to existing built-up roofs.
WBP 100 Walkway	48" x 60'		100 mil thick texturized polyester reinforced PVC membrane used as a walkway and protection material. Available in blue or grey.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
Dens Deck	Silicon treated gypsum	G-P Products
ENRGY 2, ENRGY 3, PSI-25	Isocyanurate Insulation	Johns Manville
Fesco Foam, DuraFoam	Isocyanurate Insulation with perlite facer	Johns Manville
Retro-Fit Board, DuraBoard	A high-density perlite roof insulation.	Johns Manville

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
Fesco Board	Rigid perlite roof insulation board.	Johns Manville
Fiber Glass	Glass fiber roof insulation board.	Johns Manville
Wood Fiberboard	Regular wood fiber insulation	Generic
High Density Wood Fiberboard	High Density Wood Fiber insulation board.	Generic
Perlite Insulation Board	Perlite Insulation	Generic
Type X Gypsum	Gypsum Wallboard	Generic

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast Fasteners	Insulation and membrane fastener	Various	Construction Fasteners, Inc.
2.	Dekfast Hex Plate	Insulation and membrane fastener	Various	Construction Fasteners, Inc.
3.	#12 & #14 Roofgrip	Insulation and membrane fastener	Various	ITW Buildex
4.	Metal Plate	Galvalume AZ50 stress plate	3" square	ITW Buildex
5.	Plastic Plate	Polyethylene stress plate	3.2" round	ITW Buildex
6.	UltraFast	Insulation fastener for wood and steel.		Johns Manville
7.	UltraFast ASAP	Pre-assembled Insulation fastener and plate		Johns Manville
8.	UltraFast Metal Plate	Galvalume AZ55 steel plate	3" square	Johns Manville
9.	UltraFast Plastic Plate	High Density Polyolefin round plate	3" round	Johns Manville
10.	Olympic Fasteners	Insulation and membrane fastener	Various	Olympic Mfg. Group
11.	Olympic Standard	Galvalume AZ55 stress plate	3" round	Olympic Mfg. Group
12.	Olympic Plastic Plastic	Plastic plates for fasteners.	3" round	Olympic Mfg. Group

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
13.	Rawl Fasteners	Insulation fastener for steel and wood decks	Various	Powers Fasteners Inc.
14.	Rawl Insulation Plate	Galvalume AZ55 stress plate	3" round	Powers Fasteners Inc.
15.	Rawl Membrane Plate	Galvalume AZ55 stress plate	2" round	Powers Fasteners Inc.
16.	Insul-Fixx Fastener	Insulation fastener for steel and wood decks	Various	SFS Stadler, Inc.
17.	Insul-Fixx S	Galvalume AZ55 stress plate	3" round	SFS Stadler, Inc.
18.	Insul-Fixx P	Polyethylene stress plate	3" round	SFS Stadler, Inc.
19.	Tru-Fast Fasteners	Insulation and membrane fastener	Various	The Tru-Fast Corp.
20.	Tru-Fast Ultra Stainless Fasteners	Stainless steel insulation and membrane fastener	Various	The Tru-Fast Corp.
21.	Tru-Fast MP-3	Galvalume AZ50 steel plate	3.23" round	The Tru-Fast Corp.
22.	Tru-Fast Plastic Plate	Polyethylene stress plate	3" round	The Tru-Fast Corp.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Factory Mutual Research Corp.	J.I. 2W1A3.AM	Wind Uplift	01/03/94
	J.I.3Y6A0.AM	Wind Uplift	11/15/95
	J.I. 4Z0A5.AM	Wind Uplift	02/07/96
	1D6A1.AM	TAS 114	09/04/98
	0D9A8.AM		04/26/99
	3012974	Wind Uplift	06/03/02
	3008869	4470	03/19/01
	3015203	4470	01/15/03
Dynatech Engineering Corp.	94.9.27	Wind Uplift	09/28/94
Exterior Research & Design, LLC	#3705.09.96-1	TAS 114	09/03/96
	#3705.10.97-1	TAS 114	10/17/97
Independent Roof Testing and Consultanting of South Florida, Inc.	IRT # 01-005	TAS 114	03/13/01

APPROVED ASSEMBLIES:

Membrane Type: Single Ply, Thermoplastic, Adhered PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type B: Base layer of insulation mechanically attached, top insulation layer fully adhered with approved asphalt or adhesive

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ENRGY 2, ENRGY 3, PSI-25, ISO-1		
Minimum 1.5" thick	**1, 3, 6, 10 or 16**	**1:2 ft^2**
Minimum 2" thick	**1, 3, 6, 10 or 16**	**1:2.6 ft^2**
Esgard Fiberboard, Huebert Fiberboard, Fiberboard, GAFTEMP Fiberboard		
Minimum 1" thick	**1, 6, 10 or 16**	**1:2 ft^2**
Dens Deck		
Minimum ¼" thick	**1, 6, 10 or 16**	**1:2 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Any of the insulation listed for Base Layer, above.		

Note: Optional top layer of insulation in a full mopping of any approved mopping asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as Base Layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Vapor Retarder: (Optional) An FMRC approved vapor barrier approved for use with hot asphalt may be applied to the deck or perlite base layer.

Barrier None.

Membrane:	UltraGard PVC Roofing Systems SR-50, 60 or 80, Plus 50 or Plus 60 or V-2/50 or V-2/60 installed utilizing UltraGard PVC Membrane Adhesive at a rate of 60 square feet/gallon or UltraGard PVC Latex Adhesive (where acceptable) at a rate of 40 square feet/gallon. Field sheets are to be lapped a minimum of 2" and heat seamed together using hot air equipment, which will give a minimum 1½" weld area. UltraGard Liquid PVC Seam Sealant is to be applied to all cut or non-encapsulated edges. Care shall be taken to avoid getting adhesive in the seam areas.
Maximum Design Pressure:	–60 psf (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, Adhered PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type B(2): Base layer of insulation is mechanically attached to roof deck. Any subsequent layers are then adhered to base layer of insulation. Membrane is subsequently fully or partially adhered to insulation.

All General and System Limitations apply.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO-1 **Minimum 1.5" thick**	**1 or 16**	**1:1.3 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Dens Deck **Minimum ¼" thick**	**N/A**	**N/A**

Note: Apply top layer of insulation in a full mopping of any approved mopping asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as Base Layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Barrier: None.

Membrane: UltraGard SR-50, SR-60, SR-80, V-2/50 or V-2/60 adhered with UltraGard PVC Membrane Adhesive at a rate of 50-60 square feet/gallon. Field sheets are to be lapped a minimum of 3" and heat seamed together using hot air equipment, which will give a minimum 1½" weld area. UltraGard Liquid PVC Seam Sealant is to be applied to all cut or non-encapsulated edges. Care shall be taken to avoid getting adhesive in the seam areas.

Maximum Design Pressure: –75 psf (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, Adhered PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., type B, ASTM A 611 Grade E steel decking over 0.25 in. steel supports spaced max. 6 ft. o.c. The deck is anchored to the steel supports with ITW Buildex Traxx/5 fasteners spaced max. 6 in o.c. at the supports. The deck side laps are secured with ITW Buildex Traxx/1 fasteners spaced max 24 in. o.c.

System Type B(3): Base layer of insulation is mechanically attached to roof deck. Membrane is subsequently fully or partially adhered to insulation.

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 2, ENRGY 3, ISO-1 Minimum 1.5" thick	**6 or 7**	**1:1.45 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Barrier: None.

Membrane: UltraGard SR-50, SR-60, SR-80, V-2/50 or V-2/60 adhered with UltraGard PVC Solvent Adhesive at a rate of 50-60 square feet/gallon. Field sheets are to be lapped a minimum of 3" and heat seamed together using hot air equipment, which will give a minimum 1½" weld area. UltraGard Liquid PVC Seam Sealant is to be applied to all cut or non-encapsulated edges. Care shall be taken to avoid getting adhesive in the seam areas.

Maximum Design Pressure: –60 psf (See General Limitation #7)

Membrane Type: Single Ply, Thermoplastic, Adhered PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type C: All layers of insulation simultaneously fastened.

All General and System Limitations apply.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 2, ENRGY 3, ISO-1 Minimum 1.5" thick	**N/A**	**N/A**
Esgard Fiberboard, Huebert Fiberboard, Fiberboard, GAFTEMP Fiberboard Minimum 1" thick	**N/A**	**N/A**
Dens Deck Minimum ¼" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 2, ENRGY 3, PSI-25, ISO-1 Minimum 1.5" thick	**1, 3, 6, 10 or 16**	**1:2 ft^2**
Esgard Fiberboard, Huebert Fiberboard, Fiberboard, GAFTEMP Fiberboard Minimum 1" thick	**1, 6, 10 or 16**	**1:2 ft^2**
Dens Deck Minimum ¼" thick	**1, 6, 10 or 16**	**1:2 ft^2**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Vapor Retarder: (Optional) An FMRC approved vapor barrier approved for use with hot asphalt may be applied to the deck or perlite base layer.

Barrier: None.

Membrane: UltraGard Roofing Systems SR-50, 60 or 80, Plus 50 or Plus 60 or V-2/50 or V-2/60 installed utilizing UltraGard PVC Membrane Adhesive at a rate of 60 square feet/gallon or UltraGard PVC Latex Adhesive (where acceptable) at a rate of 40 square feet/gallon. Field sheets are to be lapped a minimum of 3" and heat seamed together using hot air equipment, which will give a minimum 1½" weld area. UltraGard Liquid PVC Seam Sealant is to be applied to all cut or non-encapsulated edges. Care shall be taken to avoid getting adhesive in the seam areas.

Maximum Design Pressure: –60 psf (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, Mechanically Fastened PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type C(2): All layer of insulation are mechanically attached to roof deck. Membrane is subsequently fully or partially adhered to insulation.

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO-1 **Minimum 1.5" thick**	**1 or 16**	1:1.3 ft^2

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Barrier: None.

Membrane: UltraGard SR-50, SR-60, SR-80, V-2/50 or V-2/60 adhered with UltraGard Membrane Adhesive at a rate of 50-60 square feet/gallon. Field sheets are to be lapped a minimum of 3" and heat seamed together using hot air equipment, which will give a minimum 1½" weld area. UltraGard Liquid PVC Seam Sealant is to be applied to all cut or non-encapsulated edges. Care shall be taken to avoid getting adhesive in the seam areas.

Maximum Design Pressure: –97.5 psf (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, Mechanically Fastened PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type D(1): Membrane mechanically fastened over preliminary fastened insulation.

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ENRGY 2, ENRGY 3, PSI-25 **Minimum 1.2" thick**	**N/A**	**N/A**
ISO-1 **Minimum 1.4" thick**	**N/A**	**N/A**
Fesco Foam, DuraFoam **Minimum 1.5" thick**	**N/A**	**N/A**
Fesco Board, DuraBoard **Minimum ¾" thick**	**N/A**	**N/A**
Fiberglas Roof Insulation **Minimum $^{15}/_{16}$" thick**	**N/A**	**N/A**
Dens Deck **Minimum ¼" thick**	**N/A**	**N/A**

Note: Insulation layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Vapor Retarder: (Optional) An FMRC approved vapor barrier approved for use with hot asphalt may be applied to the deck or perlite base layer.

Barrier None.

Membrane:

Option #1: UltraGard PVC Roofing Systems SR-50, 60 or 80, Plus 50 or Plus 60 or V-2/50 or V-2/60 installed in sheets up to 81" wide with a 5" overlap and fastened in the lap 6" o.c. using Tru-Fast HD, AMP-A1P or Rawl fasteners with 2" Trilock or Rawl 2" Membrane Plates, UltraFast #14, Dekfast #14, Dekfast #15 Heavy or TPR fasteners with Dekfast DK Barbed Plates, HD Insul-Fixx or TPR fasteners with ES lap plates, or Isofast IF2 or TPR fasteners with IFC/IW-82x40 Domed Convex Plates. Sheets are then heat seamed together with a minimum 1½" weld area. UltraGard liquid PVC seam sealant is to be applied to all cut or non-encapsulated edges. (1:3.166 ft^2)

Option #2: UltraGard PVC Roofing Systems SR-50, 60 or 80, Plus 50 or Plus 60 or V-2/50 or V-2/60 installed in sheets 53" wide with a 5" overlap and fastened at the lap 18" o.c. using the fastener options noted above. Sheets are then heat seamed together with a minimum 1½" weld area. UltraGard liquid PVC seam sealant is to be applied to all cut or non-encapsulated edges. (1:6 ft^2)

Option #3 (Grade E Steel Only): UltraGard PVC Roofing Systems SR-50, 60 or 80, Plus 50 or Plus 60 or V-2/50 or V-2/60 installed in sheets 75" wide with a 5" overlap and fastened at the lap 12" o.c. using SFS Extral Load Fastener HD and Extra Load Plate or UltraGard High Load Fastener and High Load Plates. Sheets are then heat seamed together with a minimum 2" weld area. UltraGard liquid PVC seam sealant is to be applied to all cut or non-encapsulated edges. (1:5.83 ft^2)

Maximum Design Pressure:

–45 psf (See General Limitation #7.)

Membrane Type: Single Ply, Thermoplastic, Mechanically Fastened PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type D(2): Membrane mechanically fastened over preliminary fastened insulation.

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO-1 **Minimum 1.5" thick**	**N/A**	**N/A**

Note: Insulation layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See membrane sheet below for fasteners and density.

Barrier: None.

Membrane: UltraGard Roofing Systems SR-50, 60 or 80, Plus 50 or Plus 60 or V-2/50, V-2/60, installed in sheets 75" wide with a 5" overlap and fastened at the lap 6" o.c. using UltraGard High Load Fasteners and UltraGard High Load Plates, Dekfast 15 HS Fasteners and UltraGard High Load Plates, or SFS Stadler ELF HD #15 Fasteners with SFS LR6 metal plates. Sheets are then heat seamed together with a minimum 1.5" weld area. UltraGard liquid PVC seam sealant is to be applied to all cut or non-encapsulated edges.

Maximum Design Pressure: –60 psf (See General Limitation #7.)

Membrane Type: Single Ply, Thermoplastic, Mechanically Fastened PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., type B, ASTM A 611 Grade E steel decking over 0.25 in. steel supports spaced max. 6 ft. o.c. The deck is anchored to the steel supports with ITW Buildex Traxx/4 or Traxx/5 fasteners spaced max. 6 in o.c. at the supports. The deck side laps are secured with ITW Buildex Traxx/1 fasteners spaced max 30 in. o.c.

System Type D(3): Membrane mechanically fastened over preliminary fastened insulation.

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 2, ENRGY 3, ISO-1 Minimum 1.4" thick	**N/A**	**N/A**
Dens Deck Minimum ¼" thick	**N/A**	**N/A**

Note: Insulation layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See membrane sheet below for fasteners and density.

Barrier: None.

Membrane: UltraGard SR-50, 60 or 80 or V-2/50, V-2/60, fastened with UltraGard High Load Fasteners and UltraGard High Load Plates space at max. 6 in. o.c. within the lap seam in row max. 48 in. o.c. Sheets are then heat seamed together with a minimum 1.5" weld area. The outside 2 in. of each 5 in. wide lap is sealed by heat welding.

Maximum Design Pressure: –67.5 psf (See General Limitation #7.)

Membrane Type:	Single Ply, Thermoplastic, Mechanically Fastened PVC
Deck Type 2:	Steel, Non-Insulated
Deck Description:	18-22 ga., type B, slotted steel decking over steel supports spaced max. 5 ft. o.c. with minimum 200 psi cellular lightweight concrete poured with or without EPS insulation boards.
System Type E:	Membrane sheet is mechanically attached to roof deck.

All General and System Limitations apply.

Barrier	None.
Membrane:	UltraGard SR-50, SR-60 , SR-80, V-2/50, V-2/60, Plus 50 or Plus 60 installed in sheets 75" wide with a 5" overlap and fastened throught the lightweight concrete to the steel deck at the lap 6" o.c. using UltraGard High Load Fasteners and Plates or SFS Stadler ELF HD #15 Fasteners with SFS LR6 metal plates. Sheets are then heat seamed together with a minimum 1.5" weld area. UltraGard liquid PVC seam sealant is to be applied to all cut or non-encapsulated edges.
Maximum Design Pressure:	–60 psf (See General Limitation #7.)

STEEL DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.

2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9B-72 of the Florida Administrative Code.

END OF THIS ACCEPTANCE