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)

GenFlex Roofing Systems
1722 Indian Wood Circle, Suite A
Maumee, OH 43537

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: TPO Single Ply Roof Systems over Recover Deck

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 revises NOA No. 02-0521.05 and consists of pages 1 through 35.
The submitted documentation was reviewed by Jorge L. Acebo.

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply
Material:	TPO
Deck Type:	Recover
Maximum Design Pressure	See Specific Deck Type
Fire Classification:	See General Limitation #1

TABLE 1
TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

Product Name	Dimensions	Test Specifications	Product Description
GenFlex TPO	48", 75", 96", 120" or 148" wide x 100' long x 45 or 60 mils thick	TAS 131	Polyester reinforced ThermoPlastic Olefin single ply membrane.
GenFlex TPO Plus	48" or 96" wide by 100' long x 70 or 80 mils thick	TAS 131	Polyester reinforced Thermo Plastic Olefin single ply membrane.
GenFlex TPO Peel & Stick HW	18.75", 37.5", 75", 120" wide x 100' long x 45 or 60 mils thick	TAS 131	Polyester reinforced Thermo Plastic Olefin single ply membrane with a self-adhered backing and heat weld laps
GenFlex TPO Peel & Stick SA	18.75", 37.5", 75" wide x 100' long x 45 or 60 mils thick	TAS 131	Fiberglass scrim reinforced Thermo Plastic Olefin single ply membrane with a self-adhered backing, and self-adhering laps
GenFlex ISO 3	Various	ASTM C1289	Polyisocyanurate foam core insulation with fiber reinforced organic felt facers.
GenFlex ISO 5	Various	ASTM C1289	Polyisocyanurate foam core insulation with fiber reinforced organic felt facers.
GenFlex Isofiber 5	Various	ASTM C1289	Polyisocyanurate foam core insulation with fiber reinforced organic felt bottom facer and ½" wood fiberboard top facer.
GenFlex High Density Fiberboard	Various	TAS 110	Wood fiberboard insulation.
GenFlex FM-90 High Density Fiberboard	Various	TAS 110	Wood fiberboard insulation
GenFlex Bonding Adhesive	5 gallon pails	Proprietary	Solvent based, contact adhesive for bonding of roof membrane to substrate.
GenFlex Metal Anchor Bar	1" wide x 0.046" thick x 10 ft long	TAS 110	Batten Bar for mechanical attachment of membrane
GenFlex Polymer Batten Bar	1" wide x 0.05" thick x 250' long coil Holes pre-punched 6" o.c	Proprietary	Batten Strip for mechanical attachment of membrane.
GenFlex Low Rise Insulation Adhesive		Proprietary	Insulation adhesive.

TABLE 2

APPROVED INSULATIONS:

Product	Product Description	Manufacturer (With current NOA)
AC Foam II	Isocyanurate insulation	Atlas Roofing Corp.
AC Foam composite	Isocyanurate insulation with perlite facer	Atlas Roofing Corp.
E'NRG'Y 2 Plus	Isocyanurate insulation with wood fiberboard facer	Johns Manville
Multi-Max FA	Isocyanurate insulation	R-Max, Inc
Thermaroof composite	Isocyanurate insulation with perlite facer	R-Max, Inc
High Density Fiberboard	Wood fiberboard insulation	The Celotex Corp.
Dens-Deck	Silicon treated gypsum	G-P Gypsum

TABLE 3

APPROVED FASTENERS:

Product	Product Description	Manufacturer (With current NOA)
Construction Fasteners	Insulation and membrane fasteners	Construction Fasteners
Buildex Fasteners	Insulation and membrane fasteners	ITW Buildex Corp.
Olympic Fasteners	Insulation and membrane fasteners	Olympic Manufacturing
Tru-Fast Fasteners	Insulation and membrane fasteners	Tru-Fast corporation
GenFlex Fasteners	Insulation and membrane fasteners	Gen-Flex Corporation

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Factory Mutual Research	3009797	FM 4470	02/04/02
	3007119	FM 4470	01/02/02
	3005794	FM 4470	12/13/01
	3002357	FM 4470	05/16/00
	3005415	FM 4470	02/08/00
	3002775	FM 4470	09/16/99
	3000919	FM 4470	04/07/99
	3003690	FM 4470	03/29/99
	3B9A2.AM	FM 4470	01/25/99
	4B1A9.AM	FM 4470	09/09/98
	1D9A7.AM	FM 4470	07/31/98
	1D9A0.AM	FM 4470	07/30/98
	1D0A3.AM	FM 4470	09/24/97
	1B0A9.AM	FM 4470	05/09/97
	3012149	FM 4470	08/28/02
	3015927	FM 4470	01/26/04
	3023988	FM 4470	09/29/05
	3019052	FM 4470	01/28/06
	3025484	FM 4470	05/31/06
	3026594	FM 4470	06/01/06
	3025659	FM 4470	06/02/06
	3027476	FM 4470	08/11/06
Exterior Research & Design LLC.	8054.02.02-1	TAS 131	02/22/02
Underwriters Laboratories, Inc.	01NK14490	Fire Classification	06/01/01
	96NK22037	TAS 114, (UL 790)	03/10/97
	01NK25823	Wind Uplift, TAS 114, (UL 1897)	07/02/01

APPROVED ASSEMBLIES:

Membrane Type:	Single Ply, Thermoplastic, TPO
Deck Type 7I:	Recover
Deck Description:	Steel/Concrete/Lightweight Concrete/Cementitious Wood Fiber/Gypsum
System Type A(1):	One or more layers of insulation adhered to existing roof surface with approved asphalt or adhesive

All General and System Limitations apply.

Insulation Option #1:	Optional base layer(s) of maximum 4 x 4 ft (1.2 x 1.2 m) GenFlex ISO 3 or ACFoam II adhered to the existing roof surface or to each other with GenFlex Insulation Adhesive applied in approximate 0.75 in. (19 mm) wide ribbons spaced 12 in (305 mm). One layer of maximum 4 x 4 ft (1.2 x 1.2 m) E'NRG'Y-2 Plus adhered to existing roof surface or to the base insulation layer with GenFlex Insulation Adhesive Insulation layer with GenFlex Insulation Adhesive applied in approximate 0.75 in (19 mm) wide ribbons spaced 12 in (305 mm). Membrane applied as noted below. **Maximum Design Pressure: -45 psf**
Insulation Option #2:	One or more layers of maximum 4 x 4 ft (1.2 x 1.2 m) GenFlex ISO 3 or ACFoam II adhered to the existing roof surface or to each other with GenFlex Insulation Adhesive applied approximate 0.75 in (19 mm) wide ribbons spaced 12 in (305 mm). Membrane applied as noted below. **Maximum Design Pressure: -75 psf**
Insulation Option #3:	Existing roof surface shall be primed with ASTM D41 asphalt primer and allowed to dry. One or more layers of maximum 4 x 4 ft (1.2 x 1.2m) GenFlex ISO 3 or ACFoam II adhered to the existing roof surface or to each other with hot asphalt applied within the EVT range and at a rate of 20-40 lbs/100 ft^2. Membrane applied as noted below. **Maximum Design Pressure: -112.5 psf**
Membrane:	GenFlex TPO or GenFlex TPO Plus, adhered to insulation using GenFlex Bonding Adhesive applied at 30 ft^2/gal (0.7 m^2/L) to both the substrate and the bottom side of the roof cover for a combined rate of 60 ft^2/gal (1.5 m^2/L).
Maximum Design Pressure:	**See insulation options above** (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic
Deck Type 7I:	Recover
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(2):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Fastener Density/ft^2	Fastener Type
ACFoam II, H-Shield, ENRGY 2, ENRGY 3 Minimum 1.0" thick	N/A	N/A
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Top Insulation Layer	Fastener Density/ft^2	Fastener Type
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in full coating of OlyBond Adhesive Fastener at a rate of 1 gal/sq. 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.

Membrane:	GenFlex TPO or GenFlex TPO Plus, adhered to insulation using GenFlex Bonding Adhesive applied to both the substrate and the bottom side of the roof cover for a combined rate of 65 ft^2/gal (1.6 m^2/L)
Maximum Design Pressure:	**-150.0 psf** (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Steel / concrete / cementitious wood fiber / lightweight concrete / gypsum / wood

System Type A(3): One or more layers of insulation adhered with approved adhesive, membrane fully adhered.

All General and System Limitations apply.

Insulation Layer	Fastener Density/ft^2	Fastener Type
ACFoam II, ISO 95+GL, ENRGY2, ENRGY3		
Maximum 1" thick	N/A	N/A
DensDeck, DenDeck Prime		
Minimum 5/8" thick	N/A	N/A

Note: Insulation shall be adhered to the deck in full coating of OlyBond Adhesive Fastener at a rate of 1 gal/sq. 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

Membrane: GenFlex TPO or GenFlex TPO Plus adhered to insulation using GenFlex Bonding Adhesive applied at 30 ft^2/gal (0.7 m^2/L) to both the substrate and the bottom side of the roof cover for a combined rate of 60 ft^2/gal (1.5 m^2/L)

Or

GenFlex TPO Peel & Stick HW, self-adhered to insulation with 3" wide laps sealed with a minimum 1.5" wide heat weld or primed with GenFlex Clear Primer and sealed with GenFlex 3" White TPO Seam Tape

Or

GenFlex TPO Peel & Stick SA, self adhered to insulation with minimum 3" wide laps, primed with GenFlex Clear Primer and hand rolled.

Maximum Design Pressures: **-45 psf.** (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic
Deck Type 7I:	Recover, Insulated
Deck Description:	Steel/concrete/lwc/cwf/gypsum/wood
System Type A(4):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Fastener Density/ft^2	Fastener Type
(Optional) ASTM C578 (min 1.25 pcf) expanded polystyrene EPS Minimum 2.0" thick	N/A	N/A

Top Insulation Layer	Fastener Density/ft^2	Fastener Type
High Density Wood Fiberboard Minimum 1.0" thick	N/A	N/A
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" – 1" wide beads 12" o.c. of OlyBond 500 Adhesive Fastener. 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.

Membrane:	GenFlex TPO or GenFlex TPO Plus, adhered to insulation using GenFlex Bonding Adhesive applied to both the substrate and the bottom side of the roof cover for a combined rate of 65 ft^2/gal (1.6 m^2/L)
Maximum Design Pressure:	**-120.0 psf** (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic
Deck Type 7I:	Recover, Insulated
Deck Description:	Steel/concrete/lwc/cwf/gypsum/wood
System Type A(5):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Fastener Density/ft^2	Fastener Type
ACFoam II, H-Shield, ISO 95+GL Minimum 1.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" – 1" wide beads 12" o.c. of OlyBond 500 Adhesive Fastener. 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.

Membrane:	GenFlex TPO or GenFlex TPO Plus, adhered to insulation using GenFlex Bonding Adhesive applied to both the substrate and the bottom side of the roof cover for a combined rate of 65 ft^2/gal (1.6 m^2/L)
Maximum Design Pressure:	**-120.0 psf** (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic
Deck Type 7I:	Recover, Insulated
Deck Description:	Steel/concrete/lwc/cwf/gypsum/wood
System Type A(6):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Fastener Density/ft^2	Fastener Type
(Optional) ACFoam II, H-Shield, ISO 95+GL Minimum 1.5" thick	N/A	N/A

Top Insulation Layer	Fastener Density/ft^2	Fastener Type
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" – 1" wide beads 12" o.c. of OlyBond 500 Adhesive Fastener. 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.

Membrane:	GenFlex TPO or GenFlex TPO Plus, adhered to insulation using GenFlex Bonding Adhesive applied to both the substrate and the bottom side of the roof cover for a combined rate of 65 ft^2/gal (1.6 m^2/L)
Maximum Design Pressure:	**-120.0 psf** (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic
Deck Type 7I:	Recover
Deck Description:	Steel/concrete/lwc/cwf/gypsum/wood
System Type A(7):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Fastener Density/ft^2	Fastener Type
ENRGY 3 Minimum 1.5" thick	N/A	N/A

Top Insulation Layer	Fastener Density/ft^2	Fastener Type
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" – 1" wide beads 12" o.c. of OlyBond 500 Adhesive Fastener. 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.

Membrane:	GenFlex TPO or GenFlex TPO Plus, adhered to insulation using GenFlex Bonding Adhesive applied to both the substrate and the bottom side of the roof cover for a combined rate of 65 ft^2/gal (1.6 m^2/L)
Maximum Design Pressure:	**-120.0 psf** (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic
Deck Type 7I:	Recover
Deck Description:	Steel/concrete/lwc/cwf/gypsum/wood
System Type A(8):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Fastener Density/ft^2**	**Fastener Type**
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Top Insulation Layer	**Fastener Density/ft^2**	**Fastener Type**
High Density Wood Fiberboard Minimum 0.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" – 1" wide beads 12" o.c. of OlyBond 500 Adhesive Fastener. 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.

Membrane:	GenFlex TPO or GenFlex TPO Plus, adhered to insulation using GenFlex Bonding Adhesive applied to both the substrate and the bottom side of the roof cover for a combined rate of 65 ft^2 /gal (1.6 m^2/L)
Maximum Design Pressure:	**-120.0 psf** (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic
Deck Type 7I:	Recover
Deck Description:	Steel/concrete/lwc/cwf/gypsum/wood
System Type A(9):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Fastener Density/ft^2**	**Fastener Type**
Foamular 250 Minimum 1.0" thick	N/A	N/A

Top Insulation Layer	**Fastener Density/ft^2**	**Fastener Type**
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" – 1" wide beads 12" o.c. of OlyBond 500 Adhesive Fastener. 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.

Membrane:	GenFlex TPO or GenFlex TPO Plus, adhered to insulation using GenFlex Bonding Adhesive applied to both the substrate and the bottom side of the roof cover for a combined rate of 65 ft^2/gal (1.6 m^2/L)
Maximum Design Pressure:	**-120.0 psf** (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic
Deck Type 7I:	Recover, Insulated
Deck Description:	Steel/concrete/lwc/cwf/gypsum/wood
System Type A(10):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Insulation Layer	Fastener Density/ft^2	Fastener Type
ACFoam II, H-Shield, ISO 95+GL Minimum 1.5" thick	N/A	N/A
High Density Wood Fiberboard Minimum 0.5" thick	N/A	N/A
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" – 1" wide beads 12" o.c. of OlyBond 500 Adhesive Fastener. 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.

Membrane:	GenFlex TPO or GenFlex TPO Plus, adhered to insulation using GenFlex Bonding Adhesive applied to both the substrate and the bottom side of the roof cover for a combined rate of 65 ft^2/gal (1.6 m^2/L)
Maximum Design Pressure:	**-120.0 psf** (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic
Deck Type 7I:	Recover, Insulated
Deck Description:	Steel/concrete/lwc/cwf/gypsum/wood
System Type A(11):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam II, ENRGY2, ENRGY 3 Minimum 1.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ½" to ¾" wide beads 12" o.c. of Weather-Tite Pourable Foam Insulation Adhesive or GenFlex Low Rise Insulation Adhesive. 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.

Vapor Retarders:	(Optional) Any UL or FM approved asphaltic vapor retarder may be installed over the deck or the base layer of insulation
Membrane:	GenFlex TPO or GenFlex TPO Plus adhered to insulation using GenFlex Bonding Adhesive applied to both the substrate and the bottom side of the roof cover for a combined rate of 65 ft^2/gal (1.6 m^2/L)
Maximum Design Pressure:	**-135.0 psf** (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic
Deck Type 7I:	Recover, Insulated
Deck Description:	Steel/concrete/lwc/cwf/gypsum/wood
System Type A(12):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam II, ENRGY2, ENRGY 3 Minimum 1.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ½" to ¾" wide beads 12" o.c. of Weather-Tite Pourable Foam Insulation Adhesive or GenFlex Low Rise Insulation Adhesive. 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.

Vapor Retarders:	(Optional) Any UL or FM approved asphaltic vapor retarder may be installed over the deck or the base layer of insulation
Membrane:	GenFlex TPO Peel & Stick HW, self-adhered to insulation with 3" wide laps sealed with a minimum 1.5" wide heat weld or primed with GenFlex Clear Primer and sealed with GenFlex 3" White TPO Seam Tape Or GenFlex TPO Peel & Stick SA, self adhered to insulation with minimum 3" wide laps, primed with GenFlex Clear Primer and hand rolled.
Maximum Design Pressure:	**-45.0 psf** (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic
Deck Type 7I:	Recover, Insulated
Deck Description:	Steel/concrete/lwc/cwf/gypsum/wood
System Type A(13):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam II, Multi-Max, ENRGY 3, H-Shield Minimum 1.5" thick	N/A	N/A
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ½" to ¾" wide beads 12" o.c. of Weather-Tite One Step Foamable Adhesive. 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.

Vapor Retarders:	(Optional) Any UL or FM approved asphaltic vapor retarder may be installed over the deck or the base layer of insulation
Membrane:	GenFlex TPO or GenFlex TPO Plus adhered to insulation using GenFlex Bonding Adhesive applied to both the substrate and the bottom side of the roof cover for a combined rate of 65 ft^2/gal (1.6 m^2/L)
Maximum Design Pressure:	**-157.5 psf** (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic
Deck Type 7I:	Recover, Insulated
Deck Description:	Steel/concrete/lwc/cwf/gypsum/wood
System Type A(14):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam II, Multi-Max, ENRGY 3, H-Shield, ISO 95+GL Minimum 1.5" thick	N/A	N/A

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
High Density Wood Fiber Minimum 0.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ½" to ¾" wide beads 12" o.c. of Weathertite One Step Foamable Adhesive. 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.

Vapor Retarders:	(Optional) Any UL or FM approved asphaltic vapor retarder may be installed over the deck or the base layer of insulation
Membrane:	GenFlex TPO or GenFlex TPO Plus adhered to insulation using GenFlex Bonding Adhesive applied to both the substrate and the bottom side of the roof cover for a combined rate of 65 ft^2/gal (1.6 m^2/L)
Maximum Design Pressure:	**-127.5 psf** (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic
Deck Type 7I:	Recover
Deck Description:	Concrete
System Type A(15):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Insulation Layer	Fastener Density/ft^2	Fastener Type
(Optional) ACFoam II, ACFoam III, ISO 95+GL, Multi-Max FA		
Minimum 1.5" thick	N/A	N/A
DensDeck, DensDeck Prime		
Minimum 0.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in 3" – 3.5" wide ribbons of TITESET, spaced 12" o.c. 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.

Membrane:	GenFlex TPO or GenFlex TPO Plus adhered to insulation using GenFlex Bonding Adhesive applied to both the substrate and the bottom side of the roof cover for a combined rate of 65 ft^2/gal (1.6 m^2/L)
Maximum Design Pressure:	**-202.5 psf** (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I Recover

Deck Description Steel/Concrete

System Type C (1): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Insulation for Base Layer (Optional)	Fastener Density ft^2	Fastener Type
GenFlex ISO 3 (flat or tapered), ACFoam II (flat or tapered)		
Minimum: 1.3" thick	N/A	N/A
GenFlex ISO 5 (flat or tapered)		
Minimum: 1.4" thick	N/A	N/A
ACFoam Composite (flat or tapered), Multi-Max FA, Thermaroof Composite		
Minimum: 1.5" thick	N/A	N/A
GenFlex Isofiber 5		
Minimum: 1.9" thick	N/A	N/A
GenFlex High Density Fiberboard, High Density Fiberboard		
Minimum: ½" thick	N/A	N/A

Insulation Top Layer	Fastener Density ft^2	Fastener Type
GenFlex ISO 3 or ACFoam II		
Minimum: 1.5" thick	1:2	See approved fasteners in table 3
Minimum: 2.0" thick	1:4	See approved fasteners in table 3
Dens-Deck		
Minimum: ¼" thick	1:1.8	See approved fasteners in table 3

Membrane: GenFlex TPO or GenFlex TPO Plus, adhered to insulation using GenFlex Bonding Adhesive applied at 30 ft^2/gal (0.7 m^2/L) to both the substrate and the bottom side of the roof cover for a combined rate of 60 ft^2/gal (1.5 m^2/L)

Maximum Design Pressure: **-45 psf;** (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type C(2): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Insulation Base Layer	Fastener Density ft^2	Fastener Type
(Optional) GenFlex ISO 3, GenFlex ISO 5		
Minimum: 1.5" thick	N/A	N/A

Insulation Top Layer	Fastener Density ft^2	Fastener Type
GenFlex ISO 3, GenFelx ISO 5		
Minimum: 1.5" thick	1:2	GenFast 3" Square Steel Plate; GenFast #14 Fasteners

Membrane: GenFlex TPO Peel & Stick HW, self-adhered to insulation with 3" wide laps sealed with a minimum 1.5" wide heat weld or primed with GenFlex Clear Primer and sealed with GenFlex 3" White TPO Seam Tape

Or

GenFlex TPO Peel & Stick SA, self adhered to insulation with minimum 3" wide laps, primed with GenFlex Clear Primer and hand rolled.

Maximum Design Pressure: **-45.0 psf;** (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type C(3): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Insulation Base Layer	Fastener Density ft^2	Fastener Type
(Optional) Any Approved insulation		
Minimum: 0.25" thick	N/A	N/A

Insulation Top Layer	Fastener Density ft^2	Fastener Type
GenFlex High Density Fiberboard		
Minimum: 1.0" thick	1:2	GenFast 3" Square Steel Plate; GenFast #14 Fasteners

Membrane: GenFlex TPO Peel & Stick HW, self-adhered to insulation with 3" wide laps sealed with a minimum 1.5" wide heat weld or primed with GenFlex Clear Primer and sealed with GenFlex 3" White TPO Seam Tape

Or

GenFlex TPO Peel & Stick SA, self adhered to insulation with minimum 3" wide laps, primed with GenFlex Clear Primer and hand rolled.

Maximum Design Pressure: **-45 psf;** (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic, TPO
Deck Type 7I:	Recover, Insulated,
Deck Description:	Concrete
System Type C(4):	Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.
One of the following insulations.

Insulation Bottom Layer	Fastener Density ft^2	Fastener Type
Any approved insulation Minimum: 0.25" thick	N/A	N/A

Insulation Top Layer	Fastener Density ft^2	Fastener Type
GenFlex ISO 3, ACFoam II Minimum: 1.5" thick	1:1.78	GenFast #14 Fasteners, GenFast Flat Insulation Plates
GenFlex ISO 3, ACFoam II Minimum: 2.0" thick	1:1.78	GenFast #14 Fasteners, GenFast Flat Insulation Plates

Note: All layers shall be simultaneously fastened; see top or base layer for fasteners and density. 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.

Membrane:	GenFlex TPO or GenFlex TPO Plus, adhered to insulation using GenFlex Bonding Adhesive applied to both the substrate and the bottom side of the roof cover for a combined rate of 65 ft^2 /gal (1.6 m^2/L)
Maximum Design Pressure:	**-52.5 psf; {for 1.5" insulation}** (See General Limitation #7) **-60.0 psf; {for 2" insulation}** (See General Limitation #7)

Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover

Deck Description: Concrete

System Type C(5): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Insulation Base Layer	Fastener Density ft^2	Fastener Type
Any approved insulation		
Minimum: 0.25" thick	N/A	N/A

Insulation Top Layer	Fastener Density ft^2	Fastener Type
ACFoam III		
Minimum: 2" thick	1:1.79	GenFast 3" Square Steel Plate; GenFast #14 Fasteners

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

Membrane: GenFlex TPO Peel & Stick HW, self-adhered to insulation with 3" wide laps sealed with a minimum 1.5" wide heat weld or primed with GenFlex Clear Primer and sealed with GenFlex 3" White TPO Seam Tape

Or

GenFlex TPO Peel & Stick SA, self-adhered to insulation with minimum 3" wide laps, primed with GenFlex Clear Primer and hand rolled.

Maximum Design Pressure: **-67.5 psf**; (See General Limitation #7)

Membrane Type:	Single Ply, Thermoplastic, TPO
Deck Type 7I	Recover
Deck Description	Steel/Concrete/Lightweight Concrete/ Cementitious Wood Fiber/Gypsum
System Type D (1):	Membrane attached over preliminary fastened insulation

All General and System Limitations apply.

Insulation for Base or Top Layer	Fastener Density ft^2	Fastener Type
GenFlex ISO 3 (flat or tapered), ACFoam II (flat or tapered)		
Minimum: 1.3" thick	N/A	N/A
GenFlex ISO 5 (flat or tapered)		
Minimum: 1.4" thick	N/A	N/A
ACFoam Composite (flat or tapered), Multi-Max FA, Thermaroof Composite		
Minimum: 1.5" thick	N/A	N/A
GenFlex Isofiber 5		
Minimum: 1.9" thick	N/A	N/A
GenFlex High Density Fiberboard, High Density Fiberboard		
Minimum: ½" thick	N/A	N/A

Note: All insulation shall have preliminary attachment prior to installation of the roofing membrane at a minimum application of two fasteners per board for insulation boards having no dimension greater than 4 ft, and four fasteners for any insulation having no dimension greater than 8 ft.

Membrane:	GenFlex TPO or GenFlex TPO Plus, attached to deck as follows:
Fastening #1:	**Minimum Grade 33 Steel Deck Only:** GenFlex RM Plates and GenFlex #14 screws or GenFlex RM II Discs and Olympic #14 Heavy Duty Screws, spaced at max 6 in o.c. within the minimum 4.5 in (114 mm) wide laps, which are spaced at max 70.5 in (1791 mm) o.c. and sealed with a minimum 1.5 in (38 mm) heat weld. **Maximum Design: -45 psf.**
Fastening #2:	**Minimum Grade 80 Steel Deck only:** SFS Stadler Extra Load Fastener screws spaced at max 12 in (305 mm) o.c. through GenFlex Anchor Bars, which are placed within the minimum 4.5 in (114 mm) wide laps, which are spaced at max 70 in (1778 mm) o.c. and sealed with a min 1.5 in wide heat weld placed on both sides of the anchor bar. **Maximum Design Pressure: -45 psf.**
Fastening #3:	**Minimum Grade 80 Steel Deck only:** GenFlex XHD Barbed Seam Plates and GenFlex #15 XHD or Buildex #15 SPM screws or Olympic XHD 2-3/8" in barbed plates and Olympics XHD screws spaced at 12 in. (305 mm) o.c. within the minimum 4.5 in (114 mm) wide laps, which are spaced at 70 in. (1778 mm) o.c. and sealed with a minimum 1.5 in (38 mm) heat weld. **Maximum Design Pressure: - 45psf**

Fastening #4: **Minimum Grade 80 Steel Deck Only:** GenFast #15 (WH) screws and GenFast (WH) Barbed Plates or GenFlex #15 XHD screws and GenFlex 2-$^{3}/_{8}$" barbed seam plates or Olympic XHD screws and XHD plates spaced at maximum 12 in. (352 mm) o.c. within the minimum 6 in (150 mm) wide laps, which are spaced at maximum 90 in (2285 mm) o.c. and sealed with a minimum 1.75 in (45 mm) heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -45 psf

Fastening #5: **Minimum Grade 33 Steel Deck Only:** GenFast #15 (WH) screws and GenFast (WH) Barbed Plates or GenFlex #15 XHD screws and GenFlex 2-$^{3}/_{8}$" barbed seam plates or Olympic XHD screws and XHD plates spaced at maximum 6 in. (150 mm) o.c. within the minimum 6 in (150 mm) wide laps, which are spaced at maximum 114 in. (2895 mm) o.c. and sealed with a minimum 1.75 in (45 mm) heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -45 psf

Fastening #6: **Minimum Grade 80 Steel Deck Only:** GenFast #15 (WH) screws and GenFast (WH) Barbed Plates or Olympic XHD screws and XHD plates spaced at 12 in. (305 mm) o.c. within the minimum 5 in (127 mm) wide laps, which are spaced at 70 in (1778 mm) o.c. and sealed with a minimum 2 in (51 mm) wide heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -45 psf

Fastening #7: **Minimum Grade 33 Steel Deck Only:** GenFast #15 (WH) screws and GenFlex Polymer Batten Strip. Screws are spaced at maximum 12 in (305 mm) o.c. within the minimum 4.5 in (114 mm) wide laps, which are spaced at maximum 140.5 in (3,568 mm) o.c. and sealed with a minimum 1.5 in (40 mm) wide heat weld placed on the outside edge of the batten strip and a minimum 1.0 in (25 mm) wide heat weld placed on the inside edge of the batten strip.

Maximum Design Pressure: -45 psf

Fastening #8: **Minimum Grade 80 Steel Deck Only:** GenFlex #15 XHD screws spaced max 6 in. (152 mm) o.c. through GenFlex Bar Anchors. The bars and fasteners are placed within the min 4.5 in. (114 mm) wide laps, which are spaced at max 70.25 in (1784 mm) o.c. and sealed with a min. 0.75 in (19 mm) wide heat weld on the inside of the lap and a min 1 in. (25 mm) wide heat weld on the outside of the lap.

Maximum Design Pressure: -75 psf

Fastening #9: **Minimum Grade 80 Steel Deck Only:** GenFlex #15 XHD screws spaced max 12 in. (305 mm) o.c. through GenFlex Bar Anchor. The bars and fasteners are placed within the min 4.5 in. (114 mm) wide laps, which are spaced at max 70.25 in (1784 mm) o.c. and sealed with a min. 0.75 in (19 mm) wide heat weld on the inside of the lap and a min 1 in. (25 mm) wide heat weld on the outside of the lap.

Maximum Design Pressure: -52.5 psf.

Fastening #10:	**Minimum Grade 80 Steel Deck Only:** GenFlex #15 XHD screws spaced max 6 in. (152 mm) o.c. through GenFlex Bar Anchors. The bars and fasteners are placed within the min. 4.5 in. (114 mm) wide laps, which are spaced at max 142.5 in. (3620 mm) o.c. and sealed with a min.1 in. (25 mm) wide heat weld on the inside of the lap and a min 1 in. (25 mm) wide heat weld on the outside of the lap. **Maximum Design Pressure: -52.5 psf.**
Fastening #11:	**Minimum Grade 80 Steel Deck Only**: GenFast #15 (WH) screws and GenFlex Polymer Batten Strip. Screws are spaced at maximum 6 in (152 mm) o.c. within the minimum 5 in (127 mm) wide laps, which are spaced at maximum 144 in (3658 mm) o.c. and sealed with a minimum 1.5 in (40 mm) wide heat weld placed on the outside edge of the batten strip. **Maximum Design Pressure: -52.5 psf.**
Fastening #12:	**Min. 2,500 psi Concrete Deck Only:** GenFast #15 (WH) screws and GenFlex Polymer Batten Strip. Screws are spaced at maximum 12 in (305 mm) o.c. within the minimum 4.5 in (114 mm) wide laps, which are spaced at maximum 144 in (3658 mm) o.c. and sealed with a minimum 1.25 in (32 mm) wide heat weld placed on each side of the batten strip. **Maximum Design Pressure: -45 psf**
Fastening #13:	**Min. 2,500 psi Concrete Deck Only.** GenFast #15 (WH) screws and GenFlex Polymer Batten Strip. Screws are spaced at maximum 6 in (152 mm) o.c. within the minimum 5 in (127 mm) wide laps, which are spaced at maximum 144 in (3,658 mm) o.c. and sealed with a minimum 1.5 in (40 mm) wide heat weld placed on the outside edge of the batten strip. **Maximum Design Pressure: -60 psf**
Fastening #14:	Approved Lightweight concrete Deck cast over Steel or Concrete Only: Fasteners installed through lightweight concrete to steel deck. GenFlex TPO membrane secured with GenFlex #15 Roofgrip (WH) fasteners spaced max 6" o.c. through the GenFlex Polymer Batten strip. The batten strip and fasteners are placed within the min. 4.5" wide laps are spaced at max 143.5" o.c. and sealed with a min 0.75" wide heat weld on the inside of the lap and a min. 1" wide heat weld on the outside of the lap. **Maximum Design Pressure: -90 psf**
Fastening #15:	Cementitious wood Fiber or Poured Gypsum Deck Only: N.T.B Magnum Fasteners with 2 in (51 mm) head spaced at max 6 in (1152 mm) o.c. within the minimum 4.5 in (114 mm) wide laps, which are spaced at max 57 in (1448 mm) o.c. and sealed with a minimum 1.5 in (38 mm) heat weld. Fasteners shall have minimum 2 in (51 mm) embedment. **Maximum Design Pressure: -45 psf.**
Maximum Design Pressure:	**See Fastening Options for Specific Deck Type**

Membrane Type:	Single Ply, Thermoplastic, TPO
Deck Type 7I:	Recover, Insulated
Deck Description:	steel
System Type D(2):	Membrane attached over preliminary fastened insulation

All General and System Limitations apply.

Deck:	18-22 ga., 1.5 in (38mm) deep, ASTM A653 or A1008 Grade 80 steel deck secured to 0.25 in (6mm) structural supports spaced a maximum 6 ft o.c. with Buildex Teks 4 or Teks 5 fasteners spaced max. 6 in o.c.
Barrier:	(Optional) Minimum $^5/_8$" gypsum board or ¼" Dens-Deck, loose laid

One or more layers of any of the following insulation:

Insulation Layer	Fastener Density ft^2	Fastener Type
Any approve polyisocyanurate		
Minimum: 1.0" thick	N/A	N/A

Note: All insulation shall be preliminary attachment prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimensions greater than 4 ft., and four fasteners for any insulation having no dimension greater than 8 ft.

Membrane:	GenFlex TPO or GenFlex TPO Plus, attached to deck as follows:
Fastening #1:	GenFast Polymer Batten Strips and GenFast #16 Max Fasteners spaced maximum 6 in. o.c. within min. 4.5 in. wide laps. Laps are spaced at maximum 115 in. o.c. and sealed with a minimum 1.5 in. wide heat weld on the inside and outside edge of the lap. **Maximum Design Pressure: -52.5 psf (See General Limitation #7)**
Fastening #2:	GenFast 2-3/8" WH Plates and ITW Buildex #15 Roofgrip screws spaced maximum 6 in. o.c. within minimum 6 in. wide lap. Laps are spaced at maximum 144 in. o.c. and sealed with minimum 1.75 in. wide heat weld on the outside edge of the lap. **Maximum Design Pressure: -45.0 psf (See General Limitation #7)**
Fastening #3:	GenFast 3" Max Barbed Seam Plates and GenFast #16 Max Fasteners spaced maximum 12 in. o.c. within minimum 6 in. wide laps. Laps are spaced maximum 114 in. o.c. and sealed with minimum 1.75 in. wide heat weld on the outside edge of the lap. **Maximum Design Pressure: -45.0 psf (See General Limitation #7)**
Maximum Design Pressure:	**See Membrane Fastening Options Above**

Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover, Insulated

Deck Description: steel

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

All General and System Limitations apply.

Barrier: (Optional) Minimum $^5/_8$" gypsum board or ¼" Dens-Deck, loose laid

One or more layers of any of the following insulation:

Insulation Layer	Fastener Density ft^2	Fastener Type
Any approve polyisocyanurate		
Minimum: 1.0" thick	N/A	N/A

Note: All insulation shall be preliminary attachment prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimensions greater than 4 ft., and four fasteners for any insulation having no dimension greater than 8 ft.

Membrane: GenFlex TPO or GenFlex TPO Plus, attached to deck as follows:

Fastening #1: GenFast 3" Max Barbed Seam Plate and GenFast #16 Max Fasteners spaced maximum 6 in. o.c. within minimum 6 in. wide laps. Laps are spaced maximum 144 in. o.c. and sealed with a minimum 1.75 in. wide heat weld located on the outside edge of the lap.

Maximum Design Pressure: -45.0 psf (See General Limitation #7)

Fastening #2: GenFast 2-3/8" SXHD Plates and GenFast #16 SXHD fasteners spaced 6 in. o.c. within minimum 6 in. wide lap. Laps are spaced at maximum 144 in. o.c. and sealed with minimum 1.75 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -45.0 psf (See General Limitation #7)

Fastening #3: GenFast 3" Max Barbed Seam Plate and GenFast #16 Max Fasteners spaced maximum 12 in. o.c. within minimum 6 in. wide laps. Laps are spaced maximum 90 in. o.c. and sealed with a minimum 1.75 in. wide heat weld located on the outside edge of the lap.

Maximum Design Pressure: -45.0 psf (See General Limitation #7)

Maximum Design Pressure: **See Membrane Fastening Options Above**

Membrane Type:	Single Ply, Thermoplastic, TPO
Deck Type 7I:	Recover, Insulated
Deck Description:	steel
System Type D(4):	Membrane attached over preliminary fastened insulation

All General and System Limitations apply.

Deck:	18-22 ga., 1.5 in (38mm) deep, ASTM A653 or A1008 Grade 80 steel deck secured to 0.25 in (6mm) structural supports spaced a maximum 6 ft o.c. with Buildex Teks 4 or Teks 5 fasteners spaced max. 6 in o.c.
Barrier:	(Optional) Minimum $^5/_8$" gypsum board or ¼" Dens-Deck, loose laid

One or more layers of any of the following insulation:

Insulation Layer	Fastener Density ft^2	Fastener Type
Any approved polyisocyanurate		
Minimum: 1.0" thick	N/A	N/A

Note: All insulation shall be preliminary attachment prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimensions greater than 4 ft., and four fasteners for any insulation having no dimension greater than 8 ft.

Membrane:	GenFlex TPO or TPO Plus attached to deck as follows:
Fastening #1:	GenFast Polymer Batten Strips and GenFast #15 (WH) fasteners spaced maximum 6 in. o.c. within minimum 4.5 in. wide laps. Laps are spaced maximum 69.5 in. o.c. and sealed with a min 1.0 in. wide inside edge heat weld and a min. 1.25 in. wide outside edge heat weld. **Maximum Design Pressure: -90.0 psf (See General Limitation #7)**
Fastening #2:	GenFast Polymer Batten Strips and GenFast #15 (WH) fasteners spaced maximum 6 in. o.c. within minimum 6 in. wide laps. Laps are spaced maximum 114 in. o.c. and sealed with a min 1.0 in. wide inside edge heat weld and a min. 1.25 in. wide outside edge heat weld. **Maximum Design Pressure: -60.0 psf (See General Limitation #7)**
Maximum Design Pressure:	**See Membrane Fastening Options Above**

Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type7I: Recover, Insulated

Deck Description: steel

System Type D(5): Membrane attached over preliminary fastened insulation

All General and System Limitations apply.

Barrier: (Optional) Minimum $^5/_8$" gypsum board or ¼" Dens-Deck, loose laid

One or more layers of any of the following insulation:

Insulation Layer	Fastener Density ft^2	Fastener Type
Any approve insulation		
Minimum: 0.25" thick	N/A	N/A

Note: All insulation shall be preliminary attachment prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimensions greater than 4 ft., and four fasteners for any insulation having no dimension greater than 8 ft.

Membrane: Min. 0.070 thick GenFlex TPO Plus attached to deck as follows:

Fastening #1: GenFast Polymer Batten Strips and GenFast #15 WH spaced maximum 6 in. o.c. within min. 6 in. wide laps. Laps are spaced at maximum 69 in. o.c. and sealed with a minimum 1.0 in. wide inside edge heat weld and a minimum 1.5 in. wide outside edge heat weld.

Maximum Design Pressure: -75.0 psf (See General Limitation #7)

Fastening #2: ITW 2-3/8" Eyehook plates and GenFast #15 WH fasteners spaced maximum 6 in. o.c. within minimum 6 in. wide lap. Laps are spaced at maximum 90 in. o.c. and sealed with minimum 1.5 in. wide heat weld on the outside edge of the lap. An intermediate row GenFlex Polymer Batten Strips and GenFast #15 WH fasteners spaced maximum 6 in. o.c. Intermediate row is centered between lap rows and covered with a 5 in. wide cover strip with minimum 1.5 in. wide heat welds on each side.

Maximum Design Pressure: -97.5 psf (See General Limitation #7)

Fastening #3: ITW 2-3/8" Eyehook plates and GenFast #15 WH fasteners spaced maximum 6 in. o.c. within minimum 6 in. wide lap. Laps are spaced at maximum 69 in. o.c. and sealed with minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -82.5 psf (See General Limitation #7)

Maximum Design Pressure: **See Membrane Fastening Options Above**

Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover, Insulated

Deck Description: steel

System Type D(6): Membrane attached over preliminary fastened insulation

All General and System Limitations apply.

Barrier: (Optional) Minimum $^5/_8$" gypsum board or ¼" Dens-Deck, loose laid

One or more layers of any of the following insulation:

Insulation Layer	Fastener Density ft^2	Fastener Type
Any approve insulation		
Minimum: 0.25" thick	N/A	N/A

Note: All insulation shall be preliminary attachment prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimensions greater than 4 ft., and four fasteners for any insulation having no dimension greater than 8 ft.

Membrane: GenFlex TPO or GenFlex TPO Plus, attached to deck as follows:

Fastening #1: GenFast 3" Max Seam Plates and GenFast #16 Max fasteners spaced maximum 6 in. o.c. within min. 6 in. wide laps. Laps are spaced at maximum 90 in. o.c. and sealed with a minimum 1.5 in. wide heat weld on outside edge.

Maximum Design Pressure: **-67.5 psf** (See General Limitation #7)

Membrane Type:	Single Ply, Thermoplastic, TPO
Deck Type 7I:	Recover, Insulated
Deck Description:	steel
System Type D(7):	Membrane attached over preliminary fastened insulation

All General and System Limitations apply.

Deck:	18-22 ga., 1.5 in (38mm) deep, ASTM A653 or A1008 Grade 80 steel deck secured to 0.25 in (6mm) structural supports spaced a maximum 6 ft o.c. with Buildex Teks 4 or Teks 5 fasteners spaced max. 6 in o.c.
Barrier:	(Optional) Minimum $^5/_8$" gypsum board or ¼" Dens-Deck, loose laid

One or more layers of any of the following insulation:

Insulation Layer	Fastener Density ft^2	Fastener Type
Any approved insulation		
Minimum: 0.25" thick	N/A	N/A

Note: All insulation shall be preliminary attachment prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimensions greater than 4 ft., and four fasteners for any insulation having no dimension greater than 8 ft.

Membrane:	Min. 0.070 in. thick GenFlex TPO Plus attached to deck as follows:
Fastening #1:	GenFast 3" Max Seam Plates and GenFast #16 Max Fasteners spaced maximum 12 in. o.c. within minimum 6 in. wide lap. Laps are spaced maximum 69.75 in. o.c. and sealed with a minimum 1.5 in. wide heat weld on outside edge of lap.
	Maximum Design Pressure: -52.5 psf (See General Limitation #7)
Fastening #2:	GenFast (WH) 2-3/8" Seam Plate and GenFast #15 (WH) Fasteners or GenFast 3" Max Seam Plates and GenFast #16 Max Fasteners spaced maximum 6 in. o.c. within minimum 6 in. wide laps. Laps are spaced maximum 69.75 in. o.c.c and sealed with minimum 1.5 in. heat weld on outside edge of lap.
	Maximum Design Pressure: -75.0 psf (See General Limitation #7)
Fastening #3:	GenFast (WH) 2-3/8" Seam Plate and GenFast #15 (WH) Fasteners spaced maximum 6 in. o.c. within minimum 6 in. wide laps. Laps are spaced maximum 42 in. o.c. and sealed with minimum 1.5 in. heat weld on outside edge of lap.
	Maximum Design Pressure: -45.0 psf (See General Limitation #7)
Fastening #4:	GenFast (WH) 2-3/8" Seam Plates and GenFast #16 Max Fasteners spaced maximum 6 in. o.c. within minimum 6 in. wide laps. Laps are spaced maximum 90 in. o.c. and sealed with minimum 1.5 in. heat weld on outside edge of lap.
	Maximum Design Pressure: -82.5 psf (See General Limitation #7)
Maximum Design Pressure:	**See Membrane Fastening Options Above**

Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover, Insulated

Deck Description: steel

System Type D(8): Membrane attached over preliminary fastened insulation

All General and System Limitations apply.

Deck: 18-22 ga., 1.5 in (38mm) deep, ASTM A653 or A1008 Grade 80 steel deck secured to 0.25 in (6mm) structural supports spaced a maximum 6 ft o.c. with Buildex Teks 4 or Teks 5 fasteners spaced max. 6 in o.c.

Barrier: (Optional) Minimum $^5/_8$" gypsum board or ¼" Dens-Deck, loose laid

One or more layers of any of the following insulation:

Insulation Layer	Fastener Density ft^2	Fastener Type
Any approved insulation		
Minimum: 0.25" thick	N/A	N/A

Note: All insulation shall be preliminary attachment prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimensions greater than 4 ft., and four fasteners for any insulation having no dimension greater than 8 ft.

Membrane: Min. 0.045 in. thick GenFlex TPO or GenFlex TPO Plus, attached to deck as follows:

GenFast 3" Max Seam Plates and GenFast #16 Max Fasteners spaced maximum 6 in. o.c. within minimum 6 in. wide lap. Laps are spaced maximum 90 in. o.c. and sealed with a minimum 1.5 in. wide heat weld on outside edge of lap.

Maximum Design Pressure: **-67.5 psf** (See General Limitation #7)

RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

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 side lap 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 Professional Engineer, Registered 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.)**

END OF THIS ACCEPTANCE