MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786)315-2590 F (786) 315-2599
www.miamidade.gov/economy

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

GAF
1 Campus Drive
Parsippany, NJ 07054

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section 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 Section (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. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section 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 Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: GAF Ruberoid® Modified Bitumen Roof System for 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 and revises NOA No. 15-1008.01 and consists of pages 1 through 112.
The submitted documentation was reviewed by Jorge L. Acebo.

MIAMI-DADE COUNTY APPROVED

ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Modified Bitumen
Material: APP/SBS
Deck Type: Steel
Maximum Design Pressure: -120 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
GAFGLAS® Ply 4	39.37" (1 meter) Wide	ASTM D2178	Smooth surfaced asphaltic ply sheet reinforced with fiberglass mat.
Tri-Ply® Ply 4	39.37" (1 meter) Wide	ASTM D2178	Smooth surfaced asphaltic ply sheet reinforced with a fiberglass mat.
GAFGLAS® FlexPly™ 6	39.37" (1 meter) Wide	ASTM D2178	Smooth surfaced asphaltic ply sheet reinforced with fiberglass mat.
GAFGLAS® #75Base Sheet	39.37" (1 meter) Wide	ASTM D4601	Smooth asphaltic base or base/ply sheet reinforced with fiberglass mat.
Tri-Ply® #75 Base Sheet	39.37" (1 meter) Wide	ASTM D4601	Smooth asphaltic base or base/ply sheet reinforced with a fiberglass mat.
GAFGLAS® #80 Ultima™ Base Sheet	39.37" (1 meter) Wide	ASTM D4601	Smooth asphaltic base or base/ply sheet reinforced with fiberglass mat.
GAFGLAS® Stratavent® Perforated Venting Base Sheet	39.37" (1 meter) Wide	ASTM D4897	Smooth surfaced asphaltic perforated venting base sheet reinforced with fiberglass mat.
GAFGLAS® Stratavent® Nailable Venting Base Sheet	39.37" (1 meter) Wide	ASTM D4897	Smooth surfaced asphaltic nailable venting base sheet reinforced with fiberglass mat. Bottom side surfaced with granules.
GAFGLAS® Mineral-Surfaced Cap Sheet	39.37" (1 meter) Wide	ASTM D3909	Granule surfaced asphaltic cap sheet reinforced with fiberglass mat.
Tri-Ply® BUR Granule Cap Sheet	39.37" (1 meter) Wide	ASTM D3909	Granule surfaced asphaltic cap sheet reinforced with a fiberglass mat.
GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet	39.37" (1 meter) Wide	ASTM D3909	Granule surfaced asphaltic cap sheet reinforced with fiberglass mat. Cap sheet is factory coated with EnergyCote™.
Ruberoid® HW 25 Smooth	39.37" (1 meter) Wide	ASTM D6163	Smooth surfaced torch applied SBS base or ply sheet reinforced with a fiberglass mat.
Ruberoid® HW Smooth	39.37" (1 meter) Wide	ASTM D6164	Smooth surfaced torch applied SBS base or ply sheet reinforced with a polyester mat.
Ruberoid® HW Granule	39.37" (1 meter) Wide	ASTM D6164	Granule surfaced torch applied SBS cap sheet reinforced with a polyester mat.

Product	Dimensions	Test Specification	Product Description
Ruberoid® HW Granule FR	39.37" (1 meter) Wide	ASTM D6164	Fire retardant granule surfaced heat-welded SBS cap sheet reinforced with a polyester mat.
Ruberoid® HW Plus Granule	39.37" (1 meter) Wide	ASTM D6164	Granule surfaced torch applied SBS cap sheet reinforced with a polyester mat.
Ruberoid® HW Plus Granule FR	39.37" (1 meter) Wide	ASTM D6164	Fire retardant granule surfaced torch applied SBS cap sheet reinforced with a polyester mat.
Ruberoid® EnergyCap™ HW Plus Granule FR	39.37" (1 meter) Wide	ASTM D6164	Fire retardant granule surfaced heat-welded SBS cap sheet reinforced with a polyester mat. Cap sheet is factory coated with EnergyCote™.
Ruberoid® Torch Smooth	39.37" (1 meter) Wide	ASTM D6222	Smooth surfaced torch applied APP base or ply sheet reinforced with a polyester mat.
Tri-Ply® APP Smooth	39.37" (1 meter) Wide	ASTM D6222	Smooth surfaced torch applied APP cap, base or ply sheet reinforced with a polyester mat
Ruberoid® Torch Granule	39.37" (1 meter) Wide	ASTM D6222	Granule surfaced torch applied APP cap sheet reinforced with a polyester mat.
Tri-Ply® APP Granule	39.37" (1 meter) Wide	ASTM D6222	Granule surfaced torch applied APP cap sheet reinforced with a polyester mat.
Ruberoid® Torch Plus Granule FR	39.37" (1 meter) Wide	ASTM D6222	Fire retardant granule surfaced torch applied APP cap sheet reinforced with a polyester mat.
Ruberoid® EnergyCap™ Torch Plus Granule FR	39.37" (1 meter) Wide	ASTM D6222	Fire retardant granule surfaced torch applied APP cap sheet reinforced with a polyester mat. Cap sheet is factory coated with EnergyCote™.
Ruberoid® EnergyCap™ Torch Granule FR	39.37" (1 meter) Wide	ASTM D6222	Fire retardant granule surfaced torch applied APP cap sheet reinforced with a polyester mat. Cap sheet is factory coated with EnergyCote™.
Ruberoid® 20 Smooth	39.37" (1 meter) Wide	ASTM D6163	SBS polymer-modified asphalt base or ply sheet reinforced with a fiberglass mat.
Ruberoid® 30 Granule	39.37" (1 meter) Wide	ASTM D6163	Granule surfaced mop applied SBS cap sheet reinforced with a fiberglass mat.
Ruberoid® 30 Granule FR	39.37" (1 meter) Wide	ASTM D6163	Fire retardant granule surfaced mop applied SBS cap sheet reinforced with fiberglass mat.
Ruberoid® 30 Plus Granule FR	39.37" (1 meter) Wide	ASTM D6163	Fire retardant granule surfaced mop applied SBS cap sheet reinforced with fiberglass mat.

Product	Dimensions	Test Specification	Product Description
Ruberoid® Mop Granule	39.37" (1 meter) Wide	ASTM D6164	Granule surfaced mop applied SBS cap sheet reinforced with a polyester mat.
Tri-Ply® SBS Granule	39.37" (1 meter) Wide	ASTM D6164	Granule surfaced mop applied SBS cap sheet reinforced with a polyester mat.
Intec Flex PRF	39.37" (1 meter) Wide	ASTM D6164	Granule surfaced mop applied SBS cap sheet reinforced with a polyester mat.
Ruberoid® Mop Smooth	39.37" (1 meter) Wide	ASTM D6164	Smooth surfaced mop applied SBS base or ply sheet reinforced with a polyester mat.
Ruberoid® Mop Smooth 1.5	39.37" (1 meter) Wide	ASTM D6164	Smooth surfaced mop applied SBS base or ply sheet reinforced with a polyester mat.
Ruberoid® Mop Plus Smooth	39.37" (1 meter) Wide	ASTM D6164	Smooth surfaced mop applied SBS base or ply sheet reinforced with a polyester mat.
Ruberoid® Mop Plus Granule	39.37" (1 meter) Wide	ASTM D6164	Granule surfaced mop applied SBS cap sheet reinforced with a polyester mat.
Ruberoid® Mop Plus Granule FR	39.37" (1 meter) Wide	ASTM D6164	Fire retardant granule surfaced mop applied SBS cap sheet reinforced with a polyester mat.
Ruberoid® EnergyCap™ Mop Plus Granule FR	39.37" (1 meter) Wide	ASTM D6164	Fire retardant granule surfaced mop applied SBS cap sheet reinforced with a polyester mat. Cap sheet is factory coated with EnergyCote™.
Ruberoid® Mop Granule FR	39.37" (1 meter) Wide	ASTM D6164	Fire retardant granule surfaced mop applied SBS cap sheet reinforced with a polyester mat.
Ruberoid® EnergyCap™ 30 Granule FR	39.37" (1 meter) Wide	ASTM D6163	Fire retardant granule surfaced mop applied SBS cap sheet reinforced with a fiberglass mat. Cap sheet is factory coated with EnergyCote™.
Matrix™ 102 SBS Membrane Adhesive	3, 5, or 55 Gallons	ASTM D3019	Fiber reinforced rubberized cold-applied adhesive for modified bitumen roof systems.
TOPCOAT® Membrane	1, 5 or 55 Gallons	ASTM D6083	Water-based elastomeric coating
United Coatings™ Roof Mate TCM Coating	1, 5 or 55 Gallons	ASTM D6083	Water-based elastomeric coating
TOPCOAT® MB Plus	5 or 55 Gallons	Proprietary	Water based, low VOC primer designed to block asphalt bleed-through.
United Coatings™ Roof Mate MB Plus Coating	5 or 55 Gallons	Proprietary	Water based, low VOC primer designed to block asphalt bleed-through.

Product	Dimensions	Test Specification	Product Description
TOPCOAT® Surface Seal SB	5 or 55 Gallons	ASTM D6083	Solvent-based thermoplastic rubber sealant designed to protect and restore aged roof surfaces and to increase roof reflectivity.
United Coatings™ Surface Seal SB Roof Coating	5 or 55 Gallons	ASTM D6083	Solvent-based thermoplastic rubber sealant designed to protect and restore aged roof surfaces and to increase roof reflectivity.
TOPCOAT® FlexSeal™	5 or 55 gallons	TAS 139	Solvent-based elastomeric sealant.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
EnergyGuard™ Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ Tapered Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ HD Polyiso Insulation	High density polyisocyanurate foam insulation	GAF
EnergyGuard™ HD Plus Polyiso Insulation	High density polyisocyanurate foam insulation	GAF
EnergyGuard™ RA Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ RA Tapered Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ RH Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ RH Tapered Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ RH HD Polyiso Insulation	High density polyisocyanurate foam insulation	GAF
EnergyGuard™ RN Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ RN Tapered Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ Perlite Roof Insulation	Perlite insulation board.	GAF
EnergyGuard™ Perlite Recover Board	Perlite recover board	GAF
DensDeck® Roof Board	Gypsum board	Georgia-Pacific Gypsum LLC
DensDeck® Prime® Roof Board	Gypsum board	Georgia-Pacific Gypsum LLC
SECUROCK® Gypsum-Fiber Roof Board	Gypsum board	United States Gypsum Corp.
SECUROCK® Glass-Mat Roof Board	Glass faced gypsum board	United States Gypsum Corp.
Structodek® High Density Fiber Board Roof Insulation	High Density Fiber Board	Blue Ridge Fiber Board, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Drill-Tec™ #12 Fastener	Phillips head, modified buttress thread, pinch point, carbon steel fastener for use in steel or wood decks. With CR-10 coating. Available with a pinch point or drill point.	#12 X 8" Max. Length, #3 Phillips Head	GAF
2.	Drill-Tec™ #14 Fastener	Truss head, self-drilling, pinch point, high thread fastener for use in steel, wood or concrete decks.	#14 X 16" Max. Length, #3 Phillips Head.	GAF
3.	Drill-Tec™ XHD Fastener	Truss head, self-drilling, pinch point, high thread fastener for use in wood or steel decks.	#15 x 16" Max. Length, #3 Phillips head.	GAF
4.	Drill-Tec™ ASAP 3S	Drill-Tec™ #12 Fastener with Drill-Tec™ 3" Standard Steel Plate.	See Components	GAF
5.	Drill-Tec™ AccuTrac® Flat Plate	A2-SS aluminized steel plate for use with Drill-Tec™ fasteners.	3" Square; .017" Thick	GAF
6.	Drill-Tec™ AccuTrac® Recessed Plate	Galvalume® steel plate with recess for use with Drill-Tec™ fasteners.	3" Square; .017" Thick.	GAF
7.	Drill-Tec™ 3" Steel Plate	Round Galvalume® steel stress plate with reinforcing ribs and recessed for use with Drill-Tec™ fasteners.	3" Round	GAF
8.	Drill-Tec™ 3" Standard Steel Plate	Galvalume® coated steel stress plate for use with approved Drill-Tec™ fasteners.	3" Round	GAF
9.	Drill-Tec™ 3 in. Ribbed Galvalume Plate (Flat)	Round Galvalume® plated steel stress plate with reinforcing ribs for use with Drill-Tec™ fasteners.	3" Round	GAF
10.	Drill-Tec™ 2 in. Barbed Plate	Round galvanized steel stress plates for use with Drill-Tec™ fasteners.	2" Round	GAF
11.	Drill-Tec™ 2 in. Double Barbed XHD Plate	Round galvanized steel stress plates for use with Drill-Tec™ fasteners.	2" Round	GAF

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
12.	Drill-Tec™ 2-3/8 in. Barbed XHD Plate	Round galvanized steel stress plates for use with Drill-Tec™ fasteners.	2-3/8" Round	GAF
13.	Drill-Tec™ Eyehook Accuseam Plates	Round Galvalume® steel plate for use with Drill-Tec™ fasteners.	2-3/8" Round	GAF
14.	Drill-Tec™ Batten Bar	Corrosion-free steel batten bar used to secure single-ply membranes to steel, wood and structural concrete roof decks.	3/4" or 1"	GAF

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
FM Approvals	1B9A8.AM	Class 4470	09/04/97
	3D4Q2.AM	Class 4470	04/30/97
	3001276	Class 4470	01/28/99
	3005640	Class 4470	11/09/00
	3006845	Class 4470	10/17/00
	3007500	Class 4470	06/15/00
	3011140	Class 4470	08/14/01
	3013788	Class 4470	01/10/03
	3014547	Class 4470	05/22/03
	3017250	Class 4470	04/05/04
	3023458	Class 4450	07/18/06
	3024805	Class 4470	11/20/06
	3031350	Class 4470	09/27/07
	3032811	Class 4470	12/11/08
	3033719	Class 4470	12/24/08
	3035864	Class 4470	06/03/09
	3036614	Class 4470	06/09/09
	3036980	Class 4470	08/14/09
	3040738	Class 4470	05/31/11
	3041005	Class 4470	05/18/12
	3041769	Class 4470	05/26/11
	3042887	Class 4470	11/14/11
	3043633	Class 4470	01/20/12
	3043900	Class 4470	08/16/12
	3044541	Class 4470	04/04/12
	3044862	Class 4470	05/11/12
	3046388	Class 4470	09/24/12
	3047104	Class 4470	08/29/13
	3048122	Class 4470	04/29/13
	3048496	Class 4470	12/19/13

EVIDENCE SUBMITTED: (CONTINUED)

Test Agency	Test Identifier	Description	Date
FM Approvals	3048871	Class 4470	12/11/13
	3049601	Class 4470	01/29/14
	797-02-01-14-1	Class 4470	01/14/02
	797-06129-267	Class 4470	12/08/10
	797-08264-267	Class 4470	04/11/13
	797-10228-267	Class 4470	01/15/15
	RR202723	Class 4470	10/01/15
	RR202725	Class 4470	10/02/15
	FM Letter	Class 4470	09/15/15
UL LLC	R1306	UL 790	08/21/18
Trinity Engineering	4483.04 97-1	TAS-114	06/06/97
Trinity | ERD	C8500SC.11.07	TAS-117	11/30/07
	G30250.02.10-2	ASTM D6222	02/11/10
	G30250.02.10-3-R2	ASTM D3909	06/03/15
	SC6870.08.14-R1	ASTM D3909	09/04/14
	G31360.03.10	ASTM D6164	03/31/10
	G32520.06.11	ASTM D1967	06/28/11
	G33470.01.11	ASTM D6164	01/13/11
	G34140.04.11-2	ASTM D6163	04/25/11
	G34140.04.11-4-R2	ASTM D4601	06/04/15
	G34140.04.11-5-R3	ASTM D4897	06/04/15
	G40630.01.14-2C	ASTM D6164	01/07/14
	G40630.01.14-1	ASTM D6163	01/06/14
	G40630.03.14	ASTM D6164	03/06/14
	G40630.01.14-2A	ASTM D6164	01/07/14
	G40630.01.14-2A-1-R1	ASTM D6164	04/10/14
	G40620.07.12-2	ASTM D6222	07/17/12
	G40630.01.14-2B-R1	ASTM D6164	01/16/15
	G43190.03.14-1	ASTM D6222	03/06/14
	G43190.03.14-2	ASTM D6222	03/06/14
	G43190.05.14-R1	ASTM D6222	05/20/14
	G43190.11.13-1	ASTM D6222	11/15/13
	G43610.01.14	ASTM D3909	01/22/14
	G46160.02.15	ASTM D6163	02/12/15
	G46160.02.15-2D-1	ASTM D6163	02/09/16
	G46160.03.15	ASTM D6163	03/11/15
	G46160.09.14-2A	ASTM D6163	09/09/14
	G46160.09.14-3A	ASTM D6164	09/09/14
	G46160.09.14-3B	ASTM D6164	09/09/14
	G46160.09.14-3C	ASTM D6164	09/09/14
	G46160.12.14-3E	ASTM D6164	12/29/14
	G6850.08.08	ASTM D6163	08/01/08
	G6850.08.08-R1	ASTM D6164	04/14/11

EVIDENCE SUBMITTED: (CONTINUED)

Test Agency	Test Identifier	Description	Date
Trinity | ERD	G6850.10.08	ASTM D6222	10/06/08
	G6850.11.08	ASTM D6222	02/17/09
	SC6870.08.14-R1	ASTM D3909	09/04/14
	GAF-SC10195.10.15	TAS 114	10/16/15
PRI Construction Materials Technologies LLC	GAF-084-02-01	ASTM D6083	05/07/06
	GAF-122-02-01	TAS 139	05/07/06
	GAF-238-02-01	ASTM D1970	03/03/10
	GAF-314-02-01	ASTM D2178	08/23/11
	GAF-315-02-01	ASTM D2178	08/23/11
	GAF-369-02-01	ASTM C1289	10/22/12
	GAF-411-02-01	ASTM C1289	05/02/13
	GAF-412-02-01	ASTM C1289	05/02/13
	GAF-436-02-01	ASTM D1876	03/05/14
	GAF-436-02-02	TAS-114	03/05/14
	GAF-436-02-03	TAS-114	03/05/14
.	GAF-436-02-04	TAS-114	03/05/14
	GAF-436-02-05	TAS-114	03/05/14
	GAF-436-02-08	TAS-114	03/05/14
	GAF-436-02-09	TAS-114	03/05/14
	GAF-464-02-01	ASTM C1289	02/06/14
	GAF-499-02-01	ASTM D6083	03/12/14
	GAF-500-02-01	ASTM D6083	03/12/14

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies:	Date
FM Approval	N/A	B(1), B(2), B(5), B(10), B(11), B(12)	01/01/13
Deck Limitations	N/A	C(1), C(3), C(4), C(14), C(15), C(16), C(17)	01/01/13
	N/A	C(18), C(19), C(21), C(22), C(23), C(24)	01/01/13
	N/A	D(3), D(4), D(5), D(6), D(7), D(10), D(11), D(12), D(13)	01/01/13
Duc T. Nguyen, P.E.	GAF-436-02-02 Letter	C(5) for MDP -52.5 psf.	10/05/15
	GAF-436-02-03 Letter	C(5) for MDP -60 psf.	10/05/15
	GAF-436-02-04 Letter	C(6)	10/05/15
	GAF-436-02-05 Letter	C(6)	10/05/15
	GAF-436-02-09 Letter	C(7)	10/05/15
	GAF-436-02-08 Letter	C(8)	10/05/15
Robert Nieminen, P.E.	Letter	C(2)	10/05/15
	GAF-SC10195.10.15	C(26)	10/16/15

APPROVED ASSEMBLIES

Membrane Type: APP/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 18-22 ga. steel Type B Grade 33 steel decking attached to steel supports spaced 6 ft. o.c. with ITW #12 HWH Teks 5 fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached with ITW #10 or #12 HWH Teks 1 fasteners spaced at max. of 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type B(1): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation		
Minimum 2" thick	**1, 2, & 7**	**1:1.45 ft²**

Note: Base layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Perlite Roof Insulation, EnergyGuard™ Perlite Recover Board, SECUROCK® Gypsum-Fiber Roof Board, DensDeck® Prime® Roof Board		
Minimum 1" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Ply 4, Tri-Ply® Ply 4, GAFGLAS® FlexPly™ 6, GAFGLAS® #75 Base Sheet, Tri-Ply® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Plus Smooth or Ruberoid® Mop Smooth 1.5 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Ply Sheet: (Optional) One or more plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4, GAFGLAS® FlexPly™ 6, GAFGLAS® #80 Ultima™ Base Sheet, Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Plus Smooth or Ruberoid® Mop Smooth 1.5 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Membrane: One or more plies of Ruberoid® Torch Smooth, Tri-Ply® APP Smooth, Ruberoid® Torch Granule, Tri-Ply® APP Granule, Ruberoid® Torch Plus Granule FR, Ruberoid® EnergyCap™ Torch Plus Granule FR or Ruberoid® EnergyCap™ Torch Granule FR torch applied in accordance with manufacturer's instructions.
OR
Ruberoid® 20 Smooth, Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Mop Plus Smooth, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
OR
One or more plies of Ruberoid® HW 25 Smooth, Ruberoid® HW Smooth, Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR or Ruberoid® EnergyCap™ HW Plus Granule FR torch applied in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
OR
TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 18-22 ga. steel Type B Grade 80 steel decking secured to minimum 1/4″ steel supports spaced 6 ft. o.c. with ITW #12 HWH Teks 5 fasteners spaced 6” o.c. (at the bottom flute), and with side laps attached with ITW #10 or #12 HWH Teks 1 fasteners spaced at max. of 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type B(2): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation		
Minimum 1.5” thick	**1, 2, 4, 7, 8**	**1:1.33 ft²**

Note: Base layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Perlite Roof Insulation, SECUROCK® Gypsum-Fiber Roof Board, EnergyGuard™ Perlite Recover Board, DensDeck® Prime Roof Board		
Minimum ½” thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Ply 4, Tri-Ply® Ply 4, GAFGLAS® FlexPly™ 6, GAFGLAS® #75 Base Sheet, Tri-Ply® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Ply Sheet: (Optional) **(Required when Mineral Surfaced Cap Sheets are used.)** One or more plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4, GAFGLAS® FlexPly™ 6, GAFGLAS® #80 Ultima™ Base Sheet, Ruberoid® 20 Smooth Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Membrane: One or more plies of Ruberoid® 20 Smooth, Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Mop Plus Smooth, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
Or
(Required to only use with Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Plus Smooth or Ruberoid® Mop Smooth 1.5 ply sheet(s).)
GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

Maximum Design Pressure: -90 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. steel, 33 ksi

System Type B(3): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime® Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation Minimum 1.5" thick	**1, 2, 4, 5, 6, 7, 8**	**1:4 ft²**

Note: Base layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation Minimum 1.5" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: (Optional) **(Required when Mineral Surfaced Cap Sheets are used.)** One or more plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4, GAFGLAS® FlexPly™ 6, GAFGLAS® #80 Ultima™ Base Sheet, Ruberoid® 20 Smooth Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Membrane: One or more plies of Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Mop Plus Smooth, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. applied in accordance with manufacturer's instructions.
Or
(Required to only use with Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Plus Smooth or Ruberoid® Mop Smooth 1.5 ply sheet(s).)
GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. steel, 33 ksi

System Type B(4): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5" thick	**1, 2, 4, 5, 6, 7, 8**	**1:2 ft²**
EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 2" thick	**1, 2, 4, 5, 6, 7, 8**	**1:3.2 ft²**

Note: Base layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Additional layer(s) of insulation shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Perlite Roof Insulation Minimum 3/4" thick	**N/A**	**N/A**
Structodek® High Density Roofing Fiberboard, EnergyGuard™ Perlite Recover Board Minimum 1/2" thick	**N/A**	**N/A**
DensDeck® Prime Roof Board, SECUROCK® Gypsum-Fiber Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Base Sheet: Two or three plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
OR
One or two plies of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® Mop Plus Granule FR, Ruberoid® Mop Granule FR, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR or Ruberoid® EnergyCap™ Mop Plus Granule FR SBS Membrane adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. steel Type B Grade 33 steel decking attached to steel supports spaced 6 ft. o.c. with ICH Traxx/4 or 5, Teks 4 or Teks 5 fasteners spaced 6" o.c. and with side laps attached with Buildex Traxx/1 or Teks 1 fasteners spaced at max. of 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type B(5): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation		
Minimum 1.5" thick	**1, 2, 4, 5, 6, 7, 8**	**1:1.33 ft²**

Note: Base layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Additional layer(s) of insulation shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Perlite Roof Insulation		
Minimum 3/4" thick	**N/A**	**N/A**
Structodek® High Density Roofing Fiberboard, EnergyGuard™ Perlite Recover Board		
Minimum 1/2" thick	**N/A**	**N/A**
DensDeck® Prime Roof Board, SECUROCK® Gypsum-Fiber Roof Board		
Minimum 1/4" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Base Sheet: Two or three plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
OR
One or two plies of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® Mop Plus Granule FR, Ruberoid® Mop Granule FR, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR or Ruberoid® EnergyCap™ Mop Plus Granule FR SBS Membrane adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., 33 ksi.

System Type B(6): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5" thick	**1, 2, 4, 5, 6, 7, 8**	**1:2 ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 2" thick	**1, 2, 4, 5, 6, 7, 8**	**1:3.2 ft²**

Note: Base layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Perlite Roof Insulation Minimum 3/4" thick	**N/A**	**N/A**
Structodek® High Density Roofing Fiberboard, EnergyGuard™ Perlite Recover Board Minimum 1/2" thick	**N/A**	**N/A**
DensDeck® Prime Roof Board, SECUROCK® Gypsum-Fiber Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Base Sheet: Two or three plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
OR
One or two plies of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., 33 ksi.

System Type B(7): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick	**1, 2, 4, 5, 6, 7, 8**	**1:3.2 ft²**

Note: Base layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Perlite Recover Board Minimum 1/2" thick	**N/A**	**N/A**
DensDeck® Prime Roof Board, SECUROCK® Gypsum-Fiber Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Base Sheet: Two or three plies of GAFGLAS® Ply 4, GAFGLAS® FlexPly™ 6 or Tri-Ply® Ply 4 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
OR
One or two plies of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., 33 ksi.

System Type B(8): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick	**1, 2, 4, 5, 6, 7, 8**	**1:2.67 ft²**

Note: Base layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Perlite Roof Insulation Minimum 3/4" thick	**N/A**	**N/A**
Structodek® High Density Roofing Fiberboard Minimum 1/2" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Base Sheet: Two or three plies of GAFGLAS® Ply 4, or Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
OR
One or two plies of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., 33 ksi.

System Type B(9): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation Minimum 2" thick	**1, 2, 4, 5, 6, 7, 8**	**1:4 ft²**

Note: Base layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Perlite Roof Insulation Minimum 3/4" thick	**N/A**	**N/A**
Structodek® High Density Roofing Fiberboard, EnergyGuard™ Perlite Recover Board Minimum 1/2" thick	**N/A**	**N/A**
DensDeck® Prime Roof Board, SECUROCK® Gypsum-Fiber Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Base Sheet: Two or three plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
OR
One or two plies of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. steel Type B Grade 33 steel decking attached to steel supports spaced 6 ft. o.c. with ICH Traxx/4 or 5, Teks 4 or Teks 5 fasteners spaced 6" o.c. and with side laps attached with ICH Traxx/1 or Teks 1 fasteners spaced at max. of 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type B(10): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation		
Minimum 2" thick	**1, 2, 4, 5, 6, 7, 8**	**1:1.33 ft²**

Note: Base layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Perlite Roof Insulation		
Minimum 3/4" thick	**N/A**	**N/A**
Structodek® High Density Fiberboard Roof Insulation, EnergyGuard™ Perlite Recover Board		
Minimum 1/2" thick	**N/A**	**N/A**
DensDeck® Prime Roof Board, SECUROCK® Gypsum-Fiber Roof Board		
Minimum 1/4" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Base Sheets: Two or three plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
OR
One or two plies of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. steel Type B Grade 33 steel decking attached to steel supports spaced 6 ft. o.c. with ICH Traxx/4 or 5, Teks 4 or Teks 5 fasteners spaced 6" o.c. and with side laps attached with ICH Traxx/1 or Teks 1 fasteners spaced at max. of 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type B(11): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 2" thick	**1, 2, 4, 5, 6, 7, 8**	**1:1.6 ft²**

Note: Base layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK® Gypsum-Fiber Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Base Sheet: One ply of Ruberoid® HW Smooth or Ruberoid® HW 25 Smooth, torch-applied in accordance with manufacturer's instructions.

Ply Sheet: (Optional) One ply of Ruberoid® HW Smooth or Ruberoid® HW 25 Smooth, torch-applied in accordance with manufacturer's instructions.

Membrane: One or more plies of Ruberoid® HW Smooth, Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR, Ruberoid® EnergyCap™ HW Plus Granule FR torch applied in accordance with manufacturer's instructions.
Or
One or more plies of Ruberoid® Torch Smooth, Tri-Ply® APP Smooth, Ruberoid® Torch Granule, Tri-Ply® APP Granule, Ruberoid® Torch Plus Granule FR, Ruberoid® EnergyCap™ Torch Plus Granule FR or Ruberoid® EnergyCap™ Torch Granule FR torch applied in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. steel Type B Grade 33 steel decking attached to steel supports spaced 6 ft. o.c. with ICH Traxx/4 or 5, Teks 4 or Teks 5 fasteners spaced 6" o.c. and with side laps attached with ICH Traxx/1 or Teks 1 fasteners spaced at max. of 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type B(12): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 2" thick	**1, 2, 4, 5, 6, 7, 8**	**1:1.6 ft²**

Note: Base layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK® Gypsum-Fiber Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Base Sheet: One ply of Ruberoid® Torch Smooth or Tri-Ply® APP Smooth, torch-applied in accordance with manufacturer's instructions.

Ply Sheet: (Optional) One ply of Ruberoid® Torch Smooth or Tri-Ply® APP Smooth, torch-applied in accordance with manufacturer's instructions.

Membrane: One or more plies of Ruberoid® Torch Smooth, Tri-Ply® APP Smooth, Ruberoid® Torch Granule, Tri-Ply® APP Granule, Ruberoid® Torch Plus Granule FR, Ruberoid® EnergyCap™ Torch Plus Granule FR or Ruberoid® EnergyCap™ Torch Granule FR torch applied in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 18-22 ga. steel Type B Grade 33 steel decking attached to steel supports spaced 6 ft. o.c. with Buildex Traxx/4 or 5 fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached with Buildex Traxx/1 fasteners spaced at max. of 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(1): Base sheet loose laid dry ; both layers of insulation simultaneously fastened.

All General and System limitations apply.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime® Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation Minimum 1.5" thick	**N/A**	**N/A**

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

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck® Roof Board Minimum 0.25" thick	**1 & 8**	**1:1 ft²**

Note: All layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: (Optional) **(Required when Heat-Weld or Torch Membranes or Mineral Surfaced Cap Sheets are used.)** One or more plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4, GAFGLAS® FlexPly™ 6, GAFGLAS® #80 Ultima™ Base Sheet, Ruberoid® 20 Smooth Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Membrane: One or more plies of Ruberoid® 20 Smooth, Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Mop Plus Smooth, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
Or
(Required to only use with ply sheet(s).) One or more plies of Ruberoid® HW Smooth, Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR or Ruberoid® EnergyCap™ HW Plus Granule FR torch applied or applied with an approved hot air welder in accordance with manufacturer's instructions.
Or
(Required to only use with ply sheet(s).) One or more plies of Ruberoid® Torch Smooth, Tri-Ply® APP Smooth, Ruberoid® Torch Granule, Tri-Ply® APP Granule, Ruberoid® Torch Plus Granule FR, Ruberoid® EnergyCap™ Torch Plus Granule FR or Ruberoid® EnergyCap™ Torch Granule FR torch applied in accordance with manufacturer's instructions.
Or
(Required to only use with Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Plus Smooth or Ruberoid® Mop Smooth 1.5 ply sheet(s).) GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge steel non-vented B-deck, Grade 33, attached to supports having a maximum spacing of 5' o.c. with puddle welds and washers at 6" o.c. and side laps with tech screws at 12"o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(2): Base sheet loose laid; insulation mechanically fastened.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of the following:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation Minimum 1.5" thick	**1 & 7**	**1:1.45 ft²**

Note: All layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2 in. side laps.

Ply Sheet: One or more plies Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions

Membrane: One or more plies of Ruberoid® 20 Smooth, Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Mop Plus Smooth, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
Or
One or more plies of Ruberoid® HW 25 Smooth, Ruberoid® HW Smooth, Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR or Ruberoid® EnergyCap™ HW Plus Granule FR applied in accordance with manufacturer's instructions.
Or
(Required to only use with Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Plus Smooth or Ruberoid® Mop Smooth 1.5 ply sheet(s).)
GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, Grade 33, steel deck secured to minimum ¼″ (6 mm) thick steel structural supports 6 ft. (1.8m) o.c. with ITW Buildex TRAXX/5 fasteners 6 in. (1.52) o.c. along the center of the supports. Deck side laps are secured 24 in. (610 mm) o.c. with ITW Buildex TRAXX/1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(3): All insulation simultaneously fastened. Base sheet adhered to insulation.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation Minimum 2” thick	**N/A**	**N/A**

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

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK® Gypsum-Fiber Roof Board Minimum 0.5” thick	**1, 2, 4, 7, 8**	**1:1.78 ft²**

Note: All layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Two or more plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. and broomed in.
Or
One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: One or more plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4, GAFGLAS® FlexPly™ 6, GAFGLAS® #80 Ultima™ Base Sheet, Ruberoid 20 Smooth, Ruberoid Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Smooth Plus adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Membrane: One or more plies of Ruberoid® 20 Smooth, Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Mop Plus Smooth, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Or

One or more plies of Ruberoid® HW Smooth, Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR or Ruberoid® EnergyCap™ HW Plus Granule FR torch applied in accordance with manufacturer's instructions.

Or

(Required to only use with Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Plus Smooth or Ruberoid® Mop Smooth 1.5 ply sheet(s).) GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

   OR

   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: APP/SBS Heat-Weld

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. steel deck, Grade 80, secured to 0.25 in. thick structural supports spaced 6' o.c. using two ICH Traxx/5 fasteners and 0.75 in. washers spaced 6 in. o.c. along each support. The deck side laps were fastened with ICH Traxx/1 fasteners spaced at 12 in. o.c. along each side lap.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(4): Base insulation loose laid; top layer of insulation is mechanically fastened.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of each of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5″ thick	**N/A**	**N/A**

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

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
SECUROCK® Gypsum-Fiber Roof Board Minimum 0.5″ thick	**1 & 7**	**1:1 ft^2**

Note: All layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of Ruberoid® HW 25 Smooth or Ruberoid® HW Smooth torch adhered with 3 in. wide side laps in accordance with manufacturer's instructions.

Membrane: Ruberoid® Torch Smooth, Tri-Ply® APP Smooth, Ruberoid® Torch Granule, Tri-Ply® APP Granule, Ruberoid® Torch Plus Granule FR, Ruberoid® EnergyCap™ Torch Plus Granule FR or Ruberoid® EnergyCap™ Torch Granule FR torch adhered with 3 in. wide side laps in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

Maximum Design Pressure: -120 psf. (See General Limitation # 7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, type B, wide rib steel deck, Grade 33 secured to minimum 0.25 in. thick steel structural supports spaced at maximum 72 in. o.c. with 0.625 in. diameter puddle welds 6 in. o.c. The deck side laps are fastened 24 in. o.c. with #12-14 x 7/8in. HWH.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(5): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation Minimum 2" thick	**1, 2, 4, 5, 6, 7, 8**	**1:2 ft²**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: (Optional) Ruberoid® Mop Smooth or Ruberoid® Mop Smooth 1.5 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
Or
One or more plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4, or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: Ruberoid® Mop Granule, Intec Flex PRF, Ruberoid® Mop Granule FR, Ruberoid® Mop Plus Granule FR or Ruberoid® EnergyCap™ Mop Plus Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing:	**Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**
1.	Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2.	GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3.	TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat. OR TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
Maximum Design Pressure:	-52.5 psf. with EnergyGuard™ RH Polyiso Insulation: (See General Limitation # 7) -60 psf. with EnergyGuard™ Polyiso Insulation: (See General Limitation # 7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, type B, wide rib steel deck, Grade 33 secured to minimum 0.25 in. thick steel structural supports spaced at maximum 72 in. o.c. with 0.625 in. diameter puddle welds 6 in. o.c. The deck side laps are fastened 24 in. o.c. with #12-14 x 7/8in. HWH.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(6): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime® Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation Minimum 2" thick	**1, 2, 4, 5, 6, 7, 8**	**1:1.45 ft²**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: (Optional) Ruberoid® Mop Smooth or Ruberoid® Mop Smooth 1.5 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
Or
One or more plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4, or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: Ruberoid® Mop Granule, Intec Flex PRF, Ruberoid® Mop Granule FR, Ruberoid® Mop Plus Granule FR or Ruberoid® EnergyCap™ Mop Plus Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, type B, wide rib steel deck, Grade 33 secured to minimum 0.25 in. thick steel structural supports spaced at maximum 72 in. o.c. with 0.625 in. diameter puddle welds 6 in. o.c. The deck side laps are fastened 24 in. o.c. with #12-14 x 7/8in. HWH.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(7): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation Minimum 2" thick	**1, 2, 4, 5, 6, 7, 8**	**1:2 ft²**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: Ruberoid® 20 Smooth adhered in a full mopping of approved asphalt applied **(Optional)** within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® 30 Granule, Ruberoid 30 Plus Granule FR, Ruberoid® 30 Granule FR or Ruberoid® EnergyCap™ 30 Granule FR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, type B, wide rib steel deck, Grade 33 secured to minimum 0.25 in. thick steel structural supports spaced at maximum 72 in. o.c. with 0.625 in. diameter puddle welds 6 in. o.c. The deck side laps are fastened 24 in. o.c. with #12-14 x 7/8in. HWH.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(8): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation Minimum 2" thick	**1, 2, 4, 5, 6, 7, 8**	**1:1.45 ft²**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: (Optional) Ruberoid® 20 Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® 30 Granule, Ruberoid® 30 Granule FR Ruberoid® 30 Plus Granule FR or Ruberoid® EnergyCap™ 30 Granule FR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

Maximum Design Pressure: -75 psf. (See General Limitation # 7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., 33 ksi.

System Type C(9): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick	**1, 2, 4, 5, 6, 7, 8**	**1:2 ft^2**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: (Optional) Ruberoid® Mop Smooth or Ruberoid® Mop Smooth 1.5 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Ruberoid® Mop Plus Granule, Ruberoid® Mop Granule FR, Ruberoid® Mop Plus Granule FR or Ruberoid® EnergyCap™ Mop FR is adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., 33 ksi

System Type C(10): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime® Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**

Note: Base layer insulation is Minimum 2 in. when top insulation layer is Minimum 2 in.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick	**1, 2, 4, 5, 6, 7, 8**	**1:2 ft^2**
EnergyGuard™ Polyiso Insulation Minimum 2" thick	**1, 2, 4, 5, 6, 7, 8**	**1:3.2 ft^2**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: One Ply of Ruberoid® 20 Smooth is adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Ruberoid® Mop Plus Granule, Ruberoid® Mop Granule FR, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR or Ruberoid® EnergyCap™ 30 Granule FR is adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., 33 ksi.

System Type C(11): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**

Note: Base layer insulation is Minimum 2 in. when top insulation layer is Minimum 2 in.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick	**1, 2, 4, 5, 6, 7, 8**	**1:2 ft^2**
EnergyGuard™ Polyiso Insulation Minimum 2" thick	**1, 2, 4, 5, 6, 7, 8**	**1:3.2 ft^2**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: One Ply of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth is adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR Ruberoid 30 Plus Granule FR or Ruberoid® EnergyCap™ 30 Granule FR is adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., 33 ksi.

System Type C(12): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**

Note: Base layer insulation is Minimum 2 in. when top insulation layer is Minimum 2 in.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick	**1, 2, 4, 5, 6, 7, 8**	**1:2 ft^2**
EnergyGuard™ Polyiso Insulation Minimum 2" thick	**1, 2, 4, 5, 6, 7, 8**	**1:3.2 ft^2**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: Two plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FRor Ruberoid® EnergyCap™ 30 Granule FR is adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., 33 ksi

System Type C(13): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation		
Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck® Prime Roof Board, SECUROCK® Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**1, 2, 4, 5, 8, 9**	**1:4 ft²**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Two or three plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
OR
One or two plies of Ruberoid® Mop Smooth 1.5,Ruberoid® Mop Plus Smooth, Ruberoid® 20 Smooth, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, type B, wide rib steel deck, Grade 33 secured to minimum 0.25 in. thick steel structural supports 6 in. o.c. spaced at maximum 72 in. o.c. with Traxx/4, Traxx/5, Teks 4 or Teks 5 fasteners. The deck side laps are fastened 24 in. o.c. with Traxx/1 or Teks 1 Fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(14): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" Securock® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck® Prime Roof Board, SECUROCK® Gypsum-Fiber Roof Board, Minimum 0.5" thick	**1, 2, 4, 5, 8, 9**	**1:2 ft²**
DensDeck® Prime Roof Board, SECUROCK® Gypsum-Fiber Roof Board, Minimum 0.5" thick	**1, 2, 4, 5, 8, 9**	**1:1.6 ft²**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Two or three plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
OR
One or two plies of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® 30 Granule FR, Ruberoid 30 Plus Granule FR, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing:	**Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**
1.	Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2.	GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3.	TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat. OR TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
Maximum Design Pressure:	-60 psf. (See General Limitation # 7) for 1:2 ft^2 fastener density -82.5 psf. (See General Limitation # 7) for 1:1.6 ft^2 fastener density

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, Grade 80 or Minimum 20 gauge, Grade 33, type B, wide rib steel deck, secured to minimum 0.25 in. thick steel structural supports 6 in. o.c. spaced at maximum 72 in. o.c. with Traxx/4, Traxx/5, Teks 4 or Teks 5 fasteners. The deck side laps are fastened 24 in. o.c. with Traxx/1 or Teks 1 Fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(15): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck® Prime Roof Board, SECUROCK® Gypsum-Fiber Roof Board, Minimum 0.5" thick	**1, 2, 4, 5, 8, 9**	**1:1.6 ft²**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Two or three plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
OR
One or two plies of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

Maximum Design Pressure: -90 psf. (See General Limitation # 7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, Grade 80 or Minimum 20 gauge, Grade 33, type B, wide rib steel deck, secured to minimum 0.25 in. thick steel structural supports 6 in. o.c. spaced at maximum 72 in. o.c. with Traxx/4, Traxx/5, Teks 4 or Teks 5 fasteners and ¾" washers. The deck side laps are fastened 24 in. o.c. with Traxx/1 or Teks 1 fasteners and ¾" washers.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(16): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck® Prime Roof Board, SECUROCK® Gypsum-Fiber Roof Board, Minimum 0.5" thick	**1, 2, 4, 5, 8, 9**	**1:1.45 ft²**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Two or three plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
OR
One or two plies of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, Grade 33, type B, wide rib steel deck, secured to minimum 0.25 in. thick steel structural supports 6 in. o.c. spaced at maximum 72 in. o.c. with #12 ICH Traxx/4, ICH Traxx/5, #12 HWH Teks 4 or HWH Teks 5. The deck side laps are fastened 24 in. o.c. with #10 HWH Teks 1 or #10 HWH Teks 3 Fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(17): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**1, 2, 4, 5, 6, 7, 8**	**1:2 ft^2**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Membrane: Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR is adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

Maximum Design Pressure: -52.5 psf. (See General Limitation # 7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, Grade 33, type B, wide rib steel deck, secured to minimum 0.25 in. thick steel structural supports 6 in. o.c. spaced at maximum 72 in. o.c. with #12 ICH Traxx/4, ICH Traxx/5, #12 HWH Teks 4 or HWH Teks 5. The deck side laps are fastened 24 in. o.c. with #10 HWH Teks 1 or #10 HWH Teks 3 Fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(18): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**1, 2, 4, 5, 6, 7, 8**	**1:2 ft^2**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: One ply of Ruberoid® 20 Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
OR
Two or three plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid 30 Plus Granule FR, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR is adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

Maximum Design Pressure: -52.5 psf. (See General Limitation # 7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, Grade 33, type B, wide rib steel deck, secured to minimum 0.25 in. thick steel structural supports 6 in. o.c. spaced at maximum 72 in. o.c. with #12 ICH Traxx/4, ICH Traxx/5, #12 HWH Teks 4 or HWH Teks 5. The deck side laps are fastened 24 in. o.c. with #10 HWH Teks 1 or #10 HWH Teks 3 Fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(19): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation Minimum 3" thick to Maximum 12" thickness.	**1, 2, 4, 5, 6, 7, 8**	**1:2 ft^2**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: One ply of Ruberoid® 20 Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
OR
Two or three plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR is adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, Grade 33

System Type C(20): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation Minimum 3" thick to Maximum 12" thickness.	**1, 2, 4, 5, 6, 7, 8**	**1:4 ft^2**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: One ply of Ruberoid® 20 Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.
OR
Two or three plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR is adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, Grade 33, type B, wide rib steel deck, secured to minimum 0.25 in. thick steel structural supports 6 in. o.c. spaced at maximum 72 in. o.c. with #12 ICH Traxx/4, ICH Traxx/5, #12 HWH Teks 4 or HWH Teks 5. The deck side laps are fastened 24 in. o.c. with #10 HWH Teks 1 or #10 HWH Teks 3 Fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(21): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation Minimum 3" thick to Maximum 12" thickness.	**1, 2, 4, 5, 6, 7, 8**	**1:1.6 ft^2**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: One ply of Ruberoid® 20 Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. in accordance with manufacturer's instructions.

Membrane: Ruberoid® Mop Granule or Ruberoid® Mop Plus Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
Or
GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS/APP

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, Grade 33, type B, wide rib steel deck, secured to minimum 0.25 in. thick steel structural supports 6 in. o.c. spaced at maximum 72 in. o.c. with #12 ICH Traxx/4, ICH Traxx/5, #12 HWH Teks 4 or HWH Teks 5. The deck side laps are fastened 24 in. o.c. with #10 HWH Teks 1 or #10 HWH Teks 3 Fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(22): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK® Gypsum-Fiber Roof Board Minimum 0.375" thick	**1, 2, 4, 5, 8**	**1:1.33 ft²**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Ply: One ply of Ruberoid® HW Smooth or Ruberoid® HW 25 Smooth torch-applied in accordance with manufacturer's instructions.

Ply Sheet: (Optional) One ply of Ruberoid® HW Smooth or Ruberoid® HW 25 Smooth torch-applied in accordance with manufacturer's instructions.

Membrane: One or more plies of Ruberoid® HW Smooth, Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR, Ruberoid® EnergyCap™ HW Plus Granule FR torch applied in accordance with manufacturer's instructions.
Or
One or more plies of Ruberoid® Torch Smooth, Tri-Ply® APP Smooth, Ruberoid® Torch Granule, Tri-Ply® APP Granule, Ruberoid® Torch Plus Granule FR, Ruberoid® EnergyCap™ Torch Plus Granule FR or Ruberoid® EnergyCap™ Torch Granule FR torch applied in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS/APP

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, Grade 33, type B, wide rib steel deck, secured to minimum 0.25 in. thick steel structural supports 6 in. o.c. spaced at maximum 72 in. o.c. with #12 ICH Traxx/4, ICH Traxx/5, #12 HWH Teks 4 or HWH Teks 5. The deck side laps are fastened 24 in. o.c. with #10 HWH Teks 1 or #10 HWH Teks 3 Fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(23): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK® Gypsum-Fiber Roof Board Minimum 0.375" thick	**1, 2, 4, 5, 8**	**1:1.33 ft²**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Ply: One ply of Ruberoid® Torch Smooth or Tri-Ply® APP Smooth torch-applied in accordance with manufacturer's instructions.

Ply Sheet: (Optional) One ply of Ruberoid® Torch Smooth or Tri-Ply® APP Smooth torch-applied in accordance with manufacturer's instructions.

Membrane: One or more plies of Ruberoid® Torch Smooth, Tri-Ply® APP Smooth, Ruberoid® Torch Granule, Tri-Ply® APP Granule, Ruberoid® Torch Plus Granule FR, Ruberoid® EnergyCap™ Torch Plus Granule FR or Ruberoid® EnergyCap™ Torch Granule FR torch applied in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: APP/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 18-22 ga. steel Type B Grade 33 steel decking secured to minimum 1/4″ steel supports spaced 6 ft. o.c. with Buildex Traxx/4 or 5 fasteners spaced 6” o.c. (at the bottom flute), and with side laps attached with Buildex Traxx/1 fasteners spaced at max. of 30" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(24): All layers of insulation simultaneously fastened, perforated base sheet loose laid over the insulation with additional membranes adhered.

All General and System limitations apply.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 2” thick	**1, 2 & 7**	**1:1.45 ft²**

Note: All layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry, with 2” side laps.

Ply Sheet: One or more plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4, GAFGLAS® FlexPly™ 6, GAFGLAS® #80 Ultima™ Base Sheet, Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Plus Smooth or Ruberoid® Mop Smooth 1.5 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Membrane: Maximum two plies of Ruberoid® Torch Smooth, Tri-Ply® APP Smooth, Ruberoid® Torch Granule, Tri-Ply® APP Granule, Ruberoid® Torch Plus Granule FR, Ruberoid® EnergyCap™ Torch Plus Granule FR or Ruberoid® EnergyCap™ Torch Granule FR torch applied in accordance with manufacturer's instructions.
Or
Maximum two plies of Ruberoid® HW Smooth, Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR or Ruberoid® EnergyCap™ HW Plus Granule FR applied with an approved hot air welder in accordance with manufacturer's instructions.
Or
(Required to only use with Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Plus Smooth or Ruberoid® Mop Smooth 1.5 ply sheet(s).)
GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. steel, 33 ksi

System Type C(25): All layers of insulation simultaneously fastened, perforated base sheet loose laid over the insulation with additional membranes adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation		
Minimum 1.5" thick	**1, 2, 4, 5, 6, 7, 8**	**1:2 ft²**

Note: All layers of insulation and optional thermal barrier (when present) shall be mechanically attached using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: One ply of Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. applied in accordance with manufacturer's instructions.
Or
Two or three plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4 or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. applied in accordance with manufacturer's instructions.

Membrane: One or more plies of Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Mop Plus Smooth, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. applied in accordance with manufacturer's instructions.
Or
(Required to only use with Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Plus Smooth or Ruberoid® Mop Smooth 1.5 ply sheet(s).)
GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge, type B, wide rib steel deck, Grade 33 secured to minimum 0.25 in. thick steel structural supports spaced at maximum 72 in. o.c. with 0.625 in. diameter puddle welds 6 in. o.c. The deck side laps are fastened 24 in. o.c. with #12-14 x 7/8in. HWH.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(26): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation Minimum 1.5" thick to Maximum 12" thickness.	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation Minimum 2" thick	**1, 2, 4, 5, 6, 7, 8**	**1:1.45 ft²**

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GAFGLAS® Stratavent® Perforated Venting Base Sheet loose laid dry with 2" side laps.

Ply Sheet: Ruberoid® Mop Smooth or Ruberoid® Mop Smooth 1.5 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
Or
One or more plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4, or GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: Ruberoid® Mop Granule, Intec Flex PRF, Ruberoid® Mop Granule FR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.

2. GAFGLAS® Mineral Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
OR
TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: APP/SBS Heat-Weld

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. steel, 33 ksi

System Type D(1): Insulation and Base sheet simultaneously attached

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation		
Minimum 1.5" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Perlite Roof Insulation		
Minimum 0.75" thick	**N/A**	**N/A**
SECUROCK® Gypsum-Fiber Roof Board		
Minimum 0.5" thick	**N/A**	**N/A**

Note: Insulation shall have preliminary attachment, prior to the installation of the base 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 optional thermal barrier (when present) shall be mechanically attached using the fastener density listed below. See base sheet below for fasteners and density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: GAFGLAS® #75 Base Sheet, Tri-Ply® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® Stratavent® Nailable Venting Base Sheet, Ruberoid® HW 25 Smooth, Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth applied over the loose laid insulation with 2" side laps fastened as specified below:

Drill Tec™ #12 Fastener or Drill-Tec™ #14 Fastener and Drill-Tec™ 3" Steel Plate or Drill-Tec™ AccuTrac® Flat Plates are installed through the base sheet and insulation in 4 rows 12" on center. One row is in the 2" side lap. The other two rows are equally spaced approximately 12" o.c. in the field of the sheet.

Ply Sheet: (Optional) One or more plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4, GAFGLAS® FlexPly™ 6 or GAFGLAS® #80 Ultima™ Base Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.

Membrane: One or more plies of Ruberoid® Torch Smooth, Tri-Ply® APP Smooth, Ruberoid® Torch Granule, Tri-Ply® APP Granule, Ruberoid® Torch Plus Granule FR, Ruberoid® EnergyCap™ Torch Plus Granule FR or torch applied in accordance with manufacturer's instructions.
Or
One or more plies of Ruberoid® HW Smooth, Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR or Ruberoid® EnergyCap™ HW Plus Granule FR torch applied or applied with an approved hot air welder in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
OR
TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. steel, 33 ksi

System Type D(2): Insulation and Base sheet simultaneously attached

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5 ” thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Perlite Roof Insulation Minimum 0.75” thick	**N/A**	**N/A**
SECUROCK® Gypsum-Fiber Roof Board Minimum 0.5” thick	**N/A**	**N/A**

Note: Insulation shall have preliminary attachment, prior to the installation of the base 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 optional thermal barrier (when present) shall be mechanically attached using the fastener density listed below. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: GAFGLAS® #75 Base Sheet, Tri-Ply® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® Stratavent® Nailable Venting Base Sheet, Ruberoid® HW 25 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth applied over the loose laid insulation with 2” side laps fastened as specified below:

Drill-Tec™ #12 Fastener or Drill-Tec™ #14 Fastener and Drill-Tec™ 3” Steel Plate or Drill-Tec™ AccuTrac® Flat Plates are installed through the base sheet and insulation in 3 rows 12” on center. One row is in the 2” side lap. The other two rows are equally spaced approximately 12” o.c. in the field of the sheet.

Ply Sheet: (Optional) One or more plies of GAFGLAS® Ply 4, Tri-Ply® Ply 4, GAFGLAS® FlexPly™ 6 or GAFGLAS® #80 Ultima™ Base Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. applied with accordance to manufacturer's instructions.

Membrane: One or more plies of Ruberoid® 20 Smooth, Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Mop Plus Smooth, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
Or
One or more plies of Ruberoid® 20 Smooth, Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Mop Plus Smooth, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered with Matrix 102 SBS Membrane Adhesive at an application rate of 1-2 gal./sq. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS Cold Applied

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 18, 20, 22 ga. type B Grade 33, wide rib, 1.5 in. deep new steel deck secured to minimum 0.25 in. thick structural supports spaced 6' o.c. at maximum with Teks 4, Teks 5, ICH Traxx/4 or ICH Traxx/5 fasteners spaced maximum 6 in. o.c. along each support. Deck side laps are fastened with Stitch Teks 1 or ICH Traxx/1 fasteners spaced 24 in. o.c. at maximum.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type D(3): Insulation is loose laid; base sheet is mechanically fastened through insulation to the roof deck**.**

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System Limitations shall apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5" thick	N/A	N/A

Note: Insulation shall have preliminary attachment, prior to the installation of the base 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 optional thermal barrier (when present) shall be simultaneously fastened. See base sheet below for fasteners and density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® Stratavent® Nailable Venting Base Sheet, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth mechanically attached through the insulation to the steel deck with Drill-Tec™ #12 Fasteners or Drill-Tec™ #14 Fasteners and Drill-Tec™ AccuTrac® Flat Plates, Drill-Tec™ AccuTrac® Recessed Plates, Drill-Tec™ 3" Standard Steel Plates, or Drill-Tec™ 3" Steel Plates spaced 6 in. o.c. within the minimum 3.5 in. wide side laps and 12 in. o.c. in the field of the sheet in three staggered rows. Base sheet side laps and fastener rows are perpendicular to the direction of the steel deck ribbing.

Ply Sheet: One or more plies of Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered to the base sheet with minimum 4 in. wide laps with Matrix™102 SBS Membrane Adhesive applied at total rate of 2 gal./sq. The base ply/adhesive/base sheet combination is permitted to cure overnight.

Membrane: One or more plies of Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Mop Plus Smooth, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR, Ruberoid® EnergyCap™ 30 Granule FR adhered to the base ply with Matrix 102 SBS Membrane adhesive applied at a total rate of 2 gal./sq. The side laps are minimum 3.75 in. wide and sealed with minimum 3.75 in. wide heat welds positioned on the outer edge of the laps. The end laps are minimum 6 in wide and sealed with Matrix 102 SBS Membrane Adhesive applied at a total rate of 2 gal./sq. applied in accordance with manufacturer's instructions

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.

2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.

3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS Heat-Weld

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. type B, wide rib steel deck, Grade 33 secured to 0.25 in. (6.4 mm) thick structural supports spaced at 6' o.c. using Traxx/5 screws spaced at 6 in o.c. and with side laps secured with Traxx/1 screws spaced at 24 in. o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type D(4): Insulation is loose laid; preliminary attachment to deck.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
EnergyGuard™ Polyiso Insulation , EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5″ thick	**N/A**	**N/A**

Note: Insulation shall have preliminary attachment, prior to the installation of the base 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, optional thermal barrier (when present) and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Ply: One of the following Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth fastened to the deck with Drill-Tec™ #12 Fasteners, Drill-Tec™ AccuTrac® Flat Plates, Drill-Tec™ AccuTrac® Recessed Plates or Drill-Tec™ 3" Standard Steel Plates spaced 6 in o.c. through the minimum 3.25 in wide side laps.

Membrane: One or more plies of Ruberoid® HW Smooth, Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR or Ruberoid® EnergyCap™ HW Plus Granule FR torched adhered or applied with an approved hot air welder with minimum 3 in wide laps. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS Heat-Weld

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. type B, wide rib steel deck, grade 80 or minimum 20 ga., type B, wide rib steel deck, grade 33 secured to 0.25 in. (6.4 mm) thick structural supports spaced at 6' o.c. using Traxx/5 screws spaced at 6 in o.c. and with side laps secured with Traxx/1 screws spaced at 24 in. o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type D(5): Insulation is loose laid; preliminary attachment to deck.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation , EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5″ thick	**N/A**	**N/A**

Note: Insulation shall have preliminary attachment, prior to the installation of the base 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, optional thermal barrier (when present) and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Ply: One of the following Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth fastened to the deck with Drill-Tec™ #12 Fasteners, Drill-Tec™ AccuTrac® Flat Plates, Drill-Tec™ AccuTrac® Recessed Plates or Drill-Tec™ 3" Standard Steel Plates spaced 6 in o.c. through the minimum 3.25 in wide side laps.

Membrane: One or more plies of Ruberoid® HW Smooth, Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR or Ruberoid® EnergyCap™ HW Plus Granule FR torched adhered or applied with an approved hot air welder with minimum 3 in wide laps. in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of Approved asphalt at 60 lbs./sq.

2. GAFGLAS® Mineral Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
OR
TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

Maximum Design Pressure: -112.5 (See General Limitation # 7)

Membrane Type: SBS Heat-Weld

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. type B, wide rib steel deck, Grade 33 was secured to 0.25 in. (6.4 mm) thick structural supports spaced at 6' o.c. using Traxx/5 screws spaced at 6 in o.c. and with side laps secured with Traxx/1 screws spaced at 24 in. o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type D(6): Insulation is loose laid; preliminary attachment to deck.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5″ thick	**N/A**	**N/A**

Note: Insulation shall have preliminary attachment, prior to the installation of the base 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, optional thermal barrier (when present) and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Ply: One ply of the following Ruberoid® Mop Smooth, Ruberoid® Mop Plus Smooth or Ruberoid® Mop Smooth 1.5 fastened to the deck with Drill-Tec™ AccuTrac® Flat Plates and Drill-Tec™ 3" Standard Steel Plates with Drill-Tec™ #12 Fasteners spaced 12 in. o.c. through the minimum 3.5 in. wide side laps.

Membrane: One or more plies of Ruberoid® HW Smooth, Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR or Ruberoid® EnergyCap™ SBS Heat-Weld Plus FR torched adhered or applied with an approved hot air welder with minimum 3 in wide laps in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

Maximum Design Pressure: -52.5 (See General Limitation # 7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. type B, wide rib steel deck, Grade 33 secured to 0.25 in. (6.4 mm) thick structural supports spaced at 6' o.c. using Traxx/5 screws spaced at 6 in. o.c. and with side laps secured with Traxx/1 screws spaced at 24 in. o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type D(7): Insulation is loose laid; preliminary attachment to deck.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime® Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation		
Minimum 1.5″ thick	**N/A**	**N/A**

Note: Insulation shall have preliminary attachment, prior to the installation of the base 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, optional thermal barrier (when present) and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Ply: One ply of Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth fastened to the deck with Drill-Tec™ #12 Fasteners and Drill-Tec™ 3" Standard Steel Plates or Drill-Tec™ ASAP S3 spaced 18 in o.c. through the minimum 3.25 in. wide side laps and in two staggered rows in the field of the sheet.

Ply Sheet: Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. applied in accordance with manufacturer's instructions.

Membrane: One or more plies of Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule FR, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Mop Plus Smooth, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-25 lbs./sq. applied in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., 33 ksi.

System Type D(8): Insulation is loose laid; preliminary attachment to deck.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5″ thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Perlite Roof Insulation Minimum 0.75” thick	**N/A**	**N/A**

Note: Insulation shall have preliminary attachment, prior to the installation of the base 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, optional thermal barrier (when present) and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: GAFGLAS® #75 Base Sheet, Tri-Ply® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet or GAFGLAS® Stratavent® Nailable Venting Base Sheet applied over the loose laid insulation with 2” side laps fastened with Drill-Tec™ #12 Fastener or Drill-Tec™ #14 Fastener and Drill-Tec™ 3” Steel Plate or Drill-Tec™ ASAP S3 installed through the base sheet and insulation maximum 18” o.c. through the minimum 2 in. wide side laps.

Ply Sheet: One or more plies of Ruberoid® 20 Smooth, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq. applied in accordance with manufacturer's instructions.

Membrane: One or more plies of Ruberoid® 30 Granule, Ruberoid® 30 Granule FR, Ruberoid® 30 Plus Granule, Ruberoid® Mop Granule, Tri-Ply® SBS Granule, Intec Flex PRF, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Mop Plus Smooth, Ruberoid® Mop Plus Granule, Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ 30 Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. applied in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
   OR
   TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., 33 ksi.

System Type D(9): Insulation is loose laid; preliminary attachment to deck.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5″ thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Perlite Roof Insulation Minimum 0.75″ thick	**N/A**	**N/A**
Structodek® High Density Roofing Fiberboard Roof Insulation, EnergyGuard™ Perlite Recover Board, EnergyGuard™ HD Polyiso Insulation, EnergyGuard™ HD Plus Polyiso Insulation Minimum 0.5″ thick	**N/A**	**N/A**
SECUROCK® Glass-Mat Roof Board, DensDeck® Roof Board Minimum 0.25″ thick	**N/A**	**N/A**

Note: Insulation shall have preliminary attachment, prior to the installation of the base 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, optional thermal barrier (when present) and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Ruberoid® Mop Smooth 1.5 fastened to the deck with Drill-Tec™ #12 or #14 Fasteners and Drill-Tec™ 2 in. Barbed Plates located off-centered in the lap by 0.5 in. towards the edge of the sheet and spaced maximum 18 in. o.c. within the 4 in. wide side laps. The Minimum 4 in. wide side laps are spaced maximum 35.625” o.c. and are torched or hot air welded.

Membrane: One or more plies of Ruberoid® Mop Plus Granule FR, Ruberoid® Mop Granule FR or Ruberoid® EnergyCap™ Mop Plus Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. applied in accordance with manufacturer's instructions.
OR
Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR or Ruberoid® EnergyCap™ HW Plus Granule FR or torch adhered with minimum 3 in. wide laps in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
OR
TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., 33 ksi.

System Type D(10): Insulation is loose laid; preliminary attachment to deck.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5″ thick	**N/A**	**N/A**
Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Perlite Roof Insulation, Minimum 0.75″ thick	**N/A**	**N/A**
Structodek® High Density Roofing Fiberboard Roof Insulation, EnergyGuard™ Perlite Recover Board, EnergyGuard™ HD Polyiso Insulation, EnergyGuard™ HD Plus Polyiso Insulation. Minimum 0.5″ thick	**N/A**	**N/A**
SECUROCK® Glass-Mat Roof Board, DensDeck® Roof Board Minimum 0.25″ thick	**N/A**	**N/A**

Note: Insulation shall have preliminary attachment, prior to the installation of the base 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, optional thermal barrier (when present) and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth fastened to the deck with Drill-Tec™ Batten Bars centered in the 4 in. wide side laps and Drill-Tec™ #12 or #14 Fasteners spaced maximum 18 in. o.c. along the batten bar. The Minimum 4 in. wide side laps are spaced maximum 35.625” o.c. and are torched or hot air welded.

Membrane: One or more plies of Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR or Ruberoid® Mop Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. applied in accordance with manufacturer's instructions.
OR
Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR or Ruberoid® EnergyCap™ HW Plus Granule FR or torch adhered with minimum 3 in. wide laps in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
OR
TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

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

Membrane Type: SBS/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. type B, wide rib steel deck, Grade 33 secured to 0.25 in. (6.4 mm) thick structural supports spaced at 6' o.c. using Traxx/4, Traxx/5, Teks 4 or Teks 5 screws spaced at 6 in. o.c. and with side laps secured with Traxx/1 screws spaced at 24 in. o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type D(11): Insulation is loose laid; preliminary attachment to deck.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5″ thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Perlite Roof Insulation, Minimum 0.75″ thick	**N/A**	**N/A**
Structodek® High Density Roofing Fiberboard Roof Insulation, EnergyGuard™ Perlite Recover Board, EnergyGuard™ HD Polyiso Insulation, EnergyGuard™ HD Plus Polyiso Insulation. Minimum 0.5″ thick	**N/A**	**N/A**
SECUROCK® Glass-Mat Roof Board, DensDeck® Roof Board Minimum 0.25″ thick	**N/A**	**N/A**

Note: Insulation shall have preliminary attachment, prior to the installation of the base 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, optional thermal barrier (when present) and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth fastened to the deck with Drill-Tec™ Batten Bars centered in the 4 in. wide side laps and Drill-Tec™ XHD Fasteners as specified below. The Minimum 4 in. wide side laps are spaced maximum 35.625" o.c. and are torched or hot air welded.

Fastening Option: #1 Fasteners spaced maximum 12 in. o.c. along the batten bar.
Maximum Design Pressure: -67.5 psf. (See General Limitation #7)

Fastening Option: #2 Fasteners spaced maximum 18 in. o.c. along the batten bar.
Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane: One or more plies of Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR or Ruberoid® Mop Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. applied in accordance with manufacturer's instructions.
OR
Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR or Ruberoid® EnergyCap™ HW Plus Granule FR torch adhered with minimum 3 in. wide laps in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
OR
TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

Maximum Design Pressure: See Base Sheet Fastening Options.

Membrane Type: SBS/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. type B, wide rib steel deck, Grade 33 secured to 0.25 in. (6.4 mm) thick structural supports spaced at 6' o.c. using Traxx/4, Traxx/5, Teks 4 or Teks 5 screws spaced at 6 in. o.c. and with side laps secured with Traxx/1 screws spaced at 24 in. o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type D(12): Insulation is loose laid; preliminary attachment to deck.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5″ thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Perlite Roof Insulation, Minimum 0.75″ thick	**N/A**	**N/A**
Structodek® High Density Roofing Fiberboard Roof Insulation, EnergyGuard™ Perlite Recover Board, EnergyGuard™ HD Polyiso Insulation, EnergyGuard™ HD Plus Polyiso Insulation. Minimum 0.5″ thick	**N/A**	**N/A**
SECUROCK® Glass-Mat Roof Board, DensDeck® Roof Board Minimum 0.25″ thick	**N/A**	**N/A**

Note: Insulation shall have preliminary attachment, prior to the installation of the base 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, optional thermal barrier (when present) and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth fastened to the deck with Drill-Tec™ 2 in. Barbed Plates and Drill-Tec™ XHD Fasteners located off-centered in the lap by 0.5 in. towards the edge of the sheet and spaced maximum 12 in. o.c. within the minimum 4 in. wide side laps. The Minimum 4 in. wide side laps are spaced maximum 35.625" o.c. and are torched or hot air welded.

Membrane: One or more plies of Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR or Ruberoid® Mop Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. applied in accordance with manufacturer's instructions.
Or
Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR or Ruberoid® EnergyCap™ HW Plus Granule FR torch adhered with minimum 3 in. wide laps in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
OR
TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

Maximum Design Pressure: -52.5 (See General Limitation # 7)

Membrane Type: SBS/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. type B, wide rib steel deck, Grade 33 secured to 0.25 in. (6.4 mm) thick structural supports spaced at 6' o.c. using Traxx/4, Traxx/5, Teks 4 or Teks 5 screws spaced at 6 in. o.c. and with side laps secured with Traxx/1 screws spaced at 24 in. o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type D(13): Insulation is loose laid; preliminary attachment to deck.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime® Roof Board, 1/2" SECUROCK® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System limitations apply.

One or more layers of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5″ thick	**N/A**	**N/A**
Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
EnergyGuard™ Perlite Roof Insulation, Minimum 0.75″ thick	**N/A**	**N/A**
Structodek® High Density Roofing Fiberboard Roof Insulation, EnergyGuard™ Perlite Recover Board, EnergyGuard™ HD Polyiso Insulation, EnergyGuard™ HD Plus Polyiso Insulation. Minimum 0.5″ thick	**N/A**	**N/A**
SECUROCK® Glass-Mat Roof Board, DensDeck® Roof Board Minimum 0.25″ thick	**N/A**	**N/A**

Note: Insulation shall have preliminary attachment, prior to the installation of the base 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, optional thermal barrier (when present) and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Ruberoid® Mop Smooth 1.5 or Ruberoid® Mop Plus Smooth fastened to the deck with Drill-Tec™ 2 3/8 in. Barbed XHD Plates and Drill-Tec™ XHD Fasteners located off-centered in the lap by 0.25 in. towards the edge of the sheet and spaced maximum 12 in. o.c. within the minimum 5 in. wide side laps. The Minimum 5 in. wide side laps are spaced maximum 35.625" o.c. and are torched or hot air welded.

Membrane: One or more plies of Ruberoid® Mop Plus Granule FR, Ruberoid® EnergyCap™ Mop Plus Granule FR or Ruberoid® Mop Granule FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. applied in accordance with manufacturer's instructions.
Or
Ruberoid® HW Granule, Ruberoid® HW Granule FR, Ruberoid® HW Plus Granule, Ruberoid® HW Plus Granule FR or Ruberoid® EnergyCap™ HW Plus Granule FR torch adhered with minimum 3 in. wide laps in accordance with manufacturer's instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions. All coatings must be listed within a current NOA.**

1. Gravel or slag applied at 400 lbs. /sq. and 300 lbs. /sq. respectively in a flood coat of approved asphalt at 60 lbs. /sq.
2. GAFGLAS® Mineral-Surfaced Cap Sheet, Tri-Ply® BUR Granule Cap Sheet or GAFGLAS® EnergyCap™ Mineral-Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs. /sq.
3. TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.
OR
TOPCOAT® MB Plus or United Coatings™ Roof Mate MB Plus Coating applied at a minimum rate of 1.0 gal./sq.(to be used as a primer) followed by TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating applied in one or more coats at a minimum rate of 1.0 gal./sq. per coat.

Maximum Design Pressure: -67.5 (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 117, calculations shall be signed and sealed by a Florida Registered Engineer, 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 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 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 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE