

Technical Information Sheet

Image Coming Soon

SA-LVOC Primer

Item Description	Item Number
5-Gallon (18.9 L) metal pail	W563587092

Description

Elevate SA LVOC Primer contains synthetic polymers and adhesion-enhancing resins. Use to prime and prepare exterior concrete, metal, wood, plywood, and gypsum surfaces to enhance the adhesion of Elevate V-Force™ Vapor Barrier Membranes, Enverge™ Air & Vapor Barrier SA Membranes, and CLAD-GARD™ Metal Roof Underlayment's.

Method of Application

1. DO NOT THIN!
2. The minimum application temperature for the SA-LVOC Primer is 14 °F (-10 °C). Apply when expecting rising temperatures.
3. Stir thoroughly before and during use. Drying time varies from 30 to 90 minutes depending on ambient temperatures and amount applied. It is dry when sticky to the touch, but not messy.
4. Membranes must be installed on the same day as the application of the SA-LVOC Primer.
5. Surfaces must be clean, dry and free of dust and foreign materials prior to application of the primer. Clean with broom or rags to remove contaminants.
6. Apply SA-LVOC Primer using a brush, roller or an airless sprayer.
7. For best results, install the membrane as soon as the primer is dry.

Storage

- Minimum storage temperature: 32 °F to 104 °F (0 °C to 40 °C).
- Take care when transporting and handling SA-LVOC Primer to avoid damage to containers.
- Stack SA-LVOC Primer in original unopened packaging no more than two pallets high.
- If material must be stored temporarily on the roof, it must be elevated from the roof surface on a pallet and protected from the weather with a light colored opaque tarp in a neat, safe manner that does not exceed the allowable load limit of the storage area.

Shelf Life

5 years in well-sealed original container when stored in a cool, well-ventilated area.

Clean-Up

Clean tools with petroleum solvents (petroleum spirits, Xylene, etc.).

Precautions

- DANGER! HIGHLY FLAMMABLE!
- Keep away from direct sunlight and away from open flames.
- Keep away from ignition sources during its use.
- Do not eat, drink, or smoke while working with SA-LVOC Primer.
- Harmful if inhaled, swallowed or when in direct contact with skin.
- Do not pour in drains.
- Do not apply onto polystyrene surfaces.
- Refer to Safety Data Sheets (SDS) for additional safety information.

Coverage Rate

- Approximate values vary depending on amount applied and permeability of the surface to be coated.
- Porous substrates: From 0.5 to 1.0 US gal/100 ft² (500 to 1000 ft²) (0.2 to 0.4 L/m²).
- Non-porous substrates: From 0.25 to 0.6 US gal/100 ft² (833 to 2,000 ft²) (0.1 to 0.25 L/m²).

LEED® Information

Post-Consumer Recycled Content: 0%

Post Industrial Recycled Content: 0%

Manufacturing Location: Drummondville, Quebec

NOTE: LEED® is a registered trademark of the U.S. Green Building Council



South Coast Air Quality Management District (SCAQMD) Rule 1168 Compliant

Actual VOC content less water and less exempt solvents: ≤ 240 grams/liter as supplied and as applied (thinning, reducing, or mixing is not recommended).

Packaging		
Unit	Weight	Approximate Coverage
5 Gallon (18.9 L) metal pails	35 lb (16 kg)	Porous substrates : 0.5 to 1.0 US gal/100 ft ² (500 to 1000 sq ft) (0.2 to 0.4 L/m ²) Non-porous substrates : 0.25 to 0.6 US gal/100 ft ² (833 to 2000 sq ft) (0.1 to 0.25 L/m ²)
Pallet: 36 pails per pallet, 26 pallets per truck, 1260 lb (576 kg) per pallet		

Typical Properties

Property	Typical Performance
Color	Red
Specified Gravity: 77 °F (25 °C)	7.8 lb/gal (0.94 kg/L)
Solids Content	45%
Brookfield Viscosity: 77 °F (25 °C)	300-600 cP
Volatile Organic Compound (V.O.C) Content	240 g/L

Please contact Holcim Technical Services at 800-428-4511 for further information.

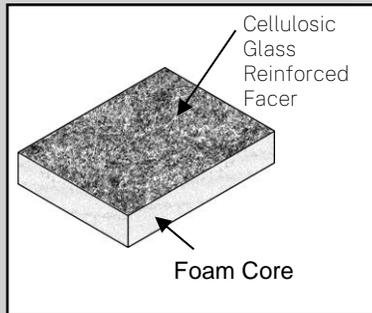
This sheet is meant to highlight Elevate products and specifications and is subject to change without notice. Holcim takes responsibility for furnishing quality materials that meet published Elevate product specifications or other technical documents, subject to normal manufacturing tolerances. Neither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

Firestone, the brand of premier roofing, wall, and lining systems you know and trust, will be coming to you under a new name: Elevate. During our transition, products carrying the brand name **Firestone** will change to **Elevate** on product labels and packaging, Technical Information Sheets, and elsewhere. Only the brand name is changing. Our products remain the same.

For further information on our brand transition to Elevate, scan the code below with your smartphone, or visit our website: www.holcimelevate.com



Technical Information Sheet



ISOGARD™ GL Insulation

Item Description

Flat and Tapered Polyiso Boards

Flat Boards: 4' x 4' (1.22 m x 1.22 m), 4' x 8' (1.22 m x 2.44 m)

Tapered Boards: 4' x 4' (1.22 m x 1.22 m)

Slope Range: 1/16" per foot (.5%) to 1/2" per foot (4%)

Thickness Range: 0.5" (12.7 mm) to 4.5" (114.3 mm)

Other options available include: 4' x 7'4" (1.22 m x 2.25m).

Export cut for international shipments and scored ISO for metal retrofits.

Meets or exceeds performance requirements of ASTM C 1289, Type II, Class 1

Description

Elevate™ ISOGARD GL flat and tapered roof insulation consists of a closed cell polyiso foam core laminated to a glass reinforced mat facer on both major surfaces. Flat and tapered ISOGARD insulation provides outstanding thermal performance on commercial roofing applications, while providing positive rooftop drainage to help eliminate ponding water when tapered ISOGARD GL insulation is used.

All Elevate polyisocyanurate foam insulations use EPA accepted blowing agents. Elevate ISOGARD GL incorporates a HCFC-free blowing agent that does not contribute to the depletion of the ozone layer (ODP-free).

Method of Application

1. Insulation shall be neatly fitted to all roof penetrations, projections, and nailers.
2. No more insulation shall be installed than can be covered with membrane and completed before the end of each day's work or before the onset of inclement weather.
3. Elevate ISOGARD GL board may be installed using:

- Elevate fasteners and plates.

NOTE: For ballasted systems, the top layer of Elevate insulation may not be mechanically attached.

- Hot asphalt (requires a cover board, when hot asphalt or torch applied base sheet is installed)
- Elevate approved insulation adhesives.
 - I.S.O. Twin Pack™
 - I.S.O.Stick™
 - Twin Jet
 - I.S.O. Spray™ R

Acceptable Immediate Substrates

- 2,500 psi Structural concrete (must be clean, dry, and properly cured)
- Steel deck (min 22 ga)
- Plywood and OSB (min 1/2")
- Lightweight concrete
- Gypsum deck (min 2")

NOTE: Please consult the Design Guides and QuickSpecs online at www.holcimelevate.com to review specific information regarding the assembly.

Storage

- Keep insulation dry at all times.
- Elevate insulation above the deck or ground.
- Cover insulation with waterproof tarps.

Precautions

- Polyiso foam will burn if exposed to a flame of sufficient heat and intensity. Keep away from heat, sparks, and open flames.
- Protect against dust that may be generated during installation.
- Refer to Safety Data Sheet (SDS) for additional information.
- Take care when transporting and handling Elevate insulation to avoid physical damage.

Specification Compliance

ASTM C1289, Type II, Class 1

UL Classified – UL1256

FM 4470 Class 1 Approved

Manufactured in an ISO 9001 Registered Facility

CAN/ULC-S704-11, Type 2, Class 2. Type 3 available upon Request.



LEED® Information

See Recycled Content in Typical Properties table.

Manufacturing Locations: Bristol, CT
De Forest, WI
Salt Lake City, UT
Youngwood, PA
Florence, KY
Jacksonville, FL

NOTE: LEED® is a registered trademark of the U.S. Green Building Council

Typical Properties (Meets ASTM C 1289, Type II, Class 1)

Property	ASTM Test Method	Elevate Typical Performance
Thermal Resistance	C518	40 °F (4.4 °C) 6.2 R/in 75 °F (23.9 °C) 5.7 R/in 110 °F (43.3 °C) 5.0 R/in
Compressive Strength	D1621	Grade 2: 20 psi (138 kPa) Grade 3: 25 psi (172 kPa) *
Density	D1622	2 pcf (32 kg/m ³)
Dimensional Stability	D2126	<2%
Moisture Vapor Transmission	E96	<1 perm (<57.5 ng/(Pa·s·m ²))
Water Absorption	C209	<1% by volume
Service Temperature	---	-100 to 250 °F (-73 to 121 °C)
Flame Spread	E84	Index 50
Smoke Development	E84	Index 160 - 180

*25 psi (172 kPa) available upon request.

Product Information

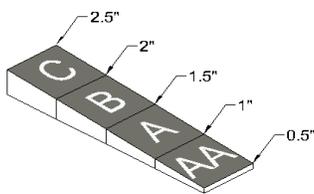
Thickness*		R-Value **	Max Flute Span		Approximate Recycled Content		
inches	mm		inches	mm	Post-Consumer	Post Industrial	Total
0.5	12.70	2.9	1.50	38.10	52%	15%	67%
1.0	25.40	5.7	2.62	66.67	37%	15%	52%
1.1	27.94	6.3	2.62	66.67	36%	15%	51%
1.2	30.48	6.8	2.62	66.67	34%	15%	49%
1.3	33.02	7.4	3.67	93.34	32%	15%	47%
1.4	35.56	8.0	3.67	93.34	30%	15%	45%
1.5	38.10	8.6	4.37	111.12	29%	15%	44%
1.6	40.64	9.1	4.37	111.12	27%	15%	42%
1.7	43.18	9.7	4.37	111.12	26%	15%	41%
1.75	44.45	10.0	4.37	111.12	26%	15%	41%
1.8	45.72	10.3	4.37	111.12	25%	15%	40%
1.9	48.26	10.8	4.37	111.12	24%	15%	39%
2.0	50.80	11.4	4.37	111.12	24%	15%	39%
2.1	53.34	12.0	4.37	111.12	22%	15%	37%
2.2	55.88	12.6	4.37	111.12	21%	15%	36%
2.25	57.15	12.9	4.37	111.12	21%	15%	36%
2.3	58.42	13.2	4.37	111.12	21%	15%	36%
2.4	60.96	13.8	4.37	111.12	20%	15%	35%
2.5	63.50	14.4	4.37	111.12	20%	15%	35%
2.6	66.04	15.0	4.37	111.12	19%	15%	34%
2.7	68.58	15.6	4.37	111.12	18%	15%	33%
2.75	69.85	15.9	4.37	111.12	18%	15%	33%
2.8	71.12	16.2	4.37	111.12	18%	15%	33%
2.9	73.66	16.8	4.37	111.12	17%	15%	32%
3.0	76.20	17.4	4.37	111.12	17%	15%	32%
3.1	78.74	18.0	4.37	111.12	16%	15%	31%
3.2	81.28	18.6	4.37	111.12	16%	15%	31%
3.25	82.55	18.9	4.37	111.12	16%	15%	31%
3.3	83.82	19.2	4.37	111.12	16%	15%	31%
3.4	86.36	19.9	4.37	111.12	15%	15%	30%
3.5	88.90	20.5	4.37	111.12	15%	15%	30%
3.6	91.44	21.1	4.37	111.12	14%	15%	29%
3.7	93.98	21.7	4.37	111.12	14%	15%	29%
3.75	95.25	22.0	4.37	111.12	14%	15%	29%
3.8	96.52	22.3	4.37	111.12	14%	15%	29%
3.9	99.06	23.0	4.37	111.12	14%	15%	29%
4.0	101.60	23.6	4.50	114.30	14%	15%	29%
4.1	104.14	24.2	4.50	114.30	13%	15%	28%
4.2	106.58	24.9	4.50	114.30	13%	15%	28%
4.25	107.95	25.2	4.50	114.30	13%	15%	28%
4.3	109.22	25.5	4.50	114.30	13%	15%	28%
4.4	111.76	26.1	4.50	114.30	13%	15%	28%
4.5	114.3	26.8	4.50	114.30	13%	15%	28%

*Other thicknesses available upon request.

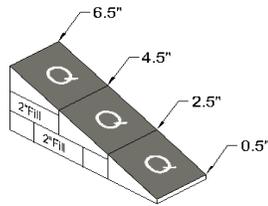
**R- values provide a 15-year time-weighted average in accordance with CAN/ULC-S770.

Tapered ISOGARD GL (available sizes)

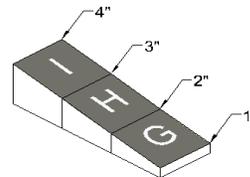
Panel Code	Min-Max Thickness		Slope
	Inches	mm	
AA	0.5 – 1.0	13 – 25	1/8"/ft
A	1.0 – 1.5	25 – 38	1/8"/ft
B	1.5 – 2.0	38 – 51	1/8"/ft
C	2.0 – 2.5	51 – 64	1/8"/ft
G	1.0 – 2.0	25 – 51	1/4"/ft
H	2.0 – 3.0	51 – 76	1/4"/ft
I	3.0 – 4.0	76 – 102	1/4"/ft
X	0.5 – 1.5	13 – 38	1/4"/ft
Y	1.5 – 2.5	38 – 64	1/4"/ft
Z	2.5 – 3.5	64 – 89	1/4"/ft
Q	0.5 – 2.5	13 – 64	1/2"/ft



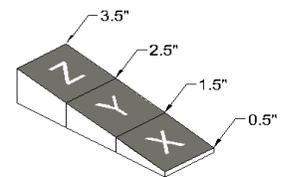
1/8"/ft. Tapered Section



1/2"/ft. Tapered Section



1/4"/ft. Tapered Section



1/4"/ft. Tapered Section

Please contact Holcim Technical Services at 800-428-4511 for further information.

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

Manufacturer

Georgia-Pacific Gypsum Georgia-Pacific Canada
 133 Peachtree Street 2180 Meadowvale Boulevard, Suite 200
 Atlanta, GA 30303 Mississauga, ON L5N 5S3
 Technical Service Hotline: 1-800-225-6119

Description

DensDeck® Prime Roof Board has been enhanced to provide a broader compatibility and higher performance with roofing adhesives. Face mat enhancements allow adhesives to be applied more uniformly and consistently. In adhered, single ply membrane testing, enhanced DensDeck Prime demonstrated an average of 24% better bond than the original products, when using solvent based adhesives. (Average based on 60 sq.ft./gal coverage rates.)* Choose DensDeck Prime Roof Boards for adhered and self-adhered “peel & stick” roofing systems, as well as hot mopped, cold mastic and torch-applied modified bitumen roofs. Enhanced DensDeck Prime Roof Boards create a stronger and more economical installation by reducing the amounts of mastic or adhesive used and potentially eliminates the field primer. Consult with membrane manufacturer for actual priming requirements.

DensDeck Prime Roof Boards are the first and only fiberglass mat gypsum roof boards with a 90-day weather exposure limited warranty when applied vertically on a parapet wall. ** (Limited to 1/2” and 5/8” products only.)

Primary Uses

Roof system manufacturers and designers have found DensDeck Prime Roof Board to be compatible with many types of roofing systems, including: modified asphalt, single-ply, metal systems, recover board, as well as an overlayment for polyisocyanurate and polystyrene insulation. DensDeck Prime Roof Board can also be used as a form board for poured gypsum concrete deck in roof applications as well as a substrate for spray foam roofing systems. 1/2” (12.7 mm) and 5/8” (15.9 mm) DensDeck Prime Roof Board may also be used in vertical applications as a backer board or liner for the roof side of parapet walls.

DensDeck Prime Roof Board may allow the bonding of cold mastic modified bitumen and torching directly to the surface. *Consult with the system manufacturer for recommendations on this application.*

DensDeck Prime Roof Board is the preferred substrate for vapor retarders.

Standards and Code Approvals

DensDeck Prime Roof Boards are manufactured to meet ASTM C1177 and have the following approvals:

- Florida Product Approved
- Miami-Dade County Product Control Approved

Recommendations and Limitations

DensDeck Prime Roof Boards are manufactured to act with a properly designed roof system following good roofing practices. The actual use of DensDeck Prime Roof Board as a roofing component in any system or assembly is the responsibility of the roofing system’s design authority. Consult with the appropriate system manufacturer and/or design authority for system and assembly specifications and instructions on applying other products to DensDeck Prime Roof Board. Georgia-Pacific does not warrant and is not responsible for any systems or assemblies utilizing DensDeck Prime Roof Board or any component in such systems or assemblies other than DensDeck Prime Roof Board.

The need for a separator sheet between the DensDeck Prime Roof Board and the roofing membrane must be determined by the roof membrane manufacturer or roofing system designer.

* Testing was done in accordance with FM approvals 4470, Appendix C: Small Scale Tests, Membrane Delamination Tests for Roofing Membranes and Substrates Using Tensile Loading.

** For complete warranty details, visit www.DensDeck.com. (Limited to 1/2” and 5/8” products only.)

Confirm any priming requirements with the membrane manufacturer. When applying solvent-based adhesives or primers, allow sufficient time for the solvent to flash off to avoid damage to roofing components.

DensDeck Prime Roof Boards should not be subjected to abnormal or excessive loads or foot traffic, such as, but not limited to, use on plaza decks or under steel-wheeled equipment that may fracture or damage the panels. Provide suitable roofing system protection when required.

When using DensDeck Prime Roof Boards for hot-mopped applications, Georgia-Pacific recommends maximum asphalt application temperatures of 425°F (218°C) to 450°F (232°C). Application temperatures above these recommended temperatures may adversely affect roof system performance. Consult and follow the roofing system manufacturer’s specifications for full mopping applications and temperature requirements.

When using DensDeck Prime Roof Board as a substrate for torch applications, ensure that the product is dry and that the proper torching technique is used. Limit the heat to the DensDeck Prime Roof Board. Maintain a majority of the torch flame directly on the roll.

Conditions beyond the control of Georgia-Pacific, such as weather conditions, dew, leaks, application temperatures and techniques may cause adverse effects with roofing systems.

Handling and Use—CAUTION

This product contains fiberglass facings which may cause skin irritation. Dust and fibers produced during the handling and installation of the product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and minimize contact with skin and eyes. Wear long sleeve shirts, long pants and eye protection. Always maintain adequate ventilation. Use a dust mask or NIOSH/MSHA approved respirator as appropriate in dusty or poorly ventilated areas.

Moisture Management

DensDeck Prime Roof Boards, like other components used in roofing systems, must be protected from exposure to moisture before, during and after installation.

Remove the plastic packaging from all DensDeck Prime Roof Board immediately upon receipt of delivery. Failure to remove the plastic packaging may result in entrapment of condensation or moisture. DensDeck Prime Roof Board stored outside must be stored level and off the ground and protected by a breathable waterproof covering. Provide means for air circulation around and under stored bundles of DensDeck Prime Roof Board. DensDeck Prime Roof Board must be covered the same day as installed.

Avoid application of DensDeck Prime Roof Boards during rain, heavy fog and any other conditions that may deposit moisture on the surface, and avoid the overuse of non-vented, direct-fired heaters during winter months. When roofing systems are installed on new poured concrete or light weight concrete decks or when re-roofing over an existing concrete deck, a vapor barrier should be installed above the concrete to retard the migration of water from the concrete into the roof assembly. Always consult the roofing system manufacturer or design authority for specific instructions for applying other products to DensDeck Prime Roof Boards.

Moisture vapor movement by convection must be eliminated, and the flow of water by gravity through imperfections in the roof system must be controlled. After a leak has occurred, no condensation on the upper surface of the system should be tolerated, and the water introduced by the leak must be dissipated to the building interior in a minimum amount of time.

Although DensDeck Prime Roof Boards are engineered with fiberglass facings and high density gypsum cores, the presence of free moisture can have a detrimental effect on the performance of the product and the installation of roofing membranes. For example, hot asphalt applications can blister; torched modified bitumen may not properly bond; and adhesives for single ply membranes may not dry properly.

Submittal Approvals

Job Name _____

continued →

Contractor _____

Date _____

Moisture accumulation may also significantly decrease wind uplift and vertical pull resistance in the system or assembly. DensDeck[®] Prime Roof Boards containing excessive free moisture content may need to be evaluated for structural stability to assure wind uplift performance.

Fire Resistance Classifications

DensDeck Prime Roof Boards are excellent fire barriers over combustible and noncombustible roof decks, including steel decks.

UL 790 Classification. DensDeck Prime Roof Boards have been classified by Underwriters Laboratories LLC (UL) for use as a fire barrier over combustible and noncombustible decks in accordance with the ANSI/UL 790 test standard. The UL classification includes a comprehensive Class A, B or C rating. For additional information concerning the UL 790 classification, consult the UL Certification Directory.

UL 1256 Classification. DensDeck Prime Roof Boards have also been classified by UL in roof deck constructions for internal (under deck) fire exposure in accordance with the ANSI/UL 1256 Steiner Tunnel test. For additional information concerning the UL 1256 classification, consult the UL Certification Directory.

FM Class 1 Approvals. DensDeck Prime Roof Boards are included in numerous roofing assemblies with a Factory Mutual (FM) Class 1 fire rating. 1/4" (6.4 mm) DensDeck Prime Roof Boards have passed testing under the FM Calorimeter Standard 4450

and have been approved by FM as such for insulated steel deck roofs when installed according to the conditions identified by FM. For more information concerning FM Approvals and FM Class 1 assemblies with DensDeck Prime Roof Boards, consult FM or RoofNav[®].

Type X. 5/8" (15.9 mm) DensDeck[®] Prime Fireguard[®] Roof Boards are manufactured to meet the "Type X" requirements of ASTM C1177 for increased fire resistance beyond regular gypsum board.

UL Fire Resistance Ratings. 5/8" (15.9 mm) DensDeck Prime Fireguard Roof Boards are designated as **Type DD** by UL and included in assembly designs investigated by UL for hourly fire resistance ratings. 5/8" (15.9 mm) DensDeck Prime Fireguard Roof Boards may also replace any unclassified 5/8" (15.9 mm) gypsum board in an assembly in the UL Fire Resistance Directory under the prefix "P".

Flame Spread and Smoke Developed. When tested in accordance with ASTM E84, DensDeck Prime Roof Boards had Flame Spread 0, Smoke Developed 0.

Wind Uplift

DensDeck Prime Roof Boards are included in numerous assemblies evaluated by FM or other independent laboratories for wind uplift performance. For information concerning such assemblies, please visit www.roofnav.com.

Physical Properties

Properties	1/4" (6.4 mm)	1/2" (12.7mm)	5/8" (15.9 mm)
Thickness, nominal	1/4" (6.4 mm) ± 1/16" (1.6 mm)	1/2" (12.7 mm) ± 1/32" (.8 mm)	5/8" (15.9 mm) ± 1/32" (.8 mm)
Width, standard	4' (1219 mm) ± 1/8" (3 mm)	4' (1219 mm) ± 1/8" (3 mm)	4' (1219 mm) ± 1/8" (3 mm)
Length, standard	4' (1219 mm) and 8' (2438 mm) ± 1/4" (6.4 mm)	4' (1219 mm) and 8' (2438 mm) ± 1/4" (6.4 mm)	4' (1219 mm) and 8' (2438 mm) ± 1/4" (6.4 mm)
Weight, nominal, lbs./sq. ft. (Kg/m ²)	1.2 (5.9)	2.0 (9.8)	2.5 (12.2)
Surfacing	Fiberglass mat with non-asphaltic coating	Fiberglass mat with non-asphaltic coating	Fiberglass mat with non-asphaltic coating
Flexural Strength ¹ , parallel, lbf. min. (N)	≥40 (178)	≥80 (356)	≥100 (444)
Flute Spanability ²	2-5/8" (66.7 mm)	5" (127 mm)	8" (203 mm)
Permeance ³ , perms (ng/Pa•S•m ²)	>30 (>1710)	>23 (>1300)	>17 (>970)
R Value ⁴ , ft ² •°F•hr/BTU (m ² •K/W)	.28	.56	.67
Linear Variation with Change in Temp., in/in °F (mm/mm/°C)	8.5 x 10 ⁻⁶ (15.3 x 10 ⁻⁶)	8.5 x 10 ⁻⁶ (15.3 x 10 ⁻⁶)	8.5 x 10 ⁻⁶ (15.3 x 10 ⁻⁶)
Linear Variation with Change in Moisture	6.25 x 10 ⁻⁶	6.25 x 10 ⁻⁶	6.25 x 10 ⁻⁶
Water Absorption ⁵ , % max	5	5	5
Compressive Strength ⁶ , psi nominal	900	900	900
Surface Water Absorption, grams, nominal	1.0	1.0	1.0
Flame Spread, Smoke Developed (ASTM E84)	0/0	0/0	0/0
Bending Radius	4' (1219 mm)	6' (1829 mm)	8' (2438 mm)

1. Tested in accordance with ASTM C473 method B.

2. Tested in accordance with ASTM E661.

3. Tested in accordance with ASTM E96 (dry cup method).

4. Tested in accordance with ASTM C518 (heat flow meter).

5. Specified values per ASTM C1177.

6. Tested in accordance with ASTM C473.



U.S.A. Georgia-Pacific Gypsum LLC
 Georgia-Pacific Gypsum II LLC
 Canada Georgia-Pacific Canada LP

SALES INFORMATION AND ORDER PLACEMENT

U.S.A. West: **1-800-824-7503**
 Midwest: **1-800-876-4746**
 South Central: **1-800-231-6060**
 Southeast: **1-800-327-2344**
 Northeast: **1-800-947-4497**

CANADA Canada Toll Free: **1-800-387-6823**
 Quebec Toll Free: **1-800-361-0486**

TECHNICAL INFORMATION

U.S.A. and Canada: **1-800-225-6119**, www.gpgypsum.com

TRADEMARKS DENSDECK, FIREGUARD, EONIC and the GEORGIA-PACIFIC logo are trademarks owned by or licensed to Georgia-Pacific Gypsum LLC. ROOFNAV is a registered mark of FM Global.

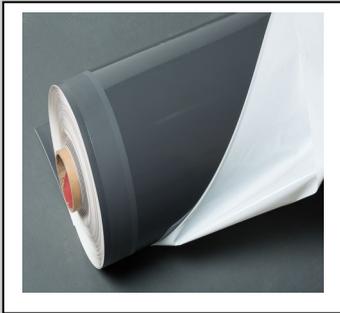
WARRANTIES, REMEDIES AND TERMS OF SALE For current warranty information for this product, please go to www.gpgypsum.com and select the product for warranty information. All sales of this product by Georgia-Pacific are subject to our Terms of Sale available at www.gpgypsum.com.

UPDATES AND CURRENT INFORMATION The information in this document may change without notice. Visit our website at www.gpgypsum.com for updates and current information.

CAUTION For product fire, safety and use information, go to www.buildgp.com/safetyinfo or call **1-800-225-6119**.

FIRE SAFETY CAUTION Passing a fire test in a controlled laboratory setting and/or certifying or labeling a product as having a one-hour, two-hour, or any other fire resistance or protection rating and, therefore, as acceptable for use in certain fire rated assemblies/systems, does not mean that either a particular assembly/system incorporating the product, or any given piece of the product itself, will necessarily provide one-hour fire resistance, two-hour fire resistance, or any other specified fire resistance or protection in an actual fire. In the event of an actual fire, you should immediately take any and all actions necessary for your safety and the safety of others without regard for any fire rating of any product or assembly/system.

Technical Information Sheet



UltraPly™ TPO SA

Item Description	Item Number
.060" x 10' x 100' (1.5 mm x 3.05 m x 30.5 m) Tan	W56TSAT699
.060" x 10' x 100' (1.5 mm x 3.05 m x 30.5 m) Gray	W56TSAG699
.060" x 10' x 100' (1.5 mm x 3.05 m x 30.5 m) White	W56TSA3699

Description

UltraPly TPO SA with Secure Bond™ Technology is a heat weldable, flexible thermoplastic polyolefin (TPO) membrane with a factory applied pressure sensitive adhesive. Designed to be the next generation in fully adhered roof system application, Elevate's Secure Bond Technology helps ensure uniform adhesion across the entire membrane, creating a powerful bond. This advanced technology not only improves installation speed over traditional adhered application, but also widens the weather window with the ability to install down to 20 °F (-7 °C). With no VOC's, UltraPly TPO SA with Secure Bond Technology is an excellent solution for all your roofing needs. UltraPly TPO SA membrane meets or exceeds all the requirements for ASTM D6878-11 and ASTM D6878M-17 & 19. The membrane is reinforced with a 9 x 9, 1,000 denier polyester weft-inserted fabric. UltraPly TPO SA membrane is self-adhering. No primers or adhesives are required on horizontal surfaces, thus eliminating Volatile Organic Compounds (VOCs).

Product Preparation

1. Substrates must be clean, dry and free of foreign material such as grease and any debris which could inhibit adhesion. This may require cleaning with a broom or blower.
2. Fasten insulation per current Elevate technical specifications to provide a proper substrate.
3. Install UltraPly TPO SA membrane only when ambient and substrate temperatures exceed 20 °F (-7 °C) and rising. Do not install UltraPly TPO SA below this minimum temperature.
4. Apply Single-Ply QuickPrime Primer or Single-Ply LVOC Primer to vertical surfaces before installing flashing membrane.
5. Unroll and position the membrane over the substrate to achieve the desired alignment and overlaps. Allow membrane to relax before positioning and adhering. **NOTE: Once membrane has fully relaxed, follow application methods below to adhere the membrane to the approved substrate.**

Method of Application

Field Membrane Application (Steps 1-5):

1. Once the membrane has relaxed in place a minimum of 30 minutes (longer in colder weather), and the seam positions are aligned, carefully fold the sheet back approximately 10' (3.05 m) from one end to expose the release liner without disturbing the original position of the membrane. **NOTE: Fold the membrane back from the end, not from the side.**

Field Membrane Application (Steps 1-5) Continued:

2. Starting from the center split of the exposed release liner, remove the liner at a 45° angle from the center of the sheet back beyond the membrane edge. Be sure to pull enough of the release liner to hold below the membrane. Remove at least 5' (1.5 m) of release liner from one end of the sheet and adhere it to the substrate. The removed liner should extend at a 45° angle beyond the edges of the membrane.
3. Keeping the membrane flat and secured, and the seam overlap aligned, continue removing the release liner at a 45° angle along the entire length of the sheet: up to 100' (30.5 m). Pulling the release liner at a higher angle can cause the sheet to move and may trap air. The two halves of the release liner should be pulled out at the same time by two people. Keep the release liner as close to the roof surface as possible during removal. **NOTE:** Removal of the liner and any handling of the exposed SA adhesive should be completed by two persons minimum.
4. To initiate adhesion, use a stiff bristled broom and apply downward pressure across the installed membrane. Broom the membrane from the center of the sheet working toward the edge.
5. Roll the installed membrane with a weighted roller (5 lb per lineal inch) across the width of the sheet to ensure full contact with the substrate. **NOTE:** Do not roll membrane in place with a weighted roller if installed over ISOGARD™ HD or Resista™ / ISOGARD CG.

Roof Edge (Gravel Stop, Gutter Edge) Membrane Application (Steps 1-5):

1. Once the membrane has relaxed in place a minimum of 30 minutes (longer in colder weather), and it is positioned correctly along the roof edge, carefully fold the sheet back approximately 10' (3.05 m) from one end to expose the release liner without disturbing the original position of the membrane. **NOTE: Fold the membrane back from the end, not from the side.**
2. Starting with the outside (roof edge) portion of the release liner, carefully pull it beneath the membrane, toward the field of the roof at a 45° angle to expose the SA adhesive without disturbing the original position of the membrane. Next, pull the inside portion of the release liner beneath the membrane. Maintain a 12" (305 mm) wide minimum separation between the two sections of liner. Back-roll the 10' (3.05 m) exposed SA section into position onto the substrate without trapping any air beneath the sheet. **NOTE: Removal of the liner and any handling of the exposed SA adhesive should be completed by two persons minimum.**
3. Keeping the release liner as close to the roof surface as possible and maintaining a 10' (3.05 m) minimum space between the two liner halves, pull both halves of the liner at a 45° angle along the length of the roof edge. Pulling the release liner at a higher angle can cause the sheet to move and may trap air.
4. To initiate adhesion, use a stiff bristled broom and apply downward pressure across the installed membrane. Broom the membrane from the center of the sheet working toward the edge.
5. Roll the installed membrane with a weighted roller (5 lb per lineal inch) across the width of the sheet to ensure full contact with the substrate. **NOTE: Do not roll membrane in place with a weighted roller if installed over ISOGARD HD or Resista / ISOGARD CG.**

Seaming

1. Follow current Elevate technical specifications for heat welding TPO membrane.
2. Side Laps are to be heat-welded. Each membrane panel has a 2" (51 mm) uncoated selvage edge. Overlap side laps and heat weld the 2" (51 mm) uncoated area to create a minimum 1½" (38 mm) robotic welded seam.
3. End Laps – Because the pressure sensitive adhesive extends the entire length of the roll, all adjoining rolls must be stripped in. Butt end laps together, then strip in the end lap with a minimum 8" (203 mm) wide UltraPly TPO membrane cover strip, centered on the end lap and heat-welded along all edges. (Do not allow primer to contaminate the area to be heat welded.)
4. Detailing – Install approved t-joint patches and apply UltraPly TPO Cut Edge Sealant as required by UltraPly TPO general specification.

Storage

- Warehouse membrane in a clean dry location.
- Membrane stored on jobsite must be kept dry.
- Material must be a minimum of 20 °F (-7 °C) prior to installation.
- Store away from sources of physical damage.
- Make certain the structural decking will support the loads incurred by material when stored on rooftop. The deck load limitations should be specified by the project designer.
- Store away from ignition sources.

Shelf Life

18 Months when stored between 60 °F (16 °C) and 80 °F (27 °C) out of direct sunlight.

Precautions

- Take care when moving, transporting, and handling to avoid physical damage.
- Removal of the plastic release liner from the adhesive backing may create a static electric charge; care should be used when removing and handling the release liner.
- Refer to Safety Data Sheets (SDS) for additional safety information.

LEED® Information

Post-Consumer Recycled Content: 0%
 Post Industrial Recycled Content: 3-5%
 Manufacturing Location: Tuscumbia, AL



NOTE: LEED® is a registered trademark of the U.S. Green Building Council

Typical Properties			
Properties	Test Method	Performance Minimum	Typical Performance
Overall Thickness	D 751	0.039" (0.54 mm)	0.060" (1.52 mm) ±10%
Coating over Scrim	D 7635	0.015" (0.39 mm)	0.021" (0.54 mm)
Breaking Strength	D 751 Grab Method	220 lbf (979 N)	390 lbf (1,735 N)
Elongation at Reinforcement Break	D 751 Grab Method	15%	30%
Tearing Strength	D 751	55 lbf (245 N)	156 (694)
Brittleness Point	D 2137	-40 °F (-40 °C)	Pass
Ozone Resistance, No cracks	D 1149	Pass	Pass
Retention of Breaking Strength	D 751 Grab Method	90%	>90%
Retention of Elongation at Break	D 751 Grab Method	90%	>90%
Retention of Tearing Strength	D 751 Grab Method	60%	>60%
Weight of Change	D 1204, 6h at 158 °F (70 °C)	±1% max	<0.02%
Linear Dimension Change	D 1204	<1%	<1%
Water Absorption	D 471	±3% max	<1.2%

Typical Properties Continued

Properties	Test Method	Performance Minimum	Typical Performance
Weather Resistance, 80 °C Black Panel, no cracking, crazing when wrapped around a 3" mandrel and inspected at 7x magnification	G 155	> 60,000 kJ/m ²	> 60,000 kJ/m ²
Puncture Resistance	FTM 101C, Method 2031	lbf (N)	300 lbf (1,334 N)
Dynamic Puncture Resistance MD	D 5635	Pass (20 J)	Pass (40 J)
Dynamic Puncture Resistance CD	D 5635	Pass (35 J)	Pass (50 J)
Static Puncture Resistance	D 5602	Pass (25 kg)	Pass (25 kg)
Air Permeance (Material)	E 2178*	< 0.004 ft ³ /ft ² (0.02 L/(s·m ²))	Pass

NOTE:

- * The ASTM 2178 values listed above are for the air permeance of the UltraPly TPO Membrane component only.
- When system design includes an air barrier, please consult your Regional Technical Coordinator for additional roof system securement enhancements.
- Consult the Designer / Architect, Code Agency or Authority having Jurisdiction (AHJ) for requirements regarding the selection and use of an appropriate air barrier material, and its installation into the building envelope.

Typical Properties – Pressure Sensitive Adhesive

Property	Test Method	Units	Performance Minimum	Typical Values
Color	---	---	---	clear
Nominal Thickness	ASTM E 408-71	in (mm)	N/A	0.008 (0.18)
Weight	---	lbf (kg/m ²)	---	0.04 (.020)
Permeability	ASTM E 96	Perms	N/A	0.6
Specific Gravity	ASTM D 71	---	N/A	0.93

Typical Properties

Acceptable Substrates	Primer Required	Acceptable Application Temperatures	Special Application Considerations
ISO 95+™ GL / ISOGARD GL	No	20 - 120 °F (-7 - 49 °C)	
ISOGARD HD	No	20 - 120 °F (-7 - 49 °C)	Do not roll in place with weighted roller
Resista / ISOGARD CG	No	20 - 120 °F (-7 - 49 °C)	Do not roll in place with weighted roller
Structural Concrete	No	20 - 120 °F (-7 - 49 °C)	Must be clean, dry and properly cured prior to application
Lightweight Concrete	No	20 - 120 °F (-7 - 49 °C)	Use on clean, dry and properly cured cellular lightweight concrete only, not acceptable with lightweight aggregate concrete
DensDeck* Prime	No	20 - 120 °F (-7 - 49 °C)	
Securock®**	No	20 - 120 °F (-7 - 49 °C)	
Plywood	No	20 - 120 °F (-7 - 49 °C)	Check local code for acceptance of direct application
OSB Board	No	20 - 120 °F (-7 - 49 °C)	Check local code for acceptance of direct application
CMU / Masonry and Vertical Substrates	Yes	20 - 120 °F (-7 - 49 °C)	Apply Elevate Single-Ply or Single-Ply LVOC Primer to all vertical substrates

*DensDeck is a registered trademark of the G-P Gypsum Corporation

**Securock is a registered trademark of the USG Corporation

Radiative Properties		
Cool Roof Rating Council (CRRC): Initial / 3 yr	White	Light Tan (HR)
Solar Reflectance	0.74 / 0.59	0.76 / 0.62*
Thermal Emittance	0.84 / 0.84	0.90 / 0.90*
Solar Reflectance Index (SRI)	90 / 69	90 / 75*
Rated Product ID	0033	0608
Licensed Manufacturer ID	0608	0091
Classification	Production Line	Production Line



*Rapid Ratings Results

Please contact Holcim Technical Services at 800-428-4511 for further information.

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

The Firestone brand of premier roofing, wall, and lining systems you know and trust will be coming to you under a new name: Elevate. During our transition, products carrying the brand name Firestone will change to Elevate on product labels and packaging, Technical Information Sheets, and elsewhere. Only the brand name is changing. Our products remain the same.

For further information on our brand transition to Elevate, scan the code below with your smartphone, or visit our website: www.holcimelevate.com.



LEARN MORE

USG SECUROCK® BRAND GYPSUM-FIBER ROOF BOARD



DESCRIPTION

USG Securock® Brand Gypsum-Fiber Roof Board is a high-performance roof board for use in low-slope roofing systems. Its unique fiber-reinforced, uniform composition gives the panel strength and water resistance through to the core. USG Securock® Brand Gypsum-Fiber Roof Board provides exceptional bond and low absorption in adhered systems and, with uniform composition, achieves high wind-uplift ratings with no risk of facer delamination. USG Securock® Brand Gypsum-Fiber Roof Board combines superior performance with sustainable design for all types of built-up roofing systems and most fluid applied, spray foam, metal and any polyester reinforced single ply or modified bitumen membrane systems.

ADVANTAGES

Exceptional Strength: Engineered to provide superior wind-uplift performance for a wide variety of roof assemblies. USG Securock® Brand Gypsum-Fiber Roof Board has a uniform composition, providing enhanced bond strength of membrane systems with no risk of facer delamination.

Fire Performance: Provides excellent fire performance and demonstrates exceptional surface burning characteristics (ASTM E84 [CAN/ULC-S102] Flame Spread 5, Smoke Developed 0).

Moisture and Mold: Uniform water-resistant core ensures excellent moisture and mold resistance. Scored a maximum "10" for mold resistance on ASTM D3273.

Versatile: Can be used as a component in most single-ply, fluid-applied, built-up, spray foam, metal and modified bitumen roofing.

INSTALLATION

- Refer to roof system manufacturer's written instructions, local code requirements and Factory Mutual (FM) and/or Underwriters Laboratories (UL) requirements for proper installation techniques.
- Use fasteners specified in accordance with above requirements. Install approved fasteners with plates into the USG Securock® Brand Gypsum-Fiber Roof Board, flush with the surface. Fasteners should be installed in strict compliance with the roof system manufacturer's installation recommendations and FMG Loss Prevention Data Sheet 1-29. **A qualified architect or engineer should review and approve calculations, framing and fastener spacing for all projects.**
- Locate edge joints on, and parallel to, deck ribs. Stagger end joints of adjacent lengths of USG Securock® Brand Gypsum-Fiber Roof Board.
- All board edges should be loosely abutted and never kicked in tight in typical installations.
- Roof boards should never be installed if they exhibit frost.
- For cover board applications, 1/4" USG Securock® Brand Gypsum-Fiber Roof Board should not be installed below 32° F.
- See product data table below for maximum flute span when panels are applied directly over metal decking.
- For vertical parapet applications, only 1/2" or 5/8" panels should be used. Maximum framing spacing is 24" o.c.

LIMITATIONS

- USG Securock® Brand Gypsum-Fiber Roof Board is engineered to perform within a properly designed roof system. The use of USG Securock® Brand Gypsum-Fiber Roof Board as a roofing component is the responsibility of the design professional.
- Consult roofing manufacturers for specific instructions on the application of their products to USG Securock® Brand Gypsum-Fiber Roof Board. For fully adhered fiberglass reinforced membranes consult the membrane manufacturer.
- Weather conditions, dew, application temperature, installation techniques and moisture drive can have adverse effects on the performance of the roof system and are beyond the control of USG.
- Keep USG Securock® Brand Gypsum-Fiber Roof Board panels dry before, during and after installation. USG Securock® Brand Gypsum-Fiber Roof Board should not be installed during rain, heavy fog and any other conditions that deposit moisture on the surface of the board. Apply only as much USG Securock® Brand Gypsum-Fiber Roof Board that can be covered by final roof membrane system in the same day. Avoid exposure to moisture from leaks or condensation.
- Wind uplift (vertical pull) of the roof system as installed can be affected by many factors beyond USG's control, including moisture migrating into the roof assembly from inside or outside the building, proper fastener spacing, the quality of installation especially for fasteners and whether the framing has been properly designed and installed to meet strength and deflection criteria specified in the contract documents. For all these reasons, USG cannot guarantee the wind-uplift resistance (vertical pull) of any roof assembly or system containing USG roof boards.
- Moisture from inside the building can be as big a risk for the roof system as moisture from outside. The contractor installing the roof and the design professional should protect the roof assembly not only from excessive moisture during the construction of the building (new concrete, paint, plaster materials) but also after the building is dried in. The HVAC system must properly manage moisture generated by the occupants of the building to make sure it is vented to the outside and does not migrate into the roof system.
- Panel spacing may be needed based on factors like roof deck's size, membrane color, ultimate deck surface temperature and time of year the roof is installed. The designer of record should use USG's published physical properties below to determine if spacing is needed.
- For reroof or re-cover applications, existing roofing system must be dry throughout prior to application of USG Securock® Brand Gypsum-Fiber Roof Board.
- Plastic or poly packaging applied at the plant to protect board during rail or other transit should be removed upon receipt to prevent condensation or trapping of moisture, which may cause application problems.
- USG Securock® Brand Gypsum-Fiber Roof Board should be stored flat and off the ground with protection from the weather. If stored outdoors, a breathable waterproof covering should be used.
- When applying solvent-based adhesives or primers, allow sufficient time for the solvent to evaporate to avoid damage to roofing components.
- USG allows the bonding of cold mastic-modified bitumen, low rise urethane foam and torching directly to the surface. Consult with the system manufacturer for recommendation on these applications.
- USG recommends maximum asphalt application temperature for Type III or Type IV asphalt of 455° F when using USG Securock® Brand Gypsum-Fiber Roof Board. Application temperatures above these recommended temperatures may adversely affect roof system performance.

FIRE PERFORMANCE

- UL Classified (Type FRX-G) as to Surface Burning Characteristics in accordance with ASTM E84 (CAN/ULC-S102).
 - Flame Spread 5 and Smoke Developed 0
- 1/4", 3/8", 1/2" and 5/8" thickness—Class A in accordance with UL790 (CAN/ULC-S107). See the *UL Building Materials Directory* for more information.
- 5/8" thickness—Meets requirements of Type X per ASTM C1278 and may be used in P series designs as a thermal barrier.

SYSTEM PERFORMANCE

- FM Approved
 - Complies with requirements of FM 4450 and FM 4470
 - Meets FM Class 1

STANDARDS COMPLIANCE

USG Securock® Brand Gypsum-Fiber Roof Board is manufactured to conform to ASTM C1278, "Standard Specification for Fiber-Reinforced Gypsum Panel."

PHYSICAL PROPERTIES

	1/4" (6.3 mm)	3/8" (9.5 mm)	1/2" (12.7 mm)	5/8" (15.9 mm)
Width, standard	4' (1,219 mm)	4' (1,219 mm)	4' (1,219 mm)	4' (1,219 mm)
Length, standard	4' (1,219 mm) and 8' (2,438 mm)			
Pieces per unit for 4' x 8' sheets	50	40	30	24
Weight, nominal lb./unit, 4' x 8' sheet	2,575	2,575	2,725	2,525
Weight, nominal lb./sq. ft.	1.57	1.96	2.76	3.20
Flexural strength, parallel, lb. min., per ASTM C473	40	70	110	161
Compressive strength, psi nominal	1,800 (12.4MPa)	1,800 (12.4MPa)	1,800 (12.4MPa)	1,800 (12.4MPa)
Flute spanability per ASTM E661	2-5/8"	5"	8"	10"
Permeance, perms, per ASTM E96	30	26	26	24
R Value per ASTM C518	0.2	0.3	0.5	0.6
Coefficient of thermal expansion, inches/inch • °F, per ASTM E831	8.0 x 10 ⁻⁶			
Linear variation with change in moisture, inches/inch • % RH, per ASTM D1037	8.0 x 10 ⁻⁶			
Water absorption, % max, per ASTM C473	10	10	10	10
Surface water absorption, nominal grams, per ASTM C473	1.6	1.6	1.6	1.6
Mold resistance per ASTM D3273*	10	10	10	10
Bending radius	25'	25'	25'	30'

***ASTM D3273 Mold Resistance Testing:** In independent lab tests conducted on USG Securock® Brand Gypsum-Fiber Roof Board and USG Securock® Brand UltraLight Glass-Mat Roof Board at the time of manufacture per ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, both panels scored a 10. The ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

SUBMITTAL APPROVALS

Job Name	
Contractor	Date

PRODUCT INFORMATION

See usg.com for the most up-to-date product information.

CAUTION

Dust may cause irritation to eyes, skin, nose, throat, and upper respiratory tract. Cut and trim with a utility knife or hand saw to minimize dust levels. Power tools must be equipped with a dust collection system. Wear eye, skin, and respiratory protection if necessary. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Do not swallow. If swallowed, call physician. For more information call Product Safety: 800 507-8899 or see the SDS at usg.com

KEEP OUT OF REACH OF CHILDREN.

TRADEMARKS

The trademarks USG, SECUROCK, IT'S YOUR WORLD, BUILD IT., the USG logo, the design elements and colors, and related marks are trademarks of USG Corporation or its affiliates.

NOTE

Products described here may not be available in all geographic markets. Consult your USG Company sales office or representative for information.

NOTICE

We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.

SAFETY FIRST!

Follow good safety/industrial hygiene practices during installation. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read SDS and literature before specification and installation.

800 USG.4YOU
800 (874-4968)
usg.com

Manufactured by
United States Gypsum Company
550 West Adams Street
Chicago, IL 60661

RF5-USA-ENG/rev. 9-23
© 2023 USG Corporation
and/or its affiliates. All rights reserved. Printed in USA

USG
IT'S YOUR WORLD. BUILD IT.®

Technical Information Sheet

Image Coming Soon

V-Force™ Vapor Barrier Membrane

Item Description	Item Number
1 Roll (5 Squares)	W56358900V25

Description

V-Force Vapor Barrier Membrane is a vapor barrier comprised of SBS modified bitumen adhesive, factory-laminated to a tri-laminate woven, high-density polyethylene top surface. A polymeric release liner protects the adhesive. V-Force membrane is intended for use as a vapor retarder in Elevate roofing systems and may be used as a temporary roof membrane for up to ninety (90) days.

Method of Application

1. V-Force membrane can be applied at ambient temperatures as low as 25 °F (-4 °C) if it has been stored in a heated area so that it will be between 50 °F (10 °C) and 100 °F (38 °C) at the time of application.
2. All substrates except metal decks must be primed with either SA Water Based Primer (W563587091) or SA Solvent Based Primer (W563587090).
3. V-Force membrane must be installed with minimum 3" (76 mm) side laps and 6" (152 mm) end laps. At the end of each roll, install a 6" x 42" (152 mm x 1.07 m) sheet metal plate to support the end lap between deck ribs. Stagger the end laps 12" (305 mm).
4. V-Force membrane must be rolled in with a 75 lb (34 kg) roller to fully mate each roll to substrate, including all lap areas.

Acceptable Immediate Substrates for Self-Adhered Application

NOTE: All substrates except metal decks must be primed with either SA Water Based Primer (W563587091) or SA Solvent Based Primer (W563587090).

- Structural Concrete (must be clean, dry, and properly cured)
- Steel Deck (processing oils must be removed)

NOTE: Factory Mutual (FM) does not recognize direct to steel deck attachment of this product.

- Plywood or OSB
- Existing Smooth Surface BUR, SBS, or APP Modified Bitumen (must be clean and smooth)
- DensDeck® Prime, SECUROCK® Gypsum Fiber, STRUCTODEK® HD
- ISOGARD™ HD Composite or Cover Board, RESISTA™ / ISOGARD CG Insulation

NOTE: Please consult the Elevate Asphalt Roofing Systems Guide for Applicators and Designers and QuickSpecs found on the Elevate website to review specific information regarding the type of deck and insulation in use.

Storage

- All material should be stored out of the weather in a clean, dry area in its original unopened packaging at a minimum of 50 °F (10 °C) and a maximum of 140 °F (60 °C).
- If material must be stored temporarily on the roof prior to application, it must be elevated from the roof surface on a pallet, stored on end, and protected from the weather with a light colored, opaque tarp in a neat, safe manner that does not exceed the allowable load limit of the storage area.

Shelf Life

Shelf life of one year (12 months) can be expected when kept dry and stored in the original, unopened packaging between 60 °F and 80 °F (16 °C and 27 °C)

Precautions

- For safety information, refer to the Safety Data Sheet (SDS) for SBS Membranes and Flashing.
- Hot asphalt cannot be used to adhere roofing materials to V-Force Vapor Barrier membrane.
- Not suitable for use as a temporary roof under ponding water conditions.
- Take care when transporting and handling Elevate Modified Bitumen rolls to avoid punctures and other types of physical damage.
- Isolate waste products, petroleum products, grease, oil (mineral and vegetable) and animal fats from all Elevate Modified Bitumen membranes.

LEED® Information

Post-Consumer Recycled Content: 0%
 Post Industrial Recycled Content: 0%
 Manufacturing Location: Quebec, Canada



NOTE: LEED® is a registered trademark of the U.S. Green Building Council

Product Data	
Property	Value
Roll Width	3' 9" (1.14 m)
Roll Length	133' 9" (40.8 m)
Net Coverage	468 ft ² (43.5 m ²)
Roll Weight	80 lb (36.5 kg)
Weight Per Pallet	2,125 lb (964 kg)
Rolls per Pallet	25
Pallet Size	43" x 43" (1.1 m x 1.1 m)
Coverage Per Pallet	11,700 ft ² (1,087 m ²)

Typical Properties		
Property	ASTM Standard	Typical Performance
Thickness	D 5147	30 mil (0.762 mm)
Tensile Strength	D 5147	54 lbf/in (9.5 kN/m), MD 68 lbf/in (12 kN/m), XMD
Ultimate Elongation, Bitumen Portion, at 73 °F (23 °C)	D 5147	33%, MD 20%, XMD
Low Temperature Flexibility (Cold Bending)	D 5147	-30 °F (-35 °C)
Dynamic Puncture	E 154	152 lbf (675 N)
Tear Strength at 73 °F (23 °C)	D 5601	79 lbf (350 N), MD 90 lbf (400 N), XMD
Lap Adhesion at 73 °F (23 °C)	D 1876	6 lbf/in (0.95 kN/m)
Water Absorption, % by Weight	D 5147, D 95	<0.1 %
Peel Resistance	D 903	5.6 lbf/in (1 kN/m)
Water Vapor Permeance, max.	E 96 Procedure B	0.04 perms (2.5 Ng/Pa·s·m ²)
Air Permeability	D 1970	0.001 L/sec·m ²
Sealability around Nail	D 1970	Pass

Please contact Holcim Technical Services at 800-428-4511 for further information.

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

Firestone, the brand of premier roofing, wall, and lining systems you know and trust, will be coming to you under a new name: Elevate. During our transition, products carrying the brand name **Firestone** will change to **Elevate** on product labels and packaging, Technical Information Sheets, and elsewhere. Only the brand name is changing. Our products remain the same.

For further information on our brand transition to Elevate, scan the code below with your smartphone, or visit our website: www.holcimelevate.com

