

TEXAS DEPARTMENT OF INSURANCE

Engineering Services / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION EC-27

Effective June 1, 2008
Revised October 1, 2009

*The following product has been evaluated for compliance with the wind loads specified in **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **April 2010**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

Vinyl Siding manufactured by

Ply Gem Siding Group
2600 Grand Blvd
Suite 900
Kansas City, Missouri 64108
(800) 962-3563

a Division of Ply Gem Industries, and marketed under the trade names **Mastic** and **Cellwood**, will be accepted for use in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

This product evaluation report includes vinyl horizontal siding, vinyl vertical siding, and vinyl soffit. This evaluation report applies to the following vinyl siding and soffit products:

Horizontal Siding: Mastic

Product Name	Profile	Exposure (in.)	Panel Thickness (in.)
Brentwood	Double 5"	10	0.040
Brentwood	Double 4"	8	0.040
Brentwood	Double 4 ½" Dutchlap	9	0.040
T-lok Barkwood	Double 5"	10	0.048
T-lok Barkwood	Double 5" Dutchlap	10	0.048
T-lok Barkwood	Double 4"	8	0.048
T-lok Barkwood	Triple 2 ⅔"	8	0.048
T-lok Barkwood	Single 8"	8	0.048
Charleston Beaded Collection	6 ½"	6 ½"	0.046
Quest Signature	Double 4"	8	0.046
Quest Signature	Double 4 ½" Dutchlap	9	0.046
Quest Signature	Double 5"	10	0.046
Ovation	Double 4"	8	0.042

**Horizontal Siding (continued):
 Mastic**

Product Name	Profile	Exposure (in.)	Panel Thickness (in.)
Ovation	Double 5"	10	0.042
Ovation	Double 4 ½" Dutchlap	9	0.042
Ovation	Triple 3	9	0.042
Silhouette Classic	Double 4"	8	0.044
Silhouette Classic	Double 5"	10	0.044
Silhouette Classic	Double 4 ½" Dutchlap	9	0.044
Grand Sierra	Double 4"	8	0.046
Grand Sierra	Double 5"	10	0.046
Grand Sierra	Double 4 ½" Dutchlap	9	0.046
Structure	Double 6"	12	1.25
Structure	Single 7"	7	1.25
Structure	Double 4"	8	1.25
Structure	Double 4 ½"	9	1.25
Carvedwood 44	Double 5"	10	0.044
Carvedwood 44	Double 4"	8	0.044
Carvedwood 44	Double 4 ½" Dutchlap	9	0.044
Carvedwood 44	Triple 3	9	0.044
Carvedwood 44	Single 8"	8	0.048
Liberty Elite	Double 4"	8	0.048
Liberty Elite	Double 5"	10	0.048
Liberty Elite	Double 5" Dutchlap	10	0.048
Mill Creek	Double 4"	8	0.040
Mill Creek	Double 4" Dutchlap	8	0.040
Mill Creek	Double 5"	10	0.040
Mill Creek	Double 5" Dutchlap	10	0.040
Mill Creek	Triple 3"	9	0.040
Trade Mark	Double 4"	8	0.040
Trade Mark	Double 5"	10	0.040
Trade Mark	Double 4 ½" Dutchlap	9	0.040
Board & Batten	8"	8	0.050

Cellwood

Product Name	Profile	Exposure (in.)	Panel Thickness (in.)
Dimensions	Double 4"	8	0.044
Dimensions	Double 4 ½" Dutchlap	9	0.044
Progressions	Double 4"	8	0.042
Progressions	Double 5"	10	0.042
Progressions	Double 4 ½" Dutchlap	9	0.042
Colonial	6 ½" Beaded	6 ½	0.044
Board & Batten	8"	8	0.050
Evolutions	Double 4"	8	0.040
Evolutions	Double 5"	10	0.040
Evolutions	Double 4 ½" Dutchlap	9	0.040

**Vertical Siding/Soffit:
Mastic**

Product Name	Profile	Exposure (in.)	Panel Thickness (in.)
Pro-Select	Double 5"	10	0.046
Pro-Bead	8"	8	0.040
Pro-Tech Plus	Triple 4"	12	0.040
Pro-Tech Plus	Double 5"	10	0.042
Ventura	Triple 3 1/3"	10	0.044

Cellwood

Product Name	Profile	Exposure (in.)	Panel Thickness (in.)
Premium	Triple 4"	12	0.040
Beaded	8"	8	0.040
Premium	Double 5"	10	0.046
Standard	Double 5"	10	0.042

INSTALLATION INSTRUCTIONS

General Installation Requirements:

All fasteners shall be corrosion resistant. Nails shall be driven in the center of the nailing slot, leaving a minimum $\frac{1}{32}$ inch space between the fastener head and the vinyl siding.

As a minimum, either the interior or exterior surface of the wall shall be sheathed with either structural or non-structural materials. If non-structural materials (such as foam or fiberboard) is used on the exterior side of the wall, then the length of the fasteners used to secure the vinyl siding to the framing shall be increased by the thickness of the non-structural material.

Apply the starter strip with fasteners spaced a maximum of 8 inches on center. The fasteners for the corner posts shall be spaced a maximum of 8 inches on center. Attach the J-channels to the framing members with fasteners spaced a maximum of 10 inches on center.

Panel ends should be staggered from adjacent courses.

Soffits: Soffit material may be installed without a listing in this product evaluation report. If the soffit is perforated (the soffit must be perforated along its entire length) or if the overhang is 24 inches in width or less, then the soffit material may be installed in accordance with the manufacturers installation instructions. All other soffit installations shall be in accordance with a listing in this product evaluation report.

Wind Resistant Assemblies:

Assembly No. 1

Horizontal Siding - Fasteners Penetrating into Studs

Design pressure: -49 psf

Minimum thickness: 0.040 inches

Fasteners: 1 1/2" long x 3/8" wide x 16 gauge staples

Assembly No. 1 (Continued)

The following Mastic products are applicable:

Liberty Elite (Double 5, Double 5 Dutchlap, Double 4)
Mill Creek (Double 5, Double 5 Dutchlap, Double 4, Double 4 Dutchlap)
Silhouette Classic (Double 5 Dutchlap, Double 4, Triple 3, Single 6 ½ Beaded, Single 8)
Trade Mark (Double 5, Double 4, Double 4 ½ Dutchlap)
Brentwood (Double 4, Double 5, Double 4 ½ Dutchlap)
T-Lok Barkwood (Double 4, Double 5, Double 5 Dutchlap, Triple 2 ⅔, Single 8)
Carvedwood 44 (Double 4, Double 5, Double 4 ½ Dutchlap, Triple 3, Single 8)
Charleston Bead Collection 6 ½
Ovation (Double 4, Double 5, Double 4 ½ Dutchlap, Triple 3)
Quest Signature (Double 4, Double 5, Double 4 ½ Dutchlap)
Grand Sierra (Double 4, Double 5, Double 4 ½ Dutchlap)

The following Cellwood products are applicable:

Dimensions (Double 4, Double 5, Double 4 ½ Dutchlap)
Colonial 6 ½ Beaded
Progressions (Double 4, Double 5, Double 4 ½ Dutchlap)
Evolutions (Double 4, Double 5, Double 4 ½ Dutchlap)

Installation: Wall studs shall be minimum Spruce-Pine-Fir dimension lumber. The wall studs shall be spaced a maximum of 16 inches on center. The vinyl siding shall be fastened to the wall studs with fasteners spaced a maximum of 16 inches on center. Panel ends should be staggered from adjacent courses.

Assembly No. 2

Horizontal Siding - Fasteners Penetrating into Studs

Design pressure: -53 psf

Minimum thickness: 0.040 inches

Fasteners: 1 ½" long roofing nails (⅜" diameter head, ⅛" shank diameter)

The following Mastic products are applicable:

Liberty Elite (Double 5, Double 5 Dutchlap, Double 4)
Mill Creek (Double 5, Double 5 Dutchlap, Double 4, Double 4 Dutchlap)
Silhouette Classic (Double 5 Dutchlap, Double 4, Triple 3, Single 6 ½ Beaded, Single 8)
Trade Mark (Double 5, Double 4, Double 4 ½ Dutchlap)
Brentwood (Double 4, Double 5, Double 4 ½ Dutchlap)
T-Lok Barkwood (Double 4, Double 5, Double 5 Dutchlap, Triple 2 ⅔, Single 8)
Carvedwood 44 (Double 4, Double 5, Double 4 ½ Dutchlap, Triple 3, Single 8)
Charleston Bead Collection 6 ½
Ovation (Double 4, Double 5, Double 4 ½ Dutchlap, Triple 3)
Quest Signature (Double 4, Double 5, Double 4 ½ Dutchlap)
Grand Sierra (Double 4, Double 5, Double 4 ½ Dutchlap)

Assembly No. 2 (Continued)

The following Cellwood products are applicable:

Dimensions (Double 4, Double 5, Double 4 ½ Dutchlap)

Colonial 6 ½ Beaded

Progressions (Double 4, Double 5, Double 4 ½ Dutchlap)

Evolutions (Double 4, Double 5, Double 4 ½ Dutchlap)

Installation: Wall studs shall be minimum Spruce-Pine-Fir dimension lumber. The wall studs shall be spaced a maximum of 16 inches on center. The vinyl siding shall be fastened to the wall studs with fasteners spaced a maximum of 16 inches on center. Panel ends should be staggered from adjacent courses.

Assembly No. 3

Horizontal Siding - Fasteners Penetrating into Sheathing

Design pressure: -60 psf

Minimum thickness: 0.040 inches

Fasteners: 1 ½" long roofing nails (⅜" diameter head, ⅛" shank diameter)

The following Mastic products are applicable:

Liberty Elite (Double 5, Double 5 Dutchlap, Double 4)

Mill Creek (Double 5, Double 5 Dutchlap, Double 4, Double 4 Dutchlap, Triple 3)

Silhouette Classic (Double 4 ½ Dutchlap, Double 4, Double 5)

Trade Mark (Double 5, Double 4, Double 4.5 Dutchlap)

Grand Sierra (Double 5, Double 4 ½ Dutchlap, Double 4)

Brentwood (Double 4, Double 5, Double 4 ½ Dutchlap)

T-lok Barkwood (Double 4, Double 5, Double 5 Dutchlap, Triple 2 ⅔, Single 8)

Carvedwood 44 (Double 4, Double 5, Double 4 ½ Dutchlap, Triple 3, Single 8)

Charleston Bead Collection 6 ½

Ovation (Double 4, Double 5, Double 4 ½ Dutchlap, Triple 3)

Quest Signature (Double 4, Double 5, Double 4 ½ Dutchlap)

Board & Batten 8

The following Cellwood products are applicable:

Dimensions (Double 4, Double 5, Double 4 ½ Dutchlap)

Colonial 6 ½ Beaded

Progressions (Double 4, Double 5, Double 4 ½ Dutchlap)

Evolutions (Double 4, Double 5, Double 4 ½ Dutchlap)

Installation: Wall studs shall be minimum Spruce-Pine-Fir dimension lumber. The wall studs shall be spaced a maximum of 24 inches on center. The vinyl siding shall be installed over minimum ⅜ inch thick wood structural sheathing (plywood or OSB). The vinyl siding shall be fastened to the wood structural sheathing with fasteners spaced a maximum of 12 inches on center. Panel ends should be staggered from adjacent courses.

Assembly No. 4

Horizontal Siding - Fasteners Penetrating into Studs

Design pressure: -44 psf

Minimum thickness: 0.045 inches

Fasteners: 1 1/2" long roofing nails (3/8" diameter head, 1/8" shank diameter)

The following Mastic products are applicable:

Structure (Double 6, Single 7) insulated horizontal vinyl siding.

Installation: Wall studs shall be minimum Spruce-Pine-Fir dimension lumber. The wall studs shall be spaced a maximum of 16 inches on center. The vinyl siding shall be fastened to the wall studs with fasteners spaced a maximum of 16 inches on center. Panel ends should be staggered from adjacent courses.

Assembly No. 5

Horizontal Siding - Fasteners Penetrating into Sheathing

Design pressure: -69 psf

Minimum thickness: 0.045 inches

Fasteners: 1 1/2" long roofing nails (3/8" diameter head, 1/8" shank diameter)

The following Mastic products are applicable:

Structure (Double 6, Single 7) insulated horizontal vinyl siding.

Installation: Wall studs shall be minimum Spruce-Pine-Fir dimension lumber. The wall studs shall be spaced a maximum of 16 inches on center. The vinyl siding shall be installed over minimum 15/32 inch thick plywood sheathing. The vinyl siding shall be fastened to the plywood sheathing with fasteners spaced a maximum of 8 inches on center. Panel ends should be staggered from adjacent courses.

Assembly No. 6

Horizontal Siding - Fasteners Penetrating into Studs

Design pressure: -80 psf

Minimum thickness: 0.046 inches

Fasteners: 2" long electro-galvanized smooth shank nails (3/8" diameter head, 1/8" shank diameter)

The following Mastic products are applicable:

Structure (Double 4, Double 4 1/2 Dutchlap) nominal 1" foam backed horizontal vinyl siding.

Installation: Wall studs shall be minimum Spruce-Pine-Fir dimension lumber. The wall studs shall be spaced a maximum of 16 inches on center. The vinyl siding shall be fastened to the wall studs with fasteners spaced a maximum of 16 inches on center penetrating into the studs. Panel ends should be staggered from adjacent courses.

Assembly No. 7

Vertical Siding/Soffit - Fasteners Penetrating into Sheathing

Design pressure: -37 psf

Minimum thickness: 0.046 inches

Fasteners: 1 1/2" long roofing nails (3/8" diameter head, 1/8" shank diameter)

The following Mastic products are applicable:

Pro-Select Double 5

The following Cellwood products are applicable:

Premium Double 5

Installation: Framing members shall be minimum Spruce-Pine-Fir dimension lumber. The framing members shall be spaced a maximum of 24 inches on center. The vinyl siding shall be installed over minimum 3/8 inch thick wood structural sheathing (plywood or OSB). The vinyl siding shall be fastened to the wood structural sheathing with fasteners spaced a maximum of 24 inches on center.

Assembly No. 8

Vertical Siding/Soffit - Fasteners Penetrating into Sheathing

Design pressure: -47 psf

Minimum thickness: 0.046 inches

Fasteners: 1 1/2" long roofing nails (3/8" diameter head, 1/8" shank diameter)

The following Mastic products are applicable:

Pro-Select Double 5

The following Cellwood products are applicable:

Premium Double 5

Installation: Framing members shall be minimum Spruce-Pine-Fir dimension lumber. The framing members shall be spaced a maximum of 24 inches on center. The vinyl siding shall be installed over minimum 3/8 inch thick wood structural sheathing (plywood or OSB). The vinyl siding shall be fastened to the wood structural sheathing with fasteners spaced a maximum of 16 inches on center.

Assembly No. 9

Vertical Siding/Soffit - Fasteners Penetrating into Sheathing

Design pressure: -53 psf

Minimum thickness: 0.046 inches

Fasteners: 1 1/2" long roofing nails (3/8" diameter head, 1/8" shank diameter)

The following Mastic products are applicable:

Pro-Select Double 5

The following Cellwood products are applicable:

Premium Double 5

Assembly No. 9 (Continued)

Installation: Framing members shall be minimum Spruce-Pine-Fir dimension lumber. The framing members shall be spaced a maximum of 16 inches on center. The siding shall be installed over minimum $\frac{3}{8}$ inch thick wood structural sheathing (plywood or OSB). The vinyl siding shall be fastened to the wood structural sheathing with fasteners spaced a maximum of 16 inches on center.

Assembly No. 10

Vertical Siding/Soffit - Fasteners Penetrating into Sheathing

Design pressure: -53 psf

Minimum thickness: 0.042 inches

Fasteners: 1 $\frac{1}{2}$ " long roofing nails ($\frac{3}{8}$ " diameter head, $\frac{1}{8}$ " shank diameter)

The following Mastic products are applicable:

Pro-Tech Plus (Triple 4, Double 5)

Ventura Triple 3 $\frac{1}{3}$

Pro-Bead 8

The following Cellwood products are applicable:

Beaded 8

Standard Double 5

Premium Triple 4

Installation: Framing members shall be minimum Spruce-Pine-Fir dimension lumber. The framing members shall be spaced a maximum of 16 inches on center. The vinyl siding shall be installed over minimum $\frac{3}{8}$ inch thick wood structural sheathing (plywood or OSB). The vinyl siding shall be fastened to the wood structural sheathing with fasteners spaced a maximum of 10 inches on center.

Note: The manufacturer's installation instructions shall be on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC); the International Building Code (IBC); and the Texas Revisions.