



Product Evaluation

RC410 | 0914

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

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.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

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| Evaluation ID: | RC-410 | Effective Date: | August 1, 2014 |
| | | Revised: | September 1, 2014 |
| | | Re-evaluation Date: | July 2018 |

Product Name: Fabric Span – Air Supported Form Roof Covering System over Concrete Shell
Manufacturer: Fabric Span
 5116 North 29th East
 Idaho Falls, ID 83401
 (208) 552-6179
 www.fabricspan.com

Acceptable in designated catastrophe zones along the Texas Gulf Coast when installed in accordance with the manufacturer’s installation instructions and this product evaluation.

Product Description:

The Fabric Span roof system is an air supported formed roof covering system intended for use over concrete formed domes, constructed with Mehler Valmex Mehatop PVC membrane fabric.

Limitations:

- **Roof Slope:** Roofing system may be installed at any angle on an inflated dome shape, which includes vertical and horizontal.
- **Concrete Dome:** The concrete dome shall be designed in accordance with the wind load requirements in either the International Residential Code or the International Building Code along with Chapter 19 of the IBC and ACI 318.
- **Installation Over an Existing Roof Covering:** Not permitted.
- **Design Pressure Rating:** -124 psf
- **Roof Deck:** Minimum 4,000 psi shotcrete reinforced with minimum #3 rebar, minimum yield strength 40 ksi.
- **Insulation:** Minimum 2-1/2" thick polyurethane foam by GACO Wall Foam 183.
- **Roof Covering:** Fabric span air form shall be Valmex Mehatop F100 Type III.

Installation:

- **General:** The Fabric Span roof covering system shall be constructed in accordance with this report, the approved construction documents, and the applicable building codes. In the event of a conflict between manufacturer's published installation instructions and this report, this report shall govern. Approved construction documents shall be available at all times on the jobsite during installation.

A Texas licensed professional engineer shall design structures built using the Fabric Span roof covering system. The concrete dome shall be designed in accordance with Chapter 19 of the IBC and ACI 318. Design drawings shall include complete instructions for the construction of the roof covering assembly. A Texas licensed engineer shall seal and date the design drawings. The design drawings shall reference the appropriate edition of the wind load standard (ASCE 7) used based on the current building specifications adopted by TDI. The basic wind speed and the exposure category used for the design shall also be referenced.

- **General Procedures:** The following general procedures shall be followed:
 - Inflate the Fabric Span – Air Supported Fabric form which is constructed using Mehler Valmex Mehatop PVC fabric.
 - Apply Airform Primer at a minimum coverage of 1 gallon per 200 square feet to the underside of the Air Supported Fabric form. Primer shall be in accordance with the manufacturer's installation instructions. The primer shall cure for a minimum of 90 minutes.
 - Spray apply a minimum of 2-1/2" of Gaco Western Wallfoam System 183 to the underside of the air supported fabric form. Actual foam thickness shall be specified in the design documents. Foam shall be applied in accordance with the manufacturer's installation instructions.
 - Apply a minimum of 3" of shotcrete to the underside of the foam insulation. The design documents shall specify the minimum thickness and reinforcing of the shotcrete.

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