

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION FR-37

Effective December 1, 2005
Revised February 1, 2006

*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 shall be subject to reevaluation 3 years after the effective date.*

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.

1", 1 ½", 2 ½", 3 ½" and 4" Concrete Panels for Wall, Floor or Roof Panels, manufactured by:

**Crete-Tech
2700 East Lakeland Drive
Jackson, Mississippi 39232
(601) 932-3900**

will be acceptable 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

General: Panel construction is from CRCRETE®, a blend of cement, water, sand and crumb rubber with a 28-day compressive strength (Fc) of 500 psi.

1" and 1 ½" Panels

The concrete mix is poured into either 1" or 1 ½" thick over and entrapping a 24 gauge galvanized steel expanded metal ribbed wire lath. The expanded metal ribbed lath is at the bottom of the form and just inside the bottom layer of the panel. The panels are available in the following sizes: 27" wide x 96" long x 1" deep or 27" wide x 96" long x 1 ½" deep. The 1" and 1 ½" deep panels may be used as wall, roof or floor panels.

2 ½" Panels

The concrete mix is poured into an 18 gauge steel frame consisting of 2" x 3" top and bottom plates 48" long and 2" x 3" studs 96" long spaced at 16" on center. The panel is installed into an 18 gauge steel channel (mounting channel) at the top and bottom and secured with #14 self tapping screws. The panel is 48" wide x 96" long x 2 ½" deep. The 2 ½" deep panels are intended for use as wall panels.

3 ½" Panels

The concrete mix is poured into an 18 gauge steel frame consisting of 2" x 4" top and bottom plates 48" long and 2" x 4" studs 96" long spaced at 16" on center. The panel is installed into an 18 gauge steel channel (mounting channel) at the top and bottom and secured with #14 self tapping screws. The panel is 48" wide x 96" long x 3 ½" deep. The 3 ½" deep panels are intended for use as wall panels.

PRODUCT DESCRIPTION (continued)

4" Panels

The concrete mix is poured into a steel frame which consists of a horizontal, 2" x 4" top and bottom plates (48" long) with linear, 2" x 4" 14 gauge cold rolled standard steel studs (120" long) spaced at 12" on center

and ends of 18 gauge cold rolled steel 4" track construction, secured with #10 x 1/2" flange head Phillips head self driving screws at intersecting members on each face of the panel (interior and exterior). The 2" x 4" structural studs are a minimum 14 gauge steel 50 ksi.

LIMITATIONS

Design Pressures:

Nominal Panel Size	Panel Type	Allowable Design Pressure (psf)
27" wide x 96" long x 1" deep	Wall, Roof & Floor	±100
27" wide x 96" long x 1 1/2" deep	Wall, Roof & Floor	±100
48" wide x 96" long x 2 1/2" deep	Wall	±62.4
48" wide x 96" long x 3 1/2" deep	Wall	±104
48" wide x 120" long x 4" deep	Floor	±100

INSTALLATION INSTRUCTIONS

General Installation Requirements:

1" and 1 1/2" Panels

The 1" and 1 1/2" panels may be used for roof, floor or wall panels in wood frame or steel frame structures. For wood frame structures, the wood framing shall be a minimum of 2" x 10" Southern Yellow Pine members with a maximum spacing of 24" o.c. The panels shall be attached to the wood framing members with a 12d common nails located 1 1/2" from each end and spaced 6" o.c. thereafter. The fasteners shall have a minimum embedment of 1 1/2" into the wood.

For steel framing, the panels shall be applied to minimum 12 gauge steel studs spaced a maximum of 24" o.c. The panels shall be attached to the steel framing with #12 x 1 1/2" long self-tapping sheet metal screws located 1 1/2" from each end and spaced 6" o.c. thereafter.

2 1/2" and 3 1/2" Panels

The 2 1/2" and 3 1/2" panels may be used for wall panels in wood frame or steel frame structures. For wood frame structures, the wood framing shall be minimum Southern Yellow Pine framing members and the double top plate system must be minimum 2x framing. The head of the panels shall be attached to the wood framing members with a 1/4"-20 bolts and nuts located 6" from each end and spaced 24" o.c. thereafter. The sill is attached through the wood sill member into the concrete slab with 1/4" Elco Tapcon fasteners located 6" from each end and spaced 12" o.c. thereafter

For steel framing, the panels shall be applied to minimum 18 gauge steel studs. The panels shall be attached to the steel framing with 1/4"-14 x 3/4" long self-tapping sheet metal screws located 3" from each end and spaced 6" o.c. thereafter.

4" Panels

INSTALLATION INSTRUCTIONS (continued)

The 4" panels may be used for floor panels. The panels must be supported by concrete beams (minimum 3100 psi or better) with sufficient width to provide a minimum of 4" bearing length. The panels are secured to the concrete beam with $\frac{5}{16}$ " diameter Tapcon anchors located 2" from the ends of the panel and spaced a maximum of 12" on center. The Tapcon anchors shall have a minimum embedment of $1\frac{3}{4}$ " into the concrete beam.

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) and the International Building Code (IBC).