

USG STRUCTURAL PANELS

STATEMENT OF NONCOMBUSTIBILITY OF CEMENTITIOUS PANELS

The only structural, noncombustible panel both manufactured and available in the U.S.A. is USG Structural Panel, manufactured by USG.

USG Structural Panels are considered as structural cementitious panels per the requirements of ICC-ES *Acceptance Criteria for Structural Cementitious Floor and Roof Sheathing Panels (AC318)* rev. October 2015. This criteria contains a requirement to have passed ASTM E136, "Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C," and a requirement that the primary reinforcing component in the panel shall not be wood or cellulose fibers.

CEMENT BONDED PARTICLE BOARDS AND TEST DURATION

Products that are cementitious but do not meet the standard for noncombustibility include, but are not limited to, cement bonded particle board panels. The reason is that these panels have not shown that they meet the duration requirement of ASTM E136. This standard requires the duration of the test to be 30 minutes. The State of Florida Building Commission ruled on this issue in 2007. (Please contact your USG Structural Panel representative for a copy of the *State of Florida Building Commission's ruling*.)

In its ruling, the State of Florida Building Commission confirmed the duration of the ASTM E136 test to be 30 minutes. The commission ruled that the duration cannot be reduced (modified) to 10 minutes. Its conclusion was that cement bonded particle board is considered combustible until it can pass an unmodified ASTM E136 test.

Note that some manufacturers and vendors use the phrases "non-combustibility," "noncombustibility," "non-combustible" or "noncombustible" in describing their structural panels. However, the manufacturers claim only that these panels meet a modified ASTM E136 test. As noted above, a panel is considered combustible until it can pass an unmodified ASTM E136.

Below are links to various competitive products stating 10-minute modifications/durations for the ASTM E136:

[Versaroc®](#) (Scroll down to "Key Advantages")

[Armoroc®](#) (Click "Armoroc" and scroll down to "Key Benefits")

[Plycem® CemDeck™](#) is listed as the structural product in commercial thickness of 3/4" (19 mm). When paying close attention to the reports listed online for ICC-ES Evaluation Report [ESR-1219](#), it only covers siding boards 0.43" (11 mm) and 0.55" (14 mm); no mention of the report covering a structural panel of 3/4" (19 mm) thickness. Then again, a test report is listed on Plycem's website for [ASTM E136](#), but when looking at the report only thicknesses from 4 mm to 10 mm were tested. Finally, the manufacturer lists [Underwriters Laboratories UL Certificate](#) where ASTM E136-12 isn't a standard listed.

Previously another manufacturer, Viroc®, had enter the U.S. with a product for floor sheathing, meeting German Standards DIN 4102, and even pursuing and obtaining a legacy report from ICC-ES. However since their introduction, it was found the product did not meet ASTM E136, and as such the company now only markets their product as an interior wall cladding and molding/trim product for the U.S. by way of their distributor [VirocNY](#). However, the manufacturer a Portugal-based still promotes and markets the structural panel for floor sheathings. See link below:
[Viroc®](#)

This topic was covered by an independent code consultant who warns decision makers in the U.S. about cement bonded particle board products that are being promoted as noncombustible in the U.S. when the products are manufactured outside the U.S. and the countries where they are used often have different standards than the current U.S. standard. The code consultant's comments can be found at this link:

[Vandergriff Code Consulting Services](#)

UL CERTIFICATION AND FOLLOW-UP SERVICE

Underwriters Laboratories Certification Directory is widely known as the most reliable source for validation and certification of building materials for many life-safety, health and welfare characteristics. Within the directory, "Structural Cement-fiber Units" are contained in UL Category Code **CIYT**. However, this category only covers structural cement-fiber units investigated for use in fire-resistance designs as detailed in Fire-resistance Ratings. Whereas, UL Category Code **BICW** covers various noncombustible building materials certified in accordance with ANSI/ASTM E136, "Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C."

The ongoing certification by UL for Category **BICW** ensures that every panel manufactured meets the requirements for noncombustibility in accordance with ASTM E136.

USG STRUCTURAL PANELS AND NONCOMBUSTIBILITY

USG Structural Panels are the only structural, noncombustible panels manufactured and available in the U.S.A.

Manufactured by USG, USG Structural Panels meet the U.S. standard for noncombustibility in accordance with ASTM E136. See the following UL link for our Noncombustible Building Materials certification:

[USG Structural Panels UL Noncombustible Building Materials certification](#)

Always verify a product's noncombustibility claims by ensuring that a certification agency like UL has a program of continued validation.

For more information on USG Structural Panels, or for a copy of USG Structural Panel's ASTM E136-12 Certificate from UL, please contact the USG Structural Solutions team.

USG Structural Solutions	Name	Phone	Email
National Sales Manager	Mike Inman	312 436-4270	minman@usg.com
Technical Sales Manager	Frank Pospisil	312 436-7618	fpospasil@usg.com
Product Manager	Jose Estrada	312 436-4260	jmestrada@usg.com

PRODUCT INFORMATION

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

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PLYCEM is a registered trademark of The Plycem Company Inc.

VIROC is a registered trademark of Minerals Technologies Inc.

NOTE

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

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

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

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