



A LIGHTWEIGHT, NONCOMBUSTIBLE SUBFLOOR IS BREAKING NEW GROUND FOR MODULAR CONSTRUCTION

USG STRUCTURAL PANEL CONCRETE SUBFLOOR

PROJECT PROFILE

Permanent modular construction is revolutionizing the way we think about building by enhancing efficiency, increasing quality, reducing delays and boosting sustainability. The demand for modular construction has increased significantly in recent years, and as a result, modular building companies have begun searching for ways to improve the efficiency of their manufacturing processes.

One company leading that charge is Modular Steel Systems, Inc. Asked to help a prominent hotel chain build their latest project in less time and at a reduced cost, Modular Steel Systems searched for a way to improve its efficiency without sacrificing quality. The answer was choosing the noncombustible USG Structural Panel Concrete Subfloor over traditional poured concrete.

Made in America, USG Structural Panel Concrete Subfloor, also known as USG Structo-Crete™, is ideal for permanent modular construction. The panels are made from lightweight, high-strength reinforced concrete that can be screwed, cut and cored just like plywood—all while achieving a 2-hour fire rating.

Prior to switching to USG Structural Panel Concrete Subfloor, the only way Modular Steel Systems could have achieved that same noncombustible fire rating was by using pan-deck and poured concrete, which requires additional time to set and cure and weighs around 40 pounds per square foot.

In contrast, USG Structural Panel Concrete Subfloor weighs only 5 pounds per square foot and doesn't need to set or cure. This allowed Modular Steel Systems to build larger modules in less time and transport them to the job site without incurring additional costs.

Additionally, USG developed the only UL-certified fire design for modular construction. This design, known as **H501™**, uses a USG Structural Panel as the subfloor and one layer of drywall to deliver a 2-hour fire-rated assembly. It's a simple, effective and innovative solution that significantly reduces the overall weight of a building, as well as unnecessary space between floors.

Thanks to its many benefits, USG Structural Panel Concrete Subfloor is improving the speed and efficiency with which modular manufacturers can create and deliver building solutions, allowing them to meet the growing demand for modular construction better than ever before.

“The biggest advantage of modular construction is the time. If we were to use lightweight concrete, it would have slowed down production considerably. We found that the USG Structural Panel does the job a lot better and a lot quicker than concrete.”

Jim Novic, Vice President
Modular Steel Systems, Inc.

“USG wants to help the permanent modular industry innovate better designs [and] better systems to get these buildings up and open as soon as possible.”

Frank Pospisil, Technical Sales Manager
USG Structural Solutions



PROJECT HIGHLIGHT

The Only UL-Certified Modular Floor/Ceiling Fire Assembly - H501™

USG Structural Panel Concrete Subfloor can be combined with other noncombustible materials to create a floor/ceiling assembly with a 2-hour fire rating that's ideal for use in modular construction.

“Prior to us finding out about USG Structural Panels, the only way one could have achieved the 1- or 2-hour fire rating required was using lightweight concrete.”

Jim Novic, Vice President
Modular Steel Systems, Inc.

MSRP based upon full truckload delivered to jobsite:
Subfloor: \$4.50/sf

SCP72-USA-ENG/ rev. 2-19
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WEIGHT DIFFERENCE:

PAN-DECK AND CONCRETE



LB. PER
SQ. FT.

USG STRUCTURAL PANELS



LB. PER
SQ. FT.

THIN PROFILE = MORE SPACE:

CURRENT MODULAR FIRE DESIGNS



UP TO
28"
BETWEEN
MODULES

USG STRUCTURAL PANELS

12-5/8"
BETWEEN
MODULES



KEY PRODUCT

USG Structural Panel Concrete Subfloor is a high-strength, dimensionally stable, reinforced concrete panel for use in noncombustible construction. Lighter than precast or poured concrete, it installs like wood sheathing and is mold-, moisture- and termite-resistant, providing a faster, easier and more efficient way to build floors.



MADE IN
DELAN, WI

AVAILABLE IN
CUSTOM LENGTHS
AND SIZES



GREATEST CHALLENGE

To deliver noncombustible modular building components quickly and at a reduced cost, without sacrificing quality or fire resistance.