

Fire Ratings

Numerous tests have been performed on SIP's and SIP components. These tests include the following:

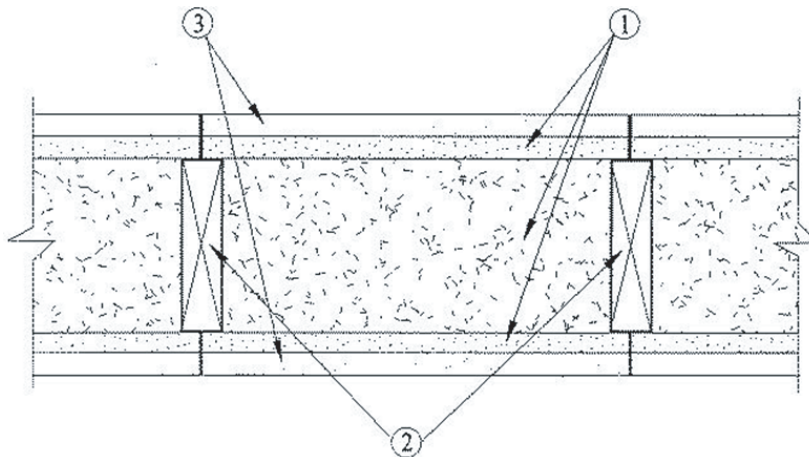
- = ASTM E-119 One-hour UL Classification U532
- = UBC 26-3 15-minute
- = UL 1256 15-minute
- = ASTM E-84 15-minute

According to current codes and NER-467, panels made with a foamed plastic core must be covered with a 15-minute thermal barrier. This is defined as Y2" gypsum board or equivalent. Equivalent materials could be 5/8" plywood or 1" x 6" T&G. In any event, seek approval on all equivalent materials from local code officials. The Design U532 classification applies to W.H. Porter, Inc., exclusively. Specific instructions relative to installation of Type C gypsum board, use of dimensional lumber splines and joint sealing must be followed.

Fire Resistance Ratings - ANSI/UL 263 BXUV

August 08, 2001

Design No. U532 Bearing Wall Rating — 1 Hr



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1. Building Units* Composite panels consisting of a nom. 5-1/2 in. thick polystyrene foamed plastic core faced on both surfaces with min. 7/16 in. thick oriented strand board. Building Units* loaded to a max of 1800 lb. per linear foot which is 60 percent of recommended axial design load.

W H PORTER INC - Type Porter Structural Insulated Panels.

2. Studs and Bearing Plates Nom. 2 by 6 in. thick No. 2 lumber installed in Building Units* (Item 1) in pre-cut channels. End stud and bearing plate secured to the oriented strand board with 1-5/8 in. long ring shank nails spaced 12 in. OC along the edges on both faces.

3. Gypsum Board* 5/8 in. thick, 4 ft. wide, applied vertically installed with 1-5/8 in. long high/low bugle-head steel screws spaced 8 in. OC along the edges and 12 in. OC in the field. Vertical joints over vertical joints of Building Units* (Item 1). Gypsum Board joints covered with joint tape and joint compound. Screwheads covered with joint compound.

CANADIAN GYPSUM COMPANY - Type C.

UNITED STATES GYPSUM CO - Type C.

USG MEXICO S A DE C V - Type C.

*Bearing the UL Classification Mark

15 Minute Thermal Barrier Options

The IBC and IRC building codes further state that any foam plastic insulation shall be separated from the interior of the building by an approved 15 minute thermal barrier consisting of 1/2" gypsum wall board or an equivalent thermal barrier. Since the core of a SIP is foam plastic, the inside of a wall or roof panel will need to be covered by a 15 minute thermal barrier.

NoBurn® Plus - "Class A" intumescent paint fire reactant

NoBurn® Plus is a product we offer in conjunction with our SIPs. It offers "Class A" fire rating, and a 15 minute thermal barrier over 7/16" OSB when tested according to UL 1715. NoBurn Plus can replace primer at virtually the same cost as conventional paints and can even be tinted. Additionally, the NoBurn Plus MIH product is mold resistant.

The APA has reported that 23/32" western species plywood or OSB will meet the 15 minute thermal barrier. This report additionally states that, according to IBC section 2603.4.1.5, 15/32" exterior grade plywood or OSB prescriptively meet this thermal barrier requirement for roof assemblies.

Beside gypsum board, plywood and OSB, other materials such as T&G decking may meet the 15 minute thermal barrier requirement. However, before proceeding, consult your local building code or inspector. While decisions made within one code jurisdiction may be considered as a precedent for others, the final decision on materials not specifically listed in the code, are usually made on a case-by-case basis within each jurisdiction.

See Section 2603 of the IBC "Foam Plastic Insulation" for more detailed information.

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