

TECHNICAL BULLETIN No. 221**Date: May 12, 2021****Subject: Premium Insulating Sheathing and the Building Codes**

The purpose of this technical bulletin is to inform BRF sales personnel and customers of key points relating to using code compliant Premium Insulating Sheathing as a non-structural exterior wall sheathing.

1. Premium Insulating Sheathing is classified in ASTM C208 Standard Specifications for Cellulosic Fiber Insulating Board as a Type IV Wall Sheathing, Grade 1 Regular, for use as wall sheathing in frame construction.
2. Fiberboard in conformance with ASTM C208 is **“prescriptive”** in the IBC and IRC. The following building code references note fiberboard compliance with ASTM C208:
2015, 2018, 2021 IBC Section 2303.1.6
2015, 2018, 2021 IRC Section 602.1.10 and Table R602.3(1), Footnote “g”
Current and past IBC and IRC versions can be accessed at www.iccsafe.org
3. Premium Insulating Sheathing can be used as an exterior wall sheathing where code permits a non-structural panel to be used in the intermittent bracing methods described in the following:
2015, 2018, 2021 IBC Table 2308.6.3(1) Bracing Methods
2015, 2018, 2021 IRC Table R602.10.4 Bracing Methods
Bracing Methods Table Link <https://up.codes/s/construction-methods-for-braced-wall-panels>
4. Different types of bracing and materials may be used in code compliant wall constructions. We have promoted the Let-in-bracing (LIB) method as a code compliant bracing method which allows Premium Insulating Sheathing to be used continuously along a braced wall line. Since there are other intermittent bracing methods, there are areas in a braced wall line where a non-structural panel (like Premium Insulating Sheathing) could be used. See definitions.
5. Premium Insulating Sheathing fasteners and fastener spacing is referenced in the codes. Premium Insulating Sheathing shall be installed in accordance with the following code references: 2015, 2018 IBC Table 2304.10.1 Footnote b; 2021 IBC Table 2304.10.2 Footnote b; and 2015, 2018, 2021 IRC Table R602.3(1).

6. Use of Premium Insulating Sheathing is limited to installation on buildings of Type V (IBC-Chapter 6) wood frame construction where any building material is permitted by code. However, the Type V-A “protected” designation requires that load bearing exterior walls have a one hour fire resistance rating. For Premium Sheathing to be used in Type V-A constructions, there must be added wall covering material to achieve the code compliant one hour rating. Premium Sheathing use on Type V-B “unprotected” constructions requires no fire rating and no added fireproofing.
7. Premium Insulating Sheathing must be covered with a **water-resistive barrier** and approved exterior wall covering in accordance with the requirements of the applicable code. A water-resistive barrier is No. 15 asphalt felt or other approved water-resistive barrier. Code references: IBC Section 1402.2 and IRC Section R703.2.
8. Premium Insulating Sheathing panels must not be utilized as a nailing base.
9. Premium Insulating Sheathing must not be used in place of a structural fiberboard (SFB) sheathing panel for wall bracing. The codes do reference SFB as a permitted intermittent and continuous bracing method. Since we do not currently offer a structural fiberboard sheathing, these SFB bracing methods do not apply in our current business case. Continuous sheathing (CS) bracing methods require that structural sheathing be applied to all sheathable areas on a braced wall line.
10. Several other factors influence use of particular bracing methods, materials, and fastening; wind speed, seismic category, exposure, wall height and story.
11. Use of Premium Insulating Sheathing in the west coast states is affected by seismic requirements. The majority of California, Oregon and Washington populations are located in Seismic Design Categories (SDC) E and D. Premium Sheathing could be used in SDC D with an intermittent bracing method, however code required safety factors increase the length of braced wall panel sections. This increase in braced wall panel length would displace any use of non-structural panels. As an added note, CS-SFB is not allowed in SDC D. So the bottom line here is that there appears to be minimal Premium Insulating Sheathing opportunity on the west coast. The mixing and matching of intermittent bracing methods with Premium Insulating Sheathing in a sensitive seismic region is a likely point of contention with a code official.
12. In summary, Premium Insulating Sheathing can be used in those exterior wall sheathing applications where code provides other means of structural bracing, as noted in IRC Table 602.10.4 Bracing Methods, and IBC Table 2308.6.3(1) Bracing Methods. Code compliant wall bracing solutions may require review by a design professional, and require local building official approval. Refer to local codes and building official for specific requirements.

Definitions:

Braced Wall Line – Walls that are braced to resist racking due to wind and seismic forces are identified as braced wall lines (BWLs). Generally, all exterior walls are considered to be part of a braced wall line and are required to be properly braced with braced wall panels.

Braced Wall Panel – A braced wall panel (BWP) is a “section” of a braced wall line that specifically utilizes a code-compliant bracing method (e.g., let-in- brace, a wood structural panel, or other bracing methods) to resist racking forces. The length of a braced wall panel “section” can vary, and is not necessarily a 4’ wide panel on each corner.