

10'x10' Kiosk Project

3D VIEW



3D VIEW



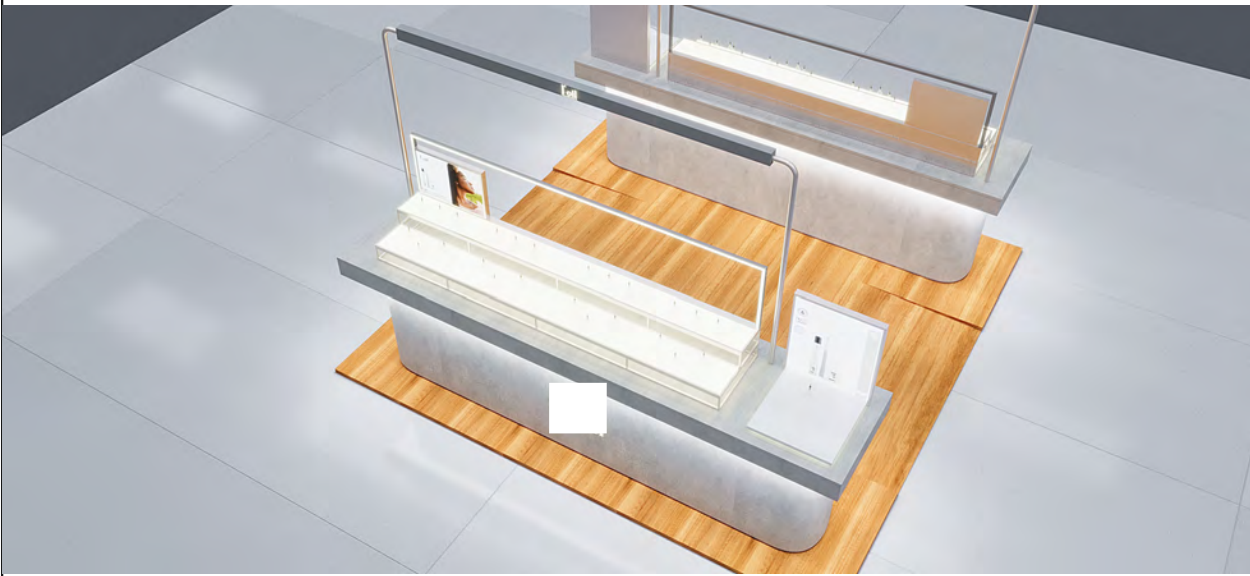
3D VIEW



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FIRE RATING



mission for panels!

A RENOWNED FIRE-RETARDANT MDF PANEL THAT DELIVERS

When you need a flame-retardant MDF solution for your paneling, cabinetry, shelving, trim and furniture needs, Flakeboard Premier® FR MDF is best in class. Our Class A/Class 1 rated fire-retardant MDF panels are ideal for interior, non-structural use in public areas such as schools, hotels, hospitals and restaurants. Premier® FR MDF's design flexibility and workability make it an ideal choice for a variety of applications.

Flakeboard Premier® FR MDF delivers:

- Smooth surface properties for painting or laminating
- Dense, flat surfaces for easy machining
- Uniform fiber distribution and texture
- Sharp edges and strong internal bond
- Good acoustical dampening properties
- The right thickness for thick board applications.

Flakeboard® FR MDF Specification (Bennettsville, SC; Eugene, OR)**

| Property | Premier® FR LAs Bennettsville | | Premier® FR Bennettsville | | Premier® FR Eugene** | |
|---------------------------------|--|--|--|--|--|--|
| Thickness (in)* | $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{4}$ | $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{4}$ | $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{4}$ | $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{4}$ | $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{4}$ | $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{4}$ |
| Density (pcf) | 42 | 46 | 46 | 46 | 47 | 47 |
| MDF (pcf) | 2300 | 2350 | 2350 | 2350 | 2350 | 2350 |
| MOE (ksi) | 250,000 | 250,000 | 250,000 | 250,000 | 250,000 | 250,000 |
| Internal Bond (psi) | 90 | 88 | 72 | 105 | 80 | 90 |
| Face Screw Hold (ft-lb) | 420 | 470 | 470 | 275 | 275 | 390 |
| Edge Screw Hold (ft-lb) | 280 | 280 | 270 | 220 | 220 | 280 |
| Thickness Swell @ 24% RH (%) | 0.080 | 0.06 | 0.06 | 0.080 | 0.06 | 0.06 |
| Thickness Tolerance (in) | ± 0.005 | ± 0.005 | ± 0.005 | ± 0.005 | ± 0.005 | ± 0.005 |
| Length and Width (in) | $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{4}$ | $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{4}$ | $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{4}$ | $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{4}$ | $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{4}$ | $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{4}$ |
| Squareness (in) | $\pm \frac{1}{32}$ | $\pm \frac{1}{32}$ | $\pm \frac{1}{32}$ | $\pm \frac{1}{32}$ | $\pm \frac{1}{32}$ | $\pm \frac{1}{32}$ |
| Flame Spread | 0 (UL and UL-C Compliant) | | 0 (UL and UL-C Compliant) | | 0 (UL and UL-C Compliant) | |
| Smoke Developed | 0 (UL and UL-C Compliant) | | 0 (UL and UL-C Compliant) | | 0 (UL and UL-C Compliant) | |

* Moisture absorption available. ** According to ASTM E 1317 (24-hour static immersion). The above figures represent our best case ranges of current production.

** Request with specifications.

- * Look for A/E/C® without problem.
- * Product suitable for a particular application is the responsibility of the fabricator or end user.
- * Compliance with AIA, LEED, IGBC, WELL and GreenSource (GreenSource) is not guaranteed.
- * Always verify that claims are suitable for your use.
- * All claims are dependent on a correct and complete specification.
- * Contact your local distributor for more information.
- * AIA/CES CEU credit available for AIA/CES members.
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- * AIA/CES CEU credit available for AIA/CES members.

USAGE NOTES

When using flame-retardant products, Premier® FR MDF must always be flame-retarded. Do not use flame-retardant products in areas where fire is a concern. Any surface should be treated in accordance with the chemical product's Premier® FR MDF prior to its installation. Chemicals should be applied to the surface of the product.

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LIMITATIONS

Premier® FR MDF is not intended for use in areas where fire is a concern. Do not use flame-retardant products in areas where fire is a concern.

STORAGE AND HANDLING

Premier® FR MDF should be stored in a dry location. The product should be stored in a dry location. Do not use flame-retardant products in areas where fire is a concern.

CALIFORNIA PROPRIETARY INFORMATION

Flakeboard, Premier® FR MDF, and other trademarks are the property of their respective owners. All other trademarks are the property of their respective owners.

FIRE RATING

TECHNICAL BULLETIN

C-8 2004

ANSI/UL 723 (ASTM E84) "TEST FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS" AND FLAMMABILITY RATINGS

Fire Protection Codes and Classification

The basic goal of fire protection codes and standards is to reduce risks associated with fire. These private and public organizations concerned with developing, revising and maintaining fire protection regulations and, as a result, these are very different building regulations, test methods to give values for material combustibility as well as required elements for commercial and, in some cases, residential occupancies.

All colors and thicknesses of "colored" solid surfaces carry the highest "Surface Finish" rating, Class I (Class A) or the principal fire rating notes:

- Life Safety Code, NFPA 101 Section 10.2.1 Interior Wall or Ceiling Finish Rating and Classification;
- Uniform Building Code (UBC) issued by ICCB, Section 4204, Table 42-A;
- Basic Building Code issued by BOCA, Section 922.5.1;
- Standard Building Code issued by SBCCI, Section FM - Specifications on Interior Finish;
- IBC Section 705.4.2 and Section 705.4.3 or Table 705.4;
- IBC Section 803.3, Interior Finish;

The United States of America has a federal structure, however building codes and regulations are the responsibility of the individual states through state legislatures. Many building authorities utilize the National Fire Protection Association's (NFPA) 101 Code for Safety to the Lives from Building and Structures" for fire regulation purposes. Examples of regional codes/standards that have been legislated are:

- South - Standard Building Code issued by the Southern Building Code (International), Inc. (SBCI);
- West - Uniform Building Code (UBC) issued by the International Conference of Building Officials (ICBO);
- Midwest/Midwest - 2013 National Building Code issued by the Building Officials and Code Administrators International, Inc.

Generally, local authorities have codes developed by organizations within their region of the United States. Building codes may or may not be adopted by their authority by the local authority.

One Test – Many Different Names

In the case of "Surface Burning" surface burning characteristics determine a material's fire performance characteristics under the same test procedure, yet these identical test procedures are performed differently by the various standards organizations. For example, the American Society for Testing and Materials (ASTM) E 84 is also called NFPA 101, 723 and the American Society for Testing and Materials (ASTM) E 84 has also been replaced as ASTM E 84. This article intended to provide the fire protection for building surface burning characteristics of interior wall finish materials. The National Fire Protection Association (NFPA) standard 101 as well as Uniform Building Code standard 705.4.1 are discussed for this same testing to summarize, however standards are equivalent.

TECHNICAL BULLETIN

ANSI/UL 723 (ASTM E84) — (continued)

Interpreting Test Results to Obtain Classification

General classification of the performance is based on the test results in accordance with the Life Safety Code NFPA 101, Section 10.2.1 and the Standard Building Code issued by BOCA, Section 924 and/or Uniform Building Code (UBC) issued by ICCB, Section 4204 and Basic Building Code issued by BOCA, Section 922.5.1.

| ULC Surface Class, NFPA 101 Section 10.2.1, and Standard Building Code issued by BOCA, Section 924 | CLASSIFICATION NAME | SPREAD INDEX | SMOKE DEVELOPED |
|--|---------------------|--------------|-----------------|
| Class A | 0 - 25 | ≤ 450 | |
| Class B | 26 - 75 | ≤ 850 | |
| Class C | 76 - 300 | ≤ 1,500 | |

Uniform Building Code (UBC) issued by ICCB, Section 4204 and Basic Building Code issued by BOCA, Section 922.5.1

| CLASSIFICATION NAME | SPREAD INDEX | SMOKE DEVELOPED |
|---------------------|--------------|-----------------|
| Class I | 0 - 25 | ≤ 450 |
| Class II | 26 - 75 | ≤ 850 |
| Class III | 76 - 300 | ≤ 1,500 |

Testing

The ANSI/UL 723 (ASTM E84) Surface Burning Characteristics of Building Materials test is typically used to determine the surface burning characteristics of materials used to construct for walls and ceilings. The test requires a 24 inch (22.5 x 24 inch (58.5 x 61.5 cm) test specimen and a 10-minute test. A specimen is placed in an automatic position. The test provides a means to describe a material's fire and test response during a controlled burn.

The "Surface Burning" burn chamber is 25 inch (635 mm) in length, 4 inch (101.6 mm) wide and 1.5 inch (38.1 mm) in depth with the walls of the chamber lined with treated fiberboard. The test specimen is placed horizontally into the burner, and a 50 cubic foot (1.4 cubic meter) meter and a natural gas supply is used to heat the burner to the maximum temperature during testing.

Calipers at one end of the burner provide a 4.5 inch (114 mm) flame source for ignition, and a flame source is controlled shut. Heat radiant observation mirrors are located at one-foot intervals along one side of the burner so that the entire length of specimen is observed for the duration of the 10-minute test. A thermometer is located at the opposite end or vent end of the burner and is used to indicate changes resulting from different pollutants or smoke.

The distance traveled by the flame is used to calculate the Flame Spread Index (FSI). "Flame spread ratings offer a general indication of the speed with which the fire might spread across the surface of a material." The amount of smoke generated during the burn is measured optically and is used to calculate the Smoke Developed Index (SDI). "This, in essence, is a rating that is based on a large-scale development value should provide better visibility in a given space over time a material with a high smoke development value."*

