



Weyerhaeuser particleboard is the ideal solution for applications where fire safety is required. Duraflake® FR particleboard is a UL® approved, Class 1-rated fire retardant panel, which makes it suitable for interior non-structural use when building codes, public safety requirements or insurance rates are important. Architects specify Duraflake® FR particleboard in restaurants, schools, hospitals, hotels, malls, airports, offices and public buildings.

Duraflake® FR Particleboard Specifications (*Albany, OR*)

APPLICATIONS

- Elevator Cabs
- Passenger Boarding Bridges
- Architectural Woodwork
- Wall Sheathing
- Wainscoting
- Display Panels
- Door Components
- Furniture
- Fixtures
- Commercial Case Goods
- Shelving
- Cabinets
- Countertops

PRODUCT USES

Weyerhaeuser Duraflake® FR particleboard is a high-quality, non-structural panel made from Douglas-fir and other western softwood particles, fire retardant chemicals and special formulas of resins and waxes. The flame retardant is distributed evenly throughout the panel, making it an effective Class-1 fire retardant particleboard. It can be drilled, routed, bullnosed, beveled and precision-machined without affecting the flame spread rating.

Duraflake® FR particleboard is a good substrate for wood veneers and high-and-low-pressure laminates.

Usage Notes

- Some laminates applied to Duraflake® FR particleboard may change the flame spread rating.
- Standard available woodworking glues have been successfully used in lamination. However, some adhesives may have compatibility problems with the chemical system used to treat Duraflake® FR particleboard. Any adhesive should be tested for compatibility with the chemical system in Duraflake® FR particleboard prior to full-scale gluing. Questions should be directed to the glue supplier.
- When used in wall systems, an integral vapor barrier must be a properly installed part of the wall if the wall is exterior or the wall separates spaces conditioned unequally.

Limitations

- Duraflake® FR particleboard should be specified for interior use only and is not intended for use in exterior applications or damp conditions.

FEATURES AND BENEFITS

Strength And Dimensional Stability

Douglas-fir and other western softwood particles have proven dimensional stability, low linear expansion, and low thickness swell. Multi-layer construction of Duraflake® FR particleboard adds to the strength and stability of the finished product.

Smooth Finishing Surface

Fine particle distribution results in a smooth surface for laminating and finishing.

Excellent Machining and Low Tool Wear

Consistent manufacturing processes and a well-balanced surface-to-core construction result in an easy-to-machine panel when sawing and routing.

Wide Range of Products and Sizes

Weyerhaeuser Duraflake® FR particleboard is stocked at distributors across North America. Stocked lengths are 6', 8', 10' and 12'. Thicknesses range from 3/8" to 1 1/2", or metric units within this range. Standard widths range from 3' to 5'. Custom dimensions may be ordered up to 6' wide. Cut-to-size is also available.

Finishes and Decorative Laminates

Weyerhaeuser Duraflake® FR particleboard can also be ordered UV-filled. It is available from secondary manufacturers with a wide variety of wood veneers, high- and-low-pressure laminates and thin roll laminates.

Duraflake® FR Particleboard Specifications (Albany, OR)

ARCHITECTURAL PROJECTS

- Piper Jaffrey, *San Francisco, CA*
- Carnegie Hall, *New York, NY*
- John F. Kennedy International Airport, *New York, NY*
- LaGuardia Airport, *New York, NY*
- Washington Convention Center, *Washington, DC*
- Asian Art Museum, *San Francisco, CA*
- University of California at San Francisco, *Mission Bay, San Francisco, CA*
- Lemay Campus, Poudre Valley Hospital, *Ft. Collins, CO*
- Centers for Disease Control, Building 18, *Atlanta, GA*

TECHNICAL DATA

Applicable Standard Tests

- ASTM E 84 Standard Test for Surface Burning Characteristics of Building Materials
- ASTM C 236 Guarded Hot Box Test
- UL 723 Test for Surface Burning Characteristics of Building Materials

Building Codes

- BOCA - Building Officials and Code Administrators International
- ICBO - International Conference of Building Officials
- SBCCI - Southern Building Code Congress International

Agency Approvals

- California State Fire Marshall 2660-1627:100
- City of New York MEA 177-78-M
- City of Los Angeles RR 248811
- City and County of San Francisco 258 W34-1
- City and County of Denver M-88-46

Physical Properties

Grade	Duraflake® FR Particleboard	
Thickness (in)*	$3/8$ - $3/4$	$13/16$ - $1/2$
Specification	Class I Flame Spread	
Density (lb/cu ft)	45	44
MOR (psi)	1,600	1,600
MOE (psi)	300,000	250,000
Internal Bond (psi)	80	60
Face Screw Hold (lb)	250	250
Edge Screw Hold (lb)	225	175
Linear Expansion (%)	0.40	0.35
Thickness Tolerance (in)	+/- .005	+/- .005
Length and Width (in)	+/- $1/16$	+/- $1/16$
Squareness (in)	+/- $1/8$	+/- $1/8$

* Metric thickness available.

The above properties are based on averages of normal production. Testing for conformance to the above specifications must be done in accordance with procedures in the American National Standard for Particleboard (ANSI A208.1-1999).

Underwriter's Laboratories, Inc. Classified Wood Particleboard

Surface Burning Characteristics, UL 723 (Based on 100 for Untreated Red Oak)

Flame Spread	20
Smoke Developed	25

See UL Classified Building Materials Index. Listed under Wood Particleboard.

Thermal Conductivity (k) and Thermal Resistance (1/k = R)*

Thickness (in)	$3/8$	$1/2$	$3/4$	1
k=	0.54	0.62	0.55	0.69
R=	1.85	1.61	1.82	1.45

* R and k values obtained using ASTM C 236 "Thermal conductance and transmittance of built-up wall sections by means of the 'Guarded Hot Box' in tests conducted by Northwest Testing Laboratories."

Warning: Particleboard is manufactured with urea-formaldehyde resin and may release formaldehyde in low concentrations. Formaldehyde can cause temporary eye and respiratory irritation and may aggravate respiratory conditions or allergies. Proper ventilation will reduce the risk of such problems.

As with any building project, always wear proper eye, ear, and breathing protection and follow local building codes.

A Material Data Safety Sheet is available upon request.

STORAGE AND HANDLING

Duraflake® FR particleboard should never be stored or used outdoors. The indoor storage area should be clean, dry, well-ventilated, and free of dust, dirt or particles that could contaminate the particleboard. Store flat on stickers on a level, hard, dry surface. Constant relative humidity and temperature should be maintained. Before use, allow to stabilize to the same conditions as are expected after the panel is installed. Condition 48 to 72 hours prior to lamination. For more information, see *Composite Panels Association Technical Bulletin: Storage and Handling of Particleboard and MDF*.

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