

FLAMEPROOF COMPANIES

ILLINOIS • WISCONSIN • TEXAS • VIRGINIA

Manufacturers of High Performance Treated Wood Products
and Distributors of Commercial Building Materials.

intertek
Total Quality Assurance



www.flameproof.com



FLAMEPROOF COMPANIES

www.flameproof.com

Montgomery, Illinois

630.859.0009

Milwaukee, Wisconsin

414.365.3465

Fort Worth, Texas

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Kinsale, Virginia

804.472.7209



PRODUCTS AND SERVICES

- 4 D-Blaze® fire retardant treated wood products
- 5 D-Blaze® applications and testing
- 6 D-Blaze® strength testing
- 7 D-Blaze® certified wall assemblies
- 8 MCA preservative treated wood
- 9 FSC/LEED Forest Stewardship Council
- 10 FX Lumber Guard XT Exterior Fire Retardant
- 11 Timbers Engineered lumber
- 12 Boom & Crane Service Cutting & Fabrication
- 13 Fire retardant In-Wall blocking
- 14 Mag Tech™ Fire Retardant OSB Sheathing
- 15 Mag Tech™ Certified Wall Assemblies



Since 1991, **Flameproof Companies** has been committed to providing superior products and excellent service to our customers. We believe our adherence to these fundamental principles allows us to provide a great experience to our customers and build lasting relationships.

Flameproof Companies is a manufacturer and supplier of treated lumber and specialty building products for the commercial, industrial and multi-family building industries. We specialize in building code compliant, environmentally friendly fire retardant and preservative treated wood products, along with related construction materials.

We have facilities strategically located in Montgomery, Illinois; Milwaukee, Wisconsin; Fort Worth, Texas and Kinsale, Virginia to best serve these regions.

We embrace innovation in products and production processing, allowing us to bring to our customers the very best our industry has to offer.

We look forward to servicing you today and building a relationship for tomorrow, and beyond.



D-BLAZE®

Class A Rated

Fire Retardant Treated Wood Products

Certified and Listed with Accredited Testing Agencies

D-Blaze® fire retardant lumber and plywood products have been tested, certified and listed with Underwriters Laboratories (Listing BUGV.r39579 & BPVV.r39580), all of which are prominent, internationally accredited testing agencies.

Ongoing Independent Third Party Inspections

Timber Product Inspection (TPI) provides ongoing random follow-up inspections to assure compliance with AWP standards for fire retardant treatment and the required quality control metrics for fire retardant chemical, physical treating parameters and kiln drying. This monitoring program is in addition to the UL and Intertek follow-up requirements for listing.

Building Code Compliant

All D-Blaze® fire retardant lumber and plywood (ICC ESR 2645) meets the requirements for FRTW listed in ICC AC66 and as such are compliant with major building codes. D-Blaze® treated wood products are compliant with 2018, 2015, 2012 and 2009 International Building Code® (IBC).

Always check with applicable building codes to determine what specific criteria are required for any given locality or job.

American Wood Protection Association (AWPA) Compliance

D-Blaze® Fire Retardant wood products comply with AWP UC-1 and UCFA use category system. D-Blaze® treatment process meets the AWP T1 standard and D-Blaze® chemical has been analyzed by Timber Products Inspection (TPI) to determine that the chemical components meet AWP P-50 protocol.





Applications for Use

- | | |
|------------------------|-------------------------|
| Fire Blocking | Flat Roof Blocking |
| Plywood Roof Sheathing | Lumber Roof Decking |
| Wall Framing | Interior Roof Trusses |
| Wall Sheathing | Interior Floor Trusses |
| Store Fixtures | Interior Millwork |
| Underlayment | Interior Scaffold Plank |
| Subfloors | Interior Wall Blocking |
| Mezzanine Floors | |

Testing and Approvals

ASTM International (ASTM):

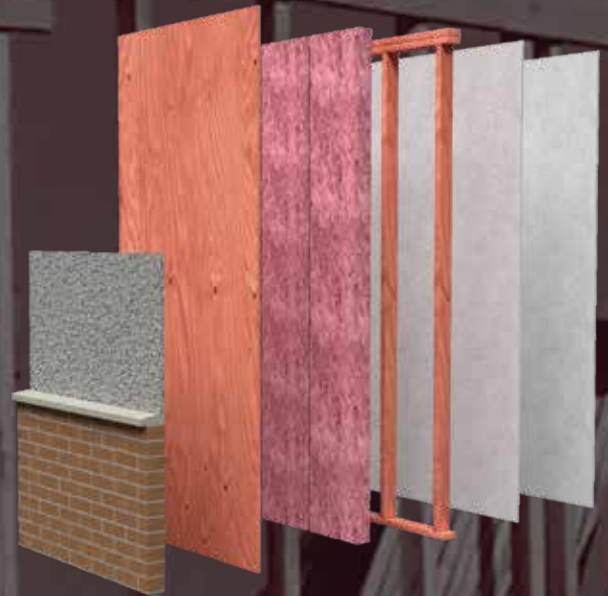
- ASTM D3201** – Standard Test Method for Hygroscopic Properties of Fire-Retardant Wood and Wood-Base Products
- ASTM D5516** – Standard Test Method for Evaluating the Flexural Properties of Fire-Retardant Treated Softwood Plywood Exposed to Elevated Temperatures
- ASTM D5664** – Standard Test Method for Evaluating the Effects of Fire-Retardant Treatments and Elevated Temperatures on Strength Properties of Fire-Retardant Treated Lumber
- ASTM D6305** – Standard Practice for Calculating Bending Strength Design Adjustment Factors for Fire Retardant Treated Plywood Roof Sheathing
- ASTM D6841** – Standard Practice for Calculating Treatment Adjustment Factors for Fire Retardant Treated Lumber
- ASTM E84** – Standard Test Method for Surface Burning Characteristics of Building Materials
- ASTM 2768** – Extended Duration Surface Burning Characteristics of Building Materials
- ASTM E119** – Fire Tests of Building Construction and Materials

American Wood-Protection Association (AWPA):

- AWPA E12** – Standard Method of Determining the Corrosion of Metal in contact with wood
- AWPA P50** – Standard for Fire Retardant FR-2 (FR-2)
- AWPA T1** – Use Category System: Processing and Treatment Standard
- AWPA U1** – Use Category System: User Specifications for Treated Wood
- BPVV.r10647**
- BUGV.r10950**
- UL - 263** – BXUV-V335
- UL - 723** – BPVV.r10647 and Plywood BUGV.r10950

Code Compliance Research Reports

- LARR** (Los Angeles Research Report) – 24502
- ICC ESR** – 2645



Dimensional Lumber

- 2x4, 2x6, 2x8, 2x10, 2x12, 2x14
- SPF, SYP, DF, HF
- FRS Rated: FSI/SDI ≤ 25

Plywood

- SYP, DF
- FRS Rated: FSI/SDI ≤ 25
- No minimum quantities required
- Short lead times
- Job site deliveries available
- Applicable for use in Type III & Type V Construction
- Cost Effective
- Custom Sizes Available
- Full FRT Lumber Packages

FLAME TECH™

Strength Testing

Table 1 Strength Design Adjustment Factors for D-Blaze Fire Retardant Lumber compared to Untreated Lumber

Property	Service Temperature < 100° F (38° C)	D-Blaze Lumber Roof Framing Climate Zone ^{1,2}		
		1A	1B	2
Compression Parallel, Fc	0.935	0.935	0.935	0.935
Horizontal Shear	0.985	0.838	0.894	0.964
Tension Parallel	0.874	0.625	0.775	0.905
Bending: Modulus of Elasticity, E	1.000	0.977	0.986	0.997
Bending: Extreme Fiber Stress, Fb	0.972	0.740	0.828	0.939
Fasteners/Connectors	0.900	0.900	0.900	0.900

Table 2 Span Ratings for D-Blaze Fire Retardant Southern Pine Plywood for Roof Sheathing Applicable at a Temperature up to 170° F (77° C) Based on Uniform Loading, Two Span Construction and L/180 Deflection Limit

Plywood Thickness (Inches)	D-Blaze ^{1,2,3,4,5,8,9,10,11,12,13} Plywood Roof Sheathings Span Ratings Used at Temperatures > 100° F and < 170° F		
	Climate Zone ^{6,7}		
	1A	1B	2
3/8" (0.375)	20	20	20
15/32" (0.469)	24	24	24
1/2" (0.500)	24	24	24
19/32" (0.594)	32	32	32
5/8" (0.625)	32	32	32
23/32" (0.719)	40	32	40
3/4" (0.750)	40	32	40
7/8" (0.875)	40	40	48
1 (1.000)	48	48	48
1 - 1/8" (1.125)	48	48	48

Table 3 Span Ratings for D-Blaze Fire Retardant Douglas Fir and other species Plywood for Roof Sheathing Applicable at a Temperature up to 170° F (77° C) Based on Uniform Loading, Two Span Construction and L/180 Deflection Limit

Plywood Thickness (Inches)	D-Blaze ^{1,2,3,4,5,8,9,10,11} Plywood Roof Sheathings Span Ratings Used at Temperatures > 100° F and < 170° F		
	Climate Zone ^{6,7}		
	1A	1B	2
3/8" (0.375)	16	16	20
15/32" (0.469)	20	20	24
1/2" (0.500)	20	20	24
19/32" (0.594)	24	24	32
5/8" (0.625)	24	24	32
23/32" (0.719)	32	32	32
3/4" (0.750)	32	32	32
7/8" (0.875)	40	32	40
1 (1.000)	40	40	48
1 - 1/8" (1.125)	48	40	48

Table 4 D-Blaze Treated Plywood Subfloor Allowable Spans (Inches) used at Temperatures < 100° F (38° C)

Plywood Thickness (Inches)	Southern Pine	Douglas Fir
	Allowable Span (Inches) ^{1,2}	Allowable Span (Inches) ^{1,2}
3/8" (0.375)	16	12
15/32" (0.469)	16	16
1/2" (0.500)	16	16
19/32" (0.594)	19.2	19.2
5/8" (0.625)	24	24
23/32" (0.719)	24	24
3/4" (0.750)	24	24
7/8" (0.875)	32	32
1 (1.000)	32	32
1 - 1/8" (1.125)	32	32

Table 5 D-Blaze Lumber and Plywood Approved Species

The following species of Plywood and Lumber are UL and ULC Classified and building code compliant when treated according to specifications. The Plywood and Lumber species noted below carry a UL FR-S Classification in the United States.

Softwood Lumber			
Jack Pine	Red Pine	Hem-Fir	Black Spruce
Lodgepole Pine	Alpine Fir	Spruce-Pine-Fir (SPF)	Englemann Spruce
Ponderosa Pine	Balsam Fir	White Fir	Red Spruce
Southern Pine	Douglas Fir	Western Hemlock	White Spruce
Plywood		Hardwood Lumber	
Douglas Fir		Basswood	
Lauan		Red Oak	
Southern Pine			
Red Pine			

NOTE: From time to time, additional species will be tested. Check with your supplier if the species desired is not shown.

Certified Wall Assemblies

2 hr Exterior Bearing Wall

(Design No. BXQV.V335)

Max. Tested Load:

100% of Design Load

Fire Ratings:

- 2 hr from interior
- 1 hr from exterior



* Refer to ESR 2645
for all wall assemblies.

* Refer to V335
for all wall assemblies.



MCA

Preservative Treated Wood

- Can be used in residential, commercial and industrial applications
- Offers a wider selection of timber species
- Easily painted or stained
- Superior preservative permanence
- Preserved wood may be disposed of in landfills or burned in commercial or industrial incinerators or boilers in accordance with federal, state and local regulations
- Lower volatile organic compounds (VOCs)



Building Code Compliance

Outdoor Preservative Treated Lumber & Wolman E/LifeWood products, as described in the ICC Evaluation Report ESR-1721, meets all building code requirements.

End Use Classifications for Wolman E Pressure Treated Wood Products

General Use - Above Ground (such as decking and sills)

Ground Contact and Fresh Water Contact

(such as decks, fence posts, joists, beams, and docks)

Ground Contact - Critical Structural Members

(such as building poles, permanent wood foundations)

Wolman E Treated Wood Advantages

- First Wood Treatment Process to Complete Life-Cycle Assessment Studies - The MCA wood treatment process systems were analyzed by Scientific Certification Systems under an exhaustive environmental review process called Life-Cycle Assessment (LCA), in accordance with rigorous international standards set by ISO, the leading international standards setting organization. The MCA LCA studies are in compliance with ISO standards 14044 and 14025.
- Home Innovation NGBS Green Certified - The MCA technology has been approved for points toward National Green Building Certification to the National Green Building Standard. Wood products treated with MCA technology are now eligible for more green building points than any other treated wood product in the market.
- UL GREENGUARD GOLD Certification - The MCA preservative has undergone rigorous testing and met stringent standards for low volatile organic compound (VOC) emissions. Products certified to this criteria are suitable for use in schools, offices, and other sensitive environments.
- Lighter, more natural wood appearance.
- Improved painting and staining qualities.
- Better corrosion resistance for code-approved fasteners and hardware.
- Approved for aluminum contact.
- End uses include interior and exterior above ground, ground contact, and fresh water immersion.
- Treated wood warranty programs. (See warranty for details.)
- Building code complaint ICC-ES reports ESR-1721.

FSC/LEED®

Forest Stewardship Council

Flameproof Companies Certified Supplier and Treater

The "GREEN" movement is firmly establishing itself with owners who are demanding environmentally responsible design and construction. There are many standards to be met in earning FSC/LEED points. Flameproof Companies can assist you in maximizing your credits. We are uniquely qualified to fire retard or preservative treat FSC credited lumber and plywood.

As a Certified Chain of Custody Supplier, material purchased from Flameproof Companies (FSC Public Search: info.fsc.org/) will qualify for the following LEED credits: EQ4.4 Urea Formaldehyde free and low emitting. formaldehyde products on sheeting grade plywood. See SDS for treated wood.

Chain of Custody #RA-COC-001997

CHICAGO FLAMEPROOF FSC®/LEEDS MATERIAL SUBMITTAL

Certified Chain of Custody Supplier, material purchased from Chicago Flameproof (FSC Public Search: info.fsc.org/) Will qualify for the following LEED credits: EQ4.4 Urea Formaldehyde free and low emitting formaldehyde products on sheeting grade plywood. See SDS for treated wood.

MR5.1 and MR5.2 Finished product manufactured within 500 miles of the project site qualifies.

MR7.0 FSC Certified Chain of Custody. Certificate # RA-COC-001997. See Chain of Custody Certificate.

Wood Products identified "FSC® Mix Credit" are valued at 100% of their cost.

Recycled Content: 0% Post-Consumer on lumber and plywood; 0% Pre-Consumer on lumber and plywood

Rapidly Renewable Content: 0% For lumber and plywood

VOC Content: Panels meeting the most stringent formaldehyde requirements are required, using testing method JIS A 1460, to have average emission levels below 0.30 mg/l.

100% of material is Harvested/Extracted outside the 500 mile radius. Our MCA treated and Fire retardant items are manufactured in Montgomery, IL 60538.

Location of Harvest/Extraction:

RoyOMartin, Chopin, LA RA-COC-000695 & RA-CW-000695

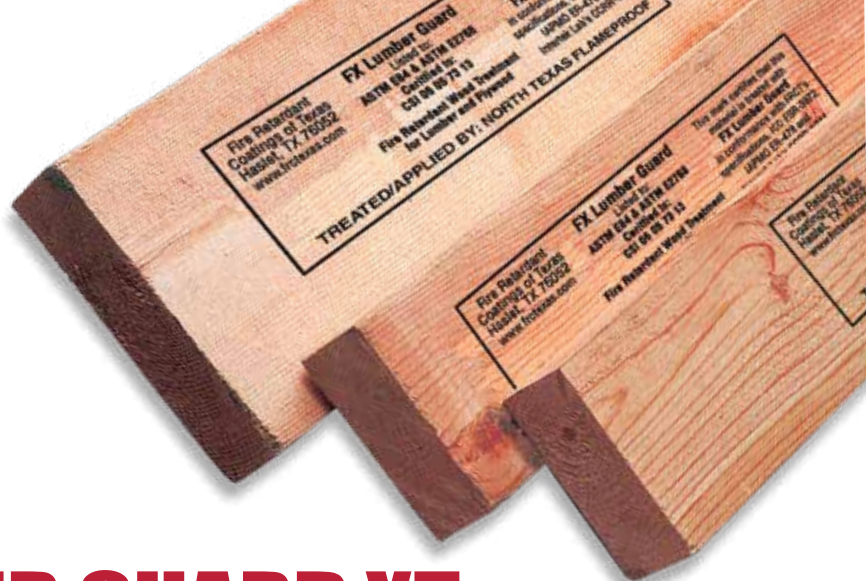
Roseburg Forest Products, Dillard OR SCS-COC-000300

Martco Limited Partnership, Chopin LA SW-COC-000696

Collins Softwoods, Portland, OR SCS-COC-000023

Biewer Lumber, St Clair, MI SCS-COC-002709

The cost of all wood products, both FSC® certified and not, must be tallied on the appropriate LEED document (e.g., MRc7 template). Wood products that are not FSC® certified and those that are identified on invoices as "FSC® Mix Credit" should be valued at 100% of the product cost.. Wood products identified as "FSC® Mix [NN]%" should be valued at the indicated percentage of their cost, e.g., a product identified as "FSC® Mix75%," should be valued at 75% of the cost. (Wood products identified as "FSC® Recycled" or "FSC® Recycled Credit" do not count toward certified wood credits. They qualify instead as recycled content products).



FX LUMBER GUARD XT

Exterior Fire Retardant Penetrant

Flameproof Companies offers options for exterior applications that call for fire retardant wood products.

FX Lumber Guard XT can be used when higher than normal humidity or moisture conditions exist within a building and minimal leaching of the fire retardant chemical from the wood is desired. The resinous base of FX Lumber Guard XT provides such properties.

In conditions where wood will be exposed permanently outdoors, and fire resistance is desired, FX Lumber Guard XT applied over kiln dried preservative treated lumber is recommended to prevent rot from occurring.

These products are not intended for use in 1-2 hour code compliant roof, wall or floor assemblies.



FX Lumber Guard XT, Technical Data Submittal Sheet

- Certified Listed to ASTM E84 & ASTM E2768
- Class A Rated
- SYP, SPF, Hem Fir & Doug Fir Lumber, SYP and Fir Plywood
- CSI Div. 06 05 73.13 Fire Retardant Wood Treatment & CSI Div. 09 96 43 Fire Retardant Coatings

Intertek: Warnock Hersey Certification is equivalent to "UL Certification"

Additional Testing and Standards:

- ASTM D2898
- CAN/ULC S102
- NFPA 255/703
- ANSI/UL 723
- UBC 42.1
- For Engineered Materials, Cedar, Redwood, Bamboo and reclaimed woods.
- ICC-ESR 3872

Technical Data, Exterior or Interior Application

- FSI < 25
- SGI / SDI < 200
- Natural Mold and Insect Inhibitor
- 1-Coat Application
- Non Toxic
- Non Halogenated
- No PBDEs
- No Carcinogens
- Storage Temp > 45°F
- Environment Safe
- Shelf Life: 3yrs
- Stainable/Paintable
- Application Temp 45-95°F



Intertek Intertek W/N 21094

TIMBERS

MCA Preservative Treated Cedar, Doug Fir, Creosote

We offer the largest inventory of hard-to-get sizes and lengths in pressure-treated, Douglas Fir and Cedar timbers in the area.

Available sizes:

3 x 6	4 x 4	6 x 6	8 x 8
3 x 8	4 x 6	6 x 8	10 x 10
3 x 10	4 x 8	6 x 12	12 x 12
3 x 12	4 x 10		
	4 x 12		



ENGINEERED LUMBER

I-Joist, LVL, Glulam

LVL - Laminated Veneer Lumber

LVL offers a stronger, stiffer and more consistent alternative to traditional solid-sawn lumber. Flameproof Companies stocks a full line of LVL with depths ranging from 5-1/2" to 24", widths from 1-3/4" to 5-1/2". LVL are available in even length increments.

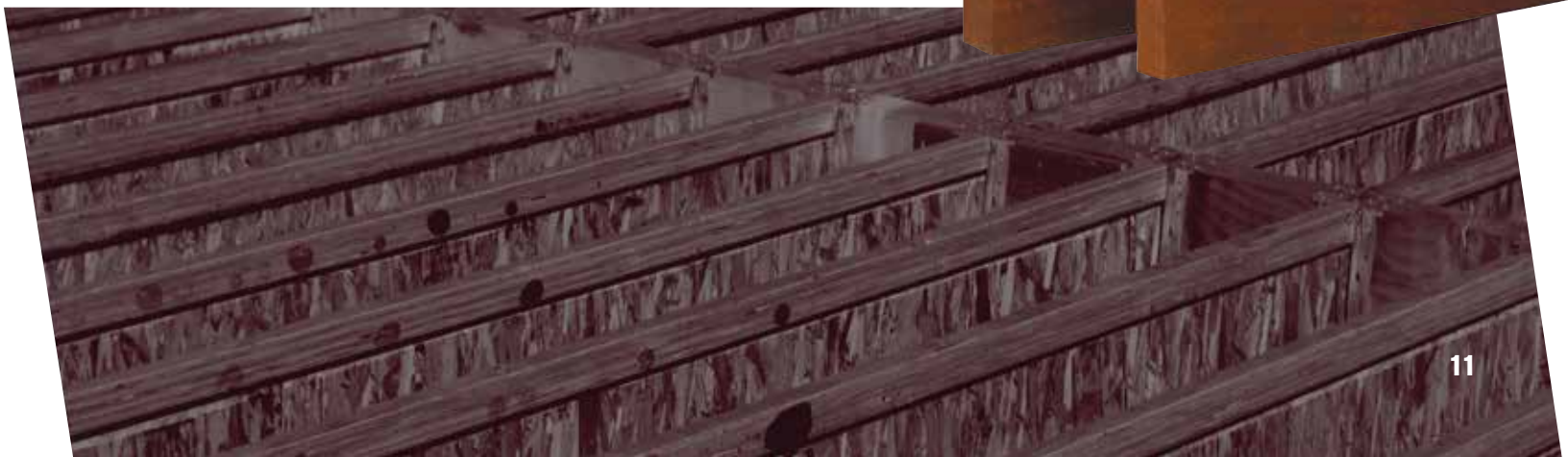
I-Joist

Flameproof stocks a full line of LVL flange and solid sawn I-joist to fit any need. Our I-joist series are versatile, consistent and cost effective.

Glulam

We supply a full line of untreated, preservative treated and fire retardant treated Doug Fir and Southern Yellow Pine Glulam beams to fit your every long-span need.

Contact Flameproof Companies regarding fire retardant treatment on engineered lumber products.



Our Own Fleet **BOOM AND CRANE SERVICE** (not available at all locations)

For decades you've relied on our crane, boom and mobile forklift services. Now you can call on us to stock materials on your jobs as well.

Count on us for superior service, at very competitive prices, as always.

Arrange your stocking needs with your salesperson, by calling the office or contact us via email.



CUTTING AND FABRICATION SERVICES



Let us custom cut to your specifications. We are equipped to perform a wide range of milling services, from customized trim, to ripping plywood and furring.

- Ripping
- Cross Cut
- Precision End Trim (PET)
- Wood Cants
- Tounge & Groove Patterns
- All types of Moulding and Custom Patterns
- Plywood/OSB cut to size

INSTA-PLY™ and INSTA-BLOCK™

D-Blaze Class-A Rated, In-Wall Blocking

Insta-Ply™ and Insta-Block™ support even the heaviest loads with superior connection shear and pullout strength.

They provide the perfect backing system for cabinets and vanities, ceiling mouldings, baseboards, door jams and wood trim, while meeting all commercial and residential specifications.

Insta-Ply™ and Insta-Block™ FRT is pressure-treated wood which provides enhanced reduction of smoke and flamespread. All blocks have been treated with D-Blaze Class-A rated fire retardant.

Insta-Ply™ and Insta-Block™ are available with FSC-certified lumber and may contribute LEED® points to your project.

INSTA-PLY™ FR, 16" O.C.
3/4" x 5-1/2" x 15-3/4" notched
FRT plywood

Available in Chain of Custody
FSC Certified

INSTA-BLOCK™ FR, 16" & 24" O.C.
2" x 6" x 15-3/4" or 23-3/4" notched
Also:
2 x 4, 2 x 8, 2 x 10, 2 x 12 by
special request

Custom blocking sizes available by request.



MAG TECH™

Fire Retardant OSB Sheathing

Product Information

Mag Tech™ OSB Structural Fire-Rated Sheathing is a patent-pending, code compliant, Class A Flame Spread Rated, fire retardant wood panel system that is both durable and easy to handle on the job site. Mag Tech™ structural sheathing must be used in fire-rated wall applications, as well as for fire retardant structural sheathing on exterior and interior walls. Mag Tech™ offers superior performance, helping to increase fire resistance in a single panel.

Mag Tech™ consists of a 3 mil thick, non-combustible, fiber-reinforced magnesium oxide (MgO) board laminated to untreated oriented strand board (OSB) on one or two faces, as required the listed wall assemblies. The non-combustible MgO board lamination process assures a composite uniform section to reinforce the OSB while also providing both flame and thermal resistance.

In contrast to other fire retardant sheathing products that are chemically-impregnated or coated, Mag Tech™ is created using a proprietary lamination process that bonds reinforced MgO board to the face of OSB structural sheathing. The noncombustible MgO laminate prevents both flame and smoke penetration through the sheathing, as well as enables the OSB to remain free of fire retardant chemicals for greater strength of the overall composite sheathing system.

Mag Tech™ is free of hazardous chemicals, with no VOC (off-gas) present during fabrication. The MgO panel face provides an attractive tile-like surface that mitigates the spread of flame and heat with a burn-through resistance that is greater than that of standard wood structural panels that are treated with fire retardant chemicals.

Refer to the Mag Tech™ Fire Retardant OSB Sheathing Products Specifications and Technical Information Brochure for further information.

Product Specifications

- Size/Length: Mag Tech™ is available in a variety of sizes, thicknesses, and grades and can be fabricated as needed per specific project specifications.
- All materials are rated as non-hazardous materials.
- Code Compliance and Fire Performance:
 - Class A Flame Spread Rating (ASTM E-84 / ASTM E2768 / UBC 8-1) per QAI Laboratories, Inc. Test Report TJ2773
 - Flame Spread Index: 0
 - Smoke Index: 0 - 5
 - Load Bearing 1-Hour and 2-Hour Fire-Rated Exterior Bearing Walls for Type III & Type V Construction when installed per the listed assemblies, (ASTM E119 / UL263) per Intertek Design No. CF/WPPS 120-01 / 120-02 / 120-03 / 60-01 / 60-02
 - IBC 706 -Fire Walls, Vertical Continuity and general materials used for makeup of fire walls are in compliance with IBC.
 - Load Tested and analyzed through engineering by Structural Enginuity, Inc. using load test in compliance with ASTM E72-80 "Standard Methods of Conducting Strength Tests of Panels for Building Construction."



MAG TECH™

Certified Wall Assemblies

Exterior Bearing Wall System

(Design No. CF/WPPS 60-01)
(Design No. CF/WPPS 120-01)
(Design No. CF/WPPS 120-02)
(Design No. CF/WPPS 120-03)

Max. Tested Load:

100% of Design Load
Mag Tech™ Configurations
1 MgO surface (facing in our out)
• 1 hr. from interior only

2 MgO surfaces
• 1-2 hr from exterior
• 1-2 hr from interior

No Mineral Wool



UPGRADABLE

- (design flexibility)
- 1-2 hr from exterior
 - 1-2 hr from interior
 - No Mineral Wool

1 hr Exterior Bearing Wall

(Design No. CF/WPPS 60-01)

Max. Tested Load:

100% of Design Load

Fire Ratings:

Mag Tech™ (1-sided)-MgO facing IN or OUT
• 1 hr. from interior only

Mag Tech™ (2-sided)
Mag Tech™ (2-sided)
• 1 hr from interior

No Mineral Wool



CF/WPPS 60-01

- 1 hr from exterior
- 1 hr from interior
- MagTech (2-sided)

(Optional)

- 1 hr from interior ONLY
- Mag Tech™ (1-sided)
(MgO surface facing IN or OUT)

FLAMEPROOF

COMPANIES

LOCATIONS WE'VE GOT YOU COVERED COAST TO COAST

CHICAGO FLAMEPROOF

1200 South Lake St., Montgomery, IL
P: 866.884.7591 | F: 630.896.4773

WISCONSIN FLAMEPROOF

8530 West Calumet Rd., Milwaukee, WI
P: 414.365.3674 | F: 866.884.7593

NORTH TEXAS FLAMEPROOF

4215 Chickasaw St. Fort Worth, TX
P: 817.534.9800 | F: 817.534.9807

EAST COAST FLAMEPROOF

1398 Kinsale Rd., Kinsale, VA
P: 804.472.7209

MANUFACTURING LOCATIONS

Chicago Flameproof, Montgomery, IL | North Texas Flameproof, Ft. Worth, TX
East Coast Flameproof

CONTACT US TODAY!

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FLAMEPROOF WEBSITE: flameproof.com

OFFICE PHONE: 866.884.7594

www.flameproof.com