1. Product Name

D-Blaze[a] Fire Retardant Pressure Treated Wood

2. Manufacturer

Chemical Specialties, Inc. (CSI)
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200 East Woodlawn Road
Charlotte, NC 28217
(800) 421-8661
(704) 522-0825
Fax: (704) 527-8232
E-mail: productinfo@chemspec.com
www.treatedwood.com

3. Product Description

BASIC USE

D-Blaze[a] Fire Retardant Treated (FRT) lumber and plywood is highly effective against the spread of flame and smoke in weather protected applications. It can be used where building codes permit the use of wood or fire retardant treated wood. Recommended and typical uses include roof trusses, roof decks and sheathing, beams and purlins, floor trusses, subflooring, joists, interior non-load bearing partitions, exterior load-bearing walls, studs, architectural millwork and trim, blocking and furring, and paneling.

COMPOSITION & MATERIALS

D-Blaze is pressure treated deep into the wood; it is not a coating. D-Blaze is noncorrosive. Wood species, which qualify under UL FRS classification, include a variety of softwood lumber, plywood and hardwood lumber.

TYPES

Softwood lumber

- Alpine fir
- Balsam fir
- Black spruce
- Englishman spruce
- Douglas fir
- Hem-fir
- Jack pine
- Lodgepole pine
- Ponderosa pine
- Red pine
- Red spruce
- Southern yellow pine
- Spruce-pine-fir
- Western hemlock
- White fir
- White spruce

Plywood

- Douglas fir
- Lauan
- Red pine
- Southern yellow pine

Hardwood lumber

- Basswood
- Red oak

SIZES

The product is compatible with any size material selected from among the wood grades suitable for pressure treating.

FINISHES

Wood treated with D-Blaze fire retardant is paintable, stainable and easy to work with common tools.

COLORS

The product is colorless and nonblooming. It will not darken or discolor most woods.

SHAPES

Wood products treated with D-Blaze can be any practical shape.

LIMITATIONS

The product is intended for weather protected applications only. It is not to be used in areas subject to precipitation, wetting, dampness or condensation. All wood products must be kiln dried to a maximum moisture content of 19% for lumber and 15% for plywood. Lower moisture contents may be preferred for cabinetry and millwork.

4. Technical Data

APPLICABLE STANDARDS

ASTM International

- 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 E84 Standard Test Method for Surface Burning Characteristics of Building Materials

American Wood-Preservers' Association (AWPA)

- AWPA C20 Stuctural Lumber - Fire-Retardant Treatment by Pressure Processes
- AWPA C27 (Type A) Plywood - Fire Retardant Treatment by Pressure Process
- AWPA U1, T1, UCFA

National Fire Protection Association (NFPA)

- NFPA 255 Standard Test Method for Surface Burning Characteristics of Building Materials
- NFPA Policy on Design Values for Fire Retardant Treated Lumber

Underwriters Laboratories, Inc. (UL) - UL 723 Tests for Surface Burning Characteristics of Building Materials

U.S. Department of Defense - MIL-L-19140E Lumber and Plywood, Fire Retardant Treated

APPROVALS

Building Officials and Code Administrators International Inc. (BOCA) - BOCA ES No. 95.42

City of Los Angeles, California - RR 24502

City of New York, New York

- Building Code MEA 406
- Building Code MEA 407

Insurance Rating Bureaus

International Conference of Building Officials (ICBO) - ICBO ES 5180

National Evaluation Service - NER 562

Southern Building Code Congress International, Inc. (SBCCI) - SBCCI ES No. 9657

U.S. Bureau of Ships - QPL

National Evaluation Service (NES) - NER 562

ENVIRONMENTAL CONSIDERATIONS

D-Blaze FRT wood products protect against corrosion on galvanized steel truss plates as well as other metal fasteners. Testing has shown that with respect to metal corrosion these FRT products maintain metal finish and metal integrity virtually as well as untreated wood exposed to the same conditions.

PHYSICAL/CHEMICAL PROPERTIES

D-Blaze FRT wood has been tested by an independent laboratory in accordance with industry standards to develop strength reduction factors for various use conditions, including roof temperatures up to 150 - 170 degrees F (66 - 77 degrees C). D-Blaze FRT wood shows very low hygroscopicity under relative humidity conditions as high as 95%. It has virtually the same moisture content as untreated wood. Test reports are available to design professionals upon request. For more technical information, see Tables 1 and 2.

FIRE RATING

D-Blaze FRT wood has been tested by Underwriters Laboratories, Inc. (UL), of Northbrook, IL, and has been designated UL

Chemical Specialties, Inc.

classification FRS, which signifies a flame-spread and smoke developed rating of 25 or less. When tested for 30 minutes, there was no evidence of significant progressive combustion. Each piece of treated material bears a UL classification stamp and meets or exceeds requirements for Class 1 or Class A flamespread ratings.

5. Installation

PREPARATORY WORK

Handle and store product per CSI recommendations. Protect wood products against moisture and dimensional changes.

METHODS

Light sanding or brushing is all that is necessary to ensure proper coating adhesion. Complete installation recommendations are available from the manufacturer.

PRECAUTIONS

Avoid frequent or prolonged inhalation of sawdust from treated wood. When sawing and machining treated wood, wear a dust mask. When power sawing or machining, wear goggles to protect eyes from flying particles. Surfaces must be clean and dry before application. For best results, application should follow manufacturer's recommendations.

BUILDING CODES

Current data on building code requirements and product compliance may be obtained from CSI technical support specialists. Installation must comply with the requirements of all applicable local, state and national code jurisdictions.

6 Availability & Cost

AVAILABILITY

For information on product availability or to identify a local wood preserver, contact Chemical Specialties, Inc.

D-Blaze[a] Fire Retardant Pressure Treated Wood Logo

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COST

Offers a lower in-place cost than most non-combustible classified building materials. Budget installed cost information may be obtained through the manufacturer.

7. Warranty

Features a 50 year limited warranty. Refer to D-Blaze 50 year limited warranty brochure or consult manufacturer for complete details.

8. Maintenance

No long-term maintenance is required other than to ensure protection from weather and other forms of moisture exposure. Installations which depend on application of approved paints or coatings for weather resistance must be periodically repainted to renew moisture protection.

9. Technical Services

A staff of factory trained service personnel offers design assistance and technical support. For technical assistance, contact Chemical Specialties, Inc.

10. Filing Systems

- First Source«
- Thomas Register
- The Blue Book
- ARCAT[a]
- MASTERSPEC«
- Additional product information is available from the manufacturer's website.

TABLE 1 D-BLAZE STRENGTH DESIGN FACTOR FOR LUMBER

	Applicable < 80°F (27°C)				Applicable < 150°F (66°C)	
	Southern Pine [2]	Douglas Fir [2]	Spruce [2]	Other Species [1]	Southern Pine	Other Species [1]
Compressive parallel, Fc	0.93	0.91	0.94	0.91	0.85	0.85
Horizontal shear	1.00	0.97	1.00	0.97	0.86	0.86
Tension parallel	0.77	0.91	0.96	0.77	0.65	0.65
Bending, modulus of elasticity, E	0.88	0.96	0.97	0.88	0.89	0.89
Bending, extreme fiber stress, Fb	0.85	0.87	0.90	0.85	0.79	0.79

[1] Species awarded "FRS" classification by Underwriters Laboratories, Inc. (UL), when tested with D-Blaze FRT chemicals are listed in TYPES in this SPEC-DATA.

[2] These design value adjustments were determined during a testing program conducted at the Mississippi State University Forest Products Utilization Laboratory. Tests were conducted in accordance with the National Forest Products Association Policy on design values for fire retardant treated lumber products.

TABLE 2 D-BLAZE PLYWOOD SPAN RATINGS

APA rating	Panel thickness in (mm)	D-Blaze rating
12/0	5/16 (7.9)	12/0
16/0	5/16 (7.9), 3/8 (9.5)	16/0
20/0	5/16 (7.9), 3/8 (9.5)	20/0
24/0	7/16 (11.1), 1/2 (12.7)	24/0
24/16	7/16 (11.1), 1/2 (12.7)	24/16
32/16	15/32 (11.9), 1/2 (12.7)	24/16
32/16	5/8 (15.9)	32/16
40/20	5/8 (15.9), 19/32 (15.1)	32/20
40/20	3/4 (19.1), 7/8 (22.2)	40/20
48/24	23/32 (18.3), 3/4 (19.1)	40/24
48/24	7/8 (22.2)	48/24

- For temperatures up to 170°F (77°C).
- 5/16" or 3/8" (7.9 or 9.5 mm) thicknesses not for roof applications. Use only plywood manufactured per PSI 83, Group 1, stress level 2 with exterior glue. Designed for 30 psf (146 kg/m^2) live load plus 4.5 psf (22 kg/m^2) dead load.