

BUILDING PRODUCTS LISTING PROGRAM

Customer: Safeguard Inc.
Class: Fire Treated Wood Products
Location: Wading River, NY

Listing No. B1046-1
Project No. B1046-1 Edition 4

Effective Date: December 17, 2012
Last Revised Date: September 24, 2024

Standards: ASTM D5516 *“Standard Test Method for Evaluating the Flexural Properties of Fire-Retardant Treated Softwood Plywood Exposed to Elevated Temperatures”*
ASTM D6305 *“Standard Practice for Calculating Bending Strength Design Adjustment Factors for Fire-Retardant-Treated Plywood Roof Sheathing”*
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 D6841 *“Standard Practice for Calculating Design Value Treatment Adjustment Factors for Fire-Retardant-Treated Lumber”*
ASTM E84 *“Standard Test Method for Surface Burning Characteristics of Building Materials”, extended to 30 minutes duration.*
ASTM E2768 *“Standard Test Method for Extended Duration Surface Burning Characteristics of Building Materials (30 min Tunnel Test)”*
ASTM D3201 *Standard Test Method for Hygroscopic Properties of Fire-Retardant Wood and Wood Based Products.*

Product: Safeguard FR Pressure Treated Plywood
Safeguard FR Pressure Treated Lumber

Markings: Each panel is marked with a permanent label containing the following information:

- a) Manufacturer’s Name
- b) Manufacturer’s Address
- c) Date of Manufacture
- d) QAI Listing number (B1046-1)
- e) Plywood/Lumber Species Designation
- f) Name of the treatment chemical
- g) Method of drying after treatment
- h) Flame Spread Index and Smoke Developed Index
- i) The following wording:
 - o “Conformance with ASTM D5516 & ASTM D6305” for plywood.
 - o “Conformance with ASTM D5664 & ASTM D6841” for lumber.
 - o “TYPE A INTERIOR / NOT FOR EXTERIOR USE”.
- j) The following QAI logo with ‘us’ identifier:



Species: Southern Yellow Pine (SYP)
 Douglas Fir (DF)

Plywood Ratings: **The following outlines Safeguard FR Pressure Treated Plywood product ratings:**

Fire Retardant Treated Wood products by Safeguard have a moisture content of < 28% when evaluated in accordance with ASTM D3201.

Table 1: Allowable Roof Sheathing Loads per ASTM D6305 (SYP)

Plywood Performance Category	Untreated Roof/Subfloor Span rating	Untreated $F_bKS^{1(a/b)}$	Treated Roof Sheathing Maximum Load (psf) ^{1,2}				Treated Floor Sheathing Span (inches)
			Span (inches)	Climate Zones			
				Zone 1A	Zone 1B	Zone 2	
15/32", 1/2"	32/16	351	24	40	48	61	16
			32	34	45	60	
19/32", 5/8"	40/20	625	24	61	80	107	20
			32	38	55	78	
23/32", 3/4"	48/24	818	32	38	55	78	24
			48	17	24	35	

- Roof sheathing maximum load (w) = (TF)(C)(F_bKS)(DOL)/L² (Live load plus dead load)
 - F_b – based on values from Table 3 of APA Plywood Design Specification (January 1997)
 - KS – based on Un-sanded Panel values from Table 1 of APA Plywood Design Specification (January 1997)
 - All loads are based on two span condition (C = 96 in/ft) with panels 24 inches wide or wider, strength axis perpendicular to supports.
 - Duration of Load (DOL) equals 1.25 for Zone 1A and 1.15 for Zone 1B & 2.
- The 15/32" or 1/2" performance category is limited to performance rated 3-ply or 4-ply. 19/32" or 5/8" performance category is limited to performance rated 4-ply or 5-ply. 23/32" or 3/4" performance category is limited to performance rated 5-ply or 7-ply.

Table 2: Surface Burning Characteristics per ASTM E84 (Extended)/E2768 (SYP, DF)

Plywood Thickness	Flame Spread Index (FSI)	Smoke Developed Index (SDI)	Flame Front
1/2" - 3/4"	<25	<25	< 10.5 feet

Products above were evaluated with a 1/8-inch (3.2 mm) joint included during evaluation to the above noted method.

Lumber Ratings: **The following outlines Safeguard FR Pressure Treated Lumber product ratings:**

Table 3: Treatment Adjustment Factor per Climate Zone per testing to ASTM D6841 (SYP)
(Applicable at service temperatures up to 150°F (68°C))

Structural Property	Service Temp. up to 100°F	Roof Framing		
		Climate Zone 1A	Climate Zone 1B	Climate Zone 2
Extreme fiber stress in bending, F_b	0.93	0.93	0.93	0.93
Tension parallel to grain, F_t	0.97	0.97	0.97	0.97
Compression parallel to grain, F_c	1.00	1.00	1.00	1.00



Horizontal shear, F_u	0.99	0.99	0.99	0.99
Modulus of elasticity, E	1.00	1.00	1.00	1.00
Compression perpendicular to grain, F_{cz}	0.95	0.95	0.95	0.95
Fasteners/Connections	0.90	0.82	0.89	0.90

Table 4: Surface Burning Characteristics per ASTM E84 (Extended)/E2768 (SYP)

Flame Spread Index (FSI)	Smoke Developed Index (SDI)	Flame Front
<25	<25	< 10.5 feet

Notes: Final acceptance of the product in the intended application is to be determined by the authority having jurisdiction.

These results do not apply to engineered wood products.

Safeguard FR Pressure Treated Plywood is not for use in conditions exposing the product to weathering.

Listed manufacturers are subject to on-going inspections by QAI to ensure that the products outlined above remains as it is listed.

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