

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 05 73.13—Fire-Retardant Wood Treatment

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 46 23—Wood Siding

REPORT HOLDER:

ROSEBURG FOREST PRODUCTS COMPANY

EVALUATION SUBJECT:

ARMORITE™ TREATED EXTERIOR COMPOSITE TRIM

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2015, 2012 and 2009 *International Residential Code*® (IRC)

Properties evaluated:

- Weather Resistance
- Termite Resistance
- Decay resistance above ground
- Corrosion
- Structural

1.2 Evaluation to the following green code(s) and/or standards:

- 2019 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2015, 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC 700-2015, ICC 700-2012 and ICC 700-2008).

2.0 USES

Armorite™ Treated Exterior Composite Trim is used as non-load-bearing exterior trim.

3.0 DESCRIPTION

3.1 General:

Armorite™ Treated Exterior Composite Trim is a wood composite containing zinc borate at a minimum level of 0.75% (w/w). Armorite™ Treated Exterior Composite Trim is recognized for use in aboveground applications (UC3A)

and resists attack by fungal decay and subterranean termites, including Formosan termites.

3.2 Material:

The material is formed by blending a zinc borate slurry with 100% softwood mill fibers and then laying down a continuous mat. The mat is hot pressed to form boards which are then cut to size and primed.

Armorite™ Treated Exterior Composite Trim is available in thicknesses of 1/2-inch (12.7 mm), 5/8-inch (15.9 mm), 3/4-inch (19 mm), 1-inch (25.4 mm) and 1.181-inch (30 mm) with a tolerance of +/- 0.010 inch. Trim widths available are nominal 2-inch [actual 2.0-inch (50.8 mm)], nominal 3-inch [actual 2.5-inch (63.5 mm)], nominal 4-inch [actual 3.5-inch (89.0 mm)], nominal 5-inch [actual 4.5-inch (114.3 mm)], nominal 6-inch [actual 5.5-inch (139.7 mm)], nominal 8-inch [actual 7.25-inch (184.2 mm)], nominal 10-inch [actual 9.25-inch (235.0 mm)], nominal 12-inch [actual 11.25-inch (285.8 mm)], and nominal 16-inch [actual 15.5-inch (393.7mm)] with a tolerance of +/- 0.125-inch (3.175 mm). Maximum length is 16 feet (4.88 m).

The attributes of the exterior composite trim have been verified as conforming to the requirements of (i) CALGreen Section A4.405.1.1 for prefinished building materials and Section A5.406.1.2 for reduced maintenance; (ii) ICC 700-2015 and ICC 700-2012 Sections 602.1.6 and 11.602.1.6 for termite-resistant materials and Sections 601.7, 11.601.7, and 12.1(A).601.7 for site-applied finishing materials; and (iii) ICC 700-2008 Section 602.8 for termite-resistant materials and Section 601.7 for site-applied finishing materials. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

4.0 DESIGN AND INSTALLATION

4.1 General:

Armorite™ Treated Exterior Composite Trim is installed in accordance with the manufacturer's published installation instructions and this report. The manufacturer's published installation instructions and this report must be strictly adhered to, and a copy of the instructions must be available at all times on the jobsite during installation. The instructions within this report must govern if there are any conflicts between the manufacturer's published installation instructions and this report.

4.2 Fasteners:

Fasteners used with Armorite™ Treated Exterior Composite Trim must be hot-dipped zinc-coated galvanized steel or other corrosion-resistant fasteners in accordance with Section 2304.10.5 of the IBC (Section 2304.9.5 of the 2012 and 2009 IBC) and Section R317.3 of the IRC. Nails are 6d, 8d or 15 gauge finish nails or headed nails long enough to penetrate solid wood substrates a minimum of 1¼ inches (32 mm). The fasteners are spaced at 16 inches (406 mm) and 24 inches (609.6 mm) on center. When used for fascia applications, the fasteners are spaced 24 inches (609.6 mm) on center.

4.3 Structural:

Maximum allowable transverse wind loads for Armorite™ Treated Exterior Composite Trim are as noted in Table 1 for ½ inch (12.7 mm) thick and Table 2 for 1.181-inch (30 mm) thick. Allowable wind loads for trim thickness between ½ inch (12.7 mm) and 1.181-inch (30 mm) may be interpolated when approved by the code official.

5.0 CONDITIONS OF USE

The Armorite™ Treated Exterior Composite Trim described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 This evaluation report and the manufacturer's published installation instructions, when required by the code official, must be submitted at the time of permit application.
- 5.2 The trim must be manufactured, identified and installed in accordance with this report and the Roseburg Forest Products Company.
- 5.3 The product must be limited to the following construction types:
 - Non-load-bearing exterior trim on buildings of Type VB construction under the IBC.

- Combustible architectural trim on exterior walls of buildings of Type I, II, III and IV construction under the IBC. The buildings are limited to 40 feet (12.2 m) in height above grade. The trim must be backed by noncombustible material (Section 1405.5 of the IBC).

- All buildings permitted under the IRC.

5.4 The product must be installed over solid backing material, such as approved exterior sheathing covered with an approved water-resistant barrier or approved exterior wall covering.

5.5 Armorite™ Treated Exterior Composite Trim is manufactured at the Roseburg Forest Products Company facility in Medford, Oregon, under a quality-control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Wood-based Exterior Composite Trim Treated with Zinc Borate (ZB) Preservative by a Non-pressure Process (AC424), dated August 2017.

7.0 IDENTIFICATION

7.1 Each package of Armorite™ Treated Exterior Composite Trim described in this report must be labeled with the Roseburg Forest Products Company name, address and telephone number; the product trade name; and the evaluation report number (ESR-4012).

7.2 The report holder's contact information is the following:

ROSEBURG FOREST PRODUCTS COMPANY
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TABLE 1—ARMORITE™ TREATED EXTERIOR COMPOSITE TRIM - MAXIMUM ALLOWABLE TRANSVERSE WIND LOADS FOR ½-INCH-THICK TRIM SECURED USING 8d COMMON NAILS²

NOMINAL ¹ TRIM WIDTH ¹ (inches)	NUMBER OF FASTENERS	FASTENER SPACING (inches)	MAXIMUM ALLOWABLE LOAD ³ (psf)	MAXIMUM WIND SPEED ⁴ (mph) (2015 IBC)		
				Wind Exposure Category		
				B	C	D
2	1	24	56	170	145	135
		16	125	180	180	180
3	1	24	56	170	145	135
		16	125	180	180	180
4	1	24	56	170	145	135
		16	104	180	180	180
5	2	24	56	170	145	135
		16	125	180	180	180
6	2	24	56	170	145	135
		16	125	180	180	180
8	2	24	56	170	145	135
		16	103	180	180	180
10	2	24	54	165	140	130
		16	81	180	175	160
	3	24	56	170	145	135
		16	121	180	180	180

TABLE 1—ARMORITE™ TREATED EXTERIOR COMPOSITE TRIM - MAXIMUM ALLOWABLE TRANSVERSE WIND LOADS FOR 1/2-INCH-THICK TRIM SECURED USING 8d COMMON NAILS² (Continued)

NOMINAL ¹ TRIM WIDTH ¹ (inches)	NUMBER OF FASTENERS	FASTENER SPACING (inches)	MAXIMUM ALLOWABLE LOAD ³ (psf)	MAXIMUM WIND SPEED ⁴ (mph) (2015 IBC)		
				Wind Exposure Category		
				B	C	D
12	2	24	44	150	130	120
		16	66	180	160	145
	3	24	56	170	145	135
		16	100	180	180	180
16	2	24	32	130	110	100
		16	48	160	135	125
	3	24	48	160	135	125
		16	73	180	165	155

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 1.6 km/h.

¹See Section 3.2 (Material) for actual trim width dimensions.

²Fasteners must have minimum head diameter of 0.28 inch, a minimum shaft diameter of 0.13 inch, and a minimum length of 2.5 inches (8d common nail).

³Wall framing must have minimum specific gravity of 0.42.

⁴Three-second-gust; based on a building height of 40 feet and an importance factor of 1.0 in accordance with ASCE 7-10, Section 6.4.2.2.

TABLE 2—ARMORITE™ TREATED EXTERIOR COMPOSITE TRIM - MAXIMUM ALLOWABLE TRANSVERSE WIND LOADS FOR 1.181-INCH-THICK TRIM SECURED USING 8d COMMON NAILS²

NOMINAL ¹ TRIM WIDTH ¹ (inches)	NUMBER OF FASTENERS	FASTENER SPACING (inches)	MAXIMUM ALLOWABLE LOAD ³ (psf)	MAXIMUM WIND SPEED ⁴ (mph) (2015 IBC)		
				Wind Exposure Category		
				B	C	D
2	1	24	121	180	180	180
		16	182	180	180	180
3	1	24	98	180	180	180
		16	147	180	180	180
4	1	24	71	180	165	150
		16	107	180	180	180
5	2	24	112	180	180	180
		16	167	180	180	180
6	2	24	92	180	180	170
		16	138	180	180	180
8	2	24	70	180	160	150
		16	105	180	180	180
10	2	24	55	170	145	135
		16	83	180	175	165
	3	24	83	180	175	165
		16	124	180	180	180
12	2	24	45	155	130	120
		16	68	180	160	150
	3	24	68	180	160	150
		16	102	180	180	180
16	2	24	33	130	110	105
		16	50	160	135	125
	3	24	50	160	135	125
		16	74	180	165	155

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 1.6 km/h.

¹See Section 3.2 (Material) for actual trim width dimensions.

²Fasteners must have minimum head diameter of 0.28 inch, a minimum shaft diameter of 0.13 inch, and a minimum length of 2.5 inches (8d common nail).

³Wall framing must have minimum specific gravity of 0.42.

⁴Three-second-gust; based on a building height of 40 feet and an importance factor of 1.0 in accordance with ASCE 7-10, Section 6.4.2.2.