

SECTION 06 16 00
SHEATHING

PART 1 - GENERAL

1.1 DESCRIPTION:

- A. Section Includes:
 - 1. Wall sheathing.
 - 2. Subflooring / Underlayment.

1.2 SUBMITTALS:

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's Literature and Data:
 - 1. Submit data for panels and adhesives.
 - 2. Submit data for fire retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.

1.3 PRODUCT DELIVERY, STORAGE AND HANDLING:

- A. Protect sheathing from dampness both during and after delivery at site.
- B. Stack plywood and other board products so as to prevent warping.
- C. Locate stacks on well drained areas, supported at least 152 mm (6 inches) above grade and cover with well-ventilated sheds having firmly constructed over hanging roof with sufficient end wall to protect lumber from driving rain.

1.4 QUALITY ASSURANCE:

- A. Installer: A firm with a minimum of three (3) years' experience in the type of work required by this section.

1.5 GRADING AND MARKINGS:

- A. Any unmarked plywood panel for its grade and species will not be allowed on VA Construction sites. For material not normally grade marked, provide manufacturer's certificates (approved by an American Lumber Standards approved agency) attesting that lumber and material meet the specified requirements.

1.6 APPLICABLE PUBLICATIONS:

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in the text by basic designation only.

- B. American Forest and Paper Association (AFPA):
NDS-15.....National Design Specification for Wood
Construction
- C. American Society of Mechanical Engineers (ASME):
B18.6.1-81(R2008).....Wood Screws
- D. American Plywood Association (APA):
E30-11.....Engineered Wood Construction Guide
- E. ASTM International (ASTM):
D3498-03(R2011).....Adhesives for Field-Gluing Plywood to Lumber
- F. American Wood Protection Association (AWPA):
- G. Military Specification (Mil. Spec.):
MIL-L-19140E.....Lumber and Plywood, Fire-Retardant Treated
- H. Environmental Protection Agency (EPA):
40 CFR 59(2014).....National Volatile Organic Compound Emission
Standards for Consumer and Commercial Products
- I. U.S. Department of Commerce Product Standard (PS)
PS 1-95.....Construction and Industrial Plywood

PART 2 - PRODUCTS

2.1 FIRE-RETARDANT-TREATED PLYWOOD

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treated Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet (3.2 m) beyond the centerline of the burners at any time during the test.
 - 1. Design Value Adjustment Factors: Treated lumber plywood shall be tested according to ASTM D 5516 and design value adjustment factors shall be calculated according to ASTM D 6305. Span ratings after treatment shall be not less than span ratings specified.
- C. Kiln-dry material after treatment to a maximum moisture content of 15 percent.
- D. Identify fire-retardant-treated plywood with appropriate classification marking of qualified testing agency.

E. Application: Treat **all plywood unless otherwise indicated.**

2.2 WALL SHEATHING

A. Plywood Sheathing: **DOC PS 1, ¾-inch thick Exterior, Structural I** sheathing, C-C Plugged.

2.3 SUBFLOORING AND UNDERLAYMENT

A. Plywood Combination Subfloor-Underlayment: **DOC PS 1, 1-inch thick High Density Overlay (HDO)** plywood shall be exterior type with one face of High Density Overlay (Industrial), Group 1, as described in APPA's Voluntary Product Standard PS 1. Each panel shall be identified with the trademark of APA.

2.4 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

2.5 MISCELLANEOUS MATERIALS

A. Adhesives for Field Gluing Panels to Framing: Formulation complying with **APA AFG-01** and **ASTM D 3498** that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.
- B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.
- C. Securely attach to substrate by fastening as indicated, complying with the following:
 - 1. Table 2304.9.1, "Fastening Schedule," in the ICC's International Building Code.

3.2 PLYWOOD PANEL INSTALLATION

- A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.
- B. Fastening Methods: Fasten panels as indicated below:
 - 1. Combination Subfloor-Underlayment:
 - a. Screw to metal framing.
 - b. Space panels 1/8 inch (3 mm) apart at edges and ends.

2. Wall Sheathing:

- a. Screw to metal framing.
- b. Space panels 1/8 inch (3 mm) apart at edges and ends.

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