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Easy-Ply Roof Deck® Architectural Specifications

CSI Section 07

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Section 07 00 00 Thermal and Moisture Protection.

1.2 RELATED SECTIONS

- A. Section 05 10 00 – Structural Metal Framing.
- B. Section 06 10 00 – Rough Carpentry.
- C. Section 07 01 00 – Operation and Maintenance of Thermal and Moisture Protection.
- D. Section 07 20 00 – Thermal Protection.
- E. Section 07 30 00 – Steep Slope Roofing.
- F. Section 07 31 00 – Shingles and Shakes.
- G. Section 07 32 00 – Roof Tiles.
- H. Section 07 33 00 – Natural Roof Coverings.
- I. Section 07 40 00 – Roofing and Siding Panels.
- J. Section 07 50 00 – Membrane Roofing.
- K. Section 07 60 00 – Flashing and Sheet Metal.

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 1. ASTM C 209 - Test Methods for Cellulosic Fiber Insulating Board.
 2. ASTM C 518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
 3. ASTM D 1037 - Test Methods of Evaluating Properties of Wood-Base Fiber and Particle Panel Materials.
 4. ASTM E 84 - Test Method for Surface Burning Characteristics of Building Materials.
 5. ASTM D 2164 - Methods of Testing Structural Insulating Roof Deck.
 6. UL listed, File R16381.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Manufacturer's installation instructions and methods.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 10 years experience in producing structural roof decking.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging with labels intact until ready for installation.
- B. Inspect the materials upon delivery to assure that specified products have been received. Report damaged material immediately to the delivering carrier and note such damage on the carrier's freight bill of lading.
- C. Store materials in a dry place, indoors, on raised platform protected from weather damage.

1.7 PROJECT CONDITIONS

- A. Install panels to roof framing at delivery if possible to avoid double handling of material. Decking installation must be followed immediately with finish roofing. Any uncovered roof deck is to be covered with a waterproof tarpaulin to keep the deck dry from rain and nighttime condensation at the end of the workday.
- B. If EasyPly panels do get wet from rain or nighttime condensation, then allow material to dry out completely before installing finish roof onto the deck. Under no circumstances install the finish roof over a wet roof deck.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Homasote Company; 932 Lower Ferry Road, West Trenton, NJ 08628. Tel: (800) 257-9491. Tel: (609) 883-3300. Fax: (609) 883-3497. Email: sales@homasote.com; Website: www.homasote.com
- B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.
- C. Substitutions: Not permitted.

- D. Provide all roof deck panels from a single manufacturer.

2.2 MATERIALS

- A. EasyPly Roof Deck: Class C fire-rated. Molded, recycled post-consumer paper, cellulose fiber structural panel made from 3 layers of 440 structural board with white vinyl flitter interior finish. Also available without vinyl flitter finish. Physical properties as follows:

1. Thickness: 2 1/16" (52.4 mm), 2' x 8' (610 x 2438 mm).
2. Density: 26-28 pcf (416-448 kg/cu. m) tested in accordance with ASTM C 209.
3. Tensile Strength: When tested in accordance with ASTM C 209:
 - a. Parallel: 450-700 psi (3,100-4,830 kPa).
 - b. Transverse: 750-1000 psi (5.1171-6.894 kPa).
4. Hardness (Janka Ball): 230 lbs (104 kg) tested in accordance with ASTM D 1037.
5. Water Absorption by Volume: When tested in accordance with ASTM C 209:
 - a. 2 hour immersion: 7 percent maximum.
6. Expansion: 50 to 90 percent relative humidity, 0.25 percent in accordance with ASTM C 209.
7. Thermal Resistance: When tested in accordance with ASTM C 209 per ASTM C 518:
 - a. R-value: 5 for 2 1/16", (52.4 mm) thick board.
 - b. K-value: .512 Btu-in/ (h ft² °F).
8. Noise reduction coefficient (NRC): 0.20
9. Flame Spread: 76 to 200 tested in accordance with ASTM E 84, Class III or C.

- B. Sizes and Weights:

Thickness Nom.	Size	Weight (lbs./sq. ft.)	R-Value
2 1/16"	2' X 8' (23 1/8" x 95 7/8") actual	5	5

All sizes are nominal.

- C. Load Table:

Calculations are based on two or more continuous spans.

Panel Thickness	Max. Rafter Spacing for Live Loads of:		
	40 PSF	50 PSF	A-Frame
2 1/16"	48"	48"	48"

Spans are limited by 1/180 deflection expressed in lbs. per square foot of roof area projected on a horizontal plane and over two or more spans. 10 PSF dead load assumed.

- D. Vapor Barriers: The white vinyl flitter interior finish will serve as a vapor barrier. The installation of additional vapor barriers will be determined by local codes and site conditions.

2.3 ACCESSORIES

Roof Rafter Fasteners:

1. To wood framing: 16d annular thread type (ring shank) galvanized nail of sufficient length required to penetrate not less than 1 inch (305 mm) into framing.
Coarse thread wood screws with 3/8" diameter flat heads of sufficient length required to penetrate not less than 1 inch (305 mm) into framing.
2. To metal framing: Consult installation instructions as to fasteners specified depending on type of metal framing used as well as gauge thickness.

B. Finish Roofing Fasteners:

1. Nails for shingles, shakes and tiles: Annular threaded type (ring shank) galvanized nail of sufficient length required to penetrate not less than 1 inch (305 mm) into the deck.
2. Screws for shakes and tiles: #10 or #14 galvanized screws of sufficient length required to penetrate not less than 1 inch (305mm) into the deck.
3. Screws for standing seam metal roofing clips: #14 concealor screws of at least 1 ¼ inch (381 mm) in length. Clip spacing to be determined by installer and site environmental conditions.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify framing member spacing complies with manufacturer's requirements.
- B. If framing installation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Verify what environmental conditions are, and shall be in accordance with manufacturer's recommendations.
- D. Starting work by installer is acceptance of framing and environmental conditions.

3.2 PREPARATION

- A. Bearing surface of roof framing is to be clean, level and parallel. Install a layer of 4 or 6 mil polyethylene plastic to the bearing surface to act as a slip sheet to allow the roof deck to move in its normal expansion and contraction cycles and to prevent the finished vinyl interior facing from wrinkling.
- B. Report and correct defects before installation.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install only clean dry panels. Do not install wet panels.
- C. Roof panel installation: Space panel joints (at the butt ends) 1/8 inch (3 mm) apart. Stagger joints.

3.4 PROTECTION

- A. Protect installed products from weather until completion of project.
- B. Touch-up, repair, or replace damaged products before Substantial Completion.

3.5 CLEANING

- A. Comply with manufacturer's recommendations for repairing damaged panels.
- B. Replace panels that cannot be repaired.