SECTION 06 16 00

SHEATHING - SAP BOARD

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\*\* NOTE TO SPECIFIER \*\* RSP Industries, Inc.; flooring acoustic underlayment.  
This section is based on the products of RSP Industries, Inc., which is located at:5461 Dunham Rd.Maple Heights, OH 44137Tel: 440-241-3401Email: [request info (amathews@sapproductsllc.com)](https://arcat.com/rfi?action=email&company=RSP%252BIndustries%252C%252BInc.&message=RE%253A%2520Spec%2520Question%2520(06160spb)%253A%2520&coid=52654&spec=06160spb&rep=&fax=)  
Web: <https://sapproductsllc.com>   
 [ [Click Here](https://arcat.com/company/rsp-industries-inc-52654) ] for additional information.  
After years of research and development, RSP Industries is excited to introduce the first viable alternative to cementitious underlayments. With sound absorption rates as high as 58 IIC and 62 STC, the sound dampening abilities of SAP Board are second to none.  
The prevention of noise transfer between living spaces has been a challenge for architects and builders for decades. Large structures such as multi-family dwellings and hotel buildings are especially prone to sound transmission between floors. Now, for the first time ever, the innovative design of SAP Board allows for sound barriers to be incorporated into the structure as the building is framed, thus allowing for continuity of installation without the need to demobilize trades to pour gypcrete.  
These unwanted noises and sounds can flow like a network through a large structure. From the constant hum of electronic equipment in large office buildings to the everyday sounds of life in multi-family structures, the close proximity of units both above and below demands that attention is given to undesired sound transmission.  
Sound Absorption Panel Boards are the latest innovation in acoustic subfloor design. SAP Board combines the ease of installation of a traditional subfloor with the sound damping qualities of the best acoustic isolation solutions in the industry. In every aspect, SAP Board provides installation benefits.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Combination subflooring/underlayment.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 06 00 00 - Wood, Plastics, and Composites.
    2. Section 06 10 00 - Rough Carpentry.
    3. Section 06 11 16 - Mechanically Graded Lumber.
    4. Section 07 10 00 - Damp proofing and Waterproofing.
    5. Section 07 21 19 - Foamed-In-Place Insulation.
    6. Section 07 27 19 - Plastic Sheet Air Barriers .
    7. Section 07 27 00 - Air Barriers
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. APA The Engineered Wood Association (APA):
       1. APA AFG-01 - Adhesives for Field-Gluing Plywood to Wood Framing.
    2. ASTM International (ASTM):
       1. ASTM D3498 - Standard Specification for Adhesives for Field-Gluing Plywood to Lumber Framing for Floor Systems.
       2. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
       3. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
       4. ASTM E492 - Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine.
    3. US Department of Commerce (DOC):
       1. DOC PS 2 - Performance Standard for Wood-Based Structural Panels.
    4. International Code Council (ICC):
       1. ICC IBC - International Building Code.
       2. ICC IRC - International Residential Code for One- and Two-Family Dwellings.
    5. ICC Evaluation Service, Inc. (ICC-ES):
       1. ICC-ES AC182 - Acceptance Criteria for Wood Structural Panel Products.
       2. ICC-ES ESR-1785 - Evaluation Report for Engineered Panels.
       3. ICC-ES ESR-1472 - Evaluation Report for Wood Screws.
       4. ICC-ES VAR-1012 - Verification of Attributes Environmental Report.
    6. Sustainable Forestry Initiative (SFI):
       1. SFI 2010 - 2014 Standard.
    7. Underwriters Laboratories, Inc. (UL):
       1. UL 263 - Standard for Fire Tests of Building Construction and Materials.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data:
        1. Manufacturer's data sheets on each product to be used.
        2. Preparation instructions and recommendations.
        3. Storage and handling requirements and recommendations.
        4. Typical installation methods.
     3. Evaluation Reports: From ICC-ES, for wood sheathing products

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern, and color.
    2. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.
     2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
     3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up on might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
       1. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
       2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
       3. Retain mock-up during construction as a standard for comparison with completed work.
       4. Do not alter or remove mock-up until work is completed or removal is authorized.
  1. PRE-INSTALLATION CONFERENCE
     1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
     2. Protect from damage due to weather, excessive temperature, and construction operations.
  3. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  4. WARRANTY
     1. Manufacturer's standard limited warranty unless indicated otherwise.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: RSP Industries, Inc., which is located at:5461 Dunham Rd.Maple Heights, OH 44137Tel: 440-241-3401Email: [request info (amathews@sapproductsllc.com)](https://arcat.com/rfi?action=email&company=RSP%252BIndustries%252C%252BInc.&message=RE%253A%2520Spec%2520Question%2520(06160spb)%253A%2520&coid=52654&spec=06160spb&rep=&fax=);Web: <https://sapproductsllc.com>
      2. Basis-of-Design Product: Provide floor sheathing/underlayment products manufactured by RSP Industries, Inc.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Delete article not required.

* 1. PERFORMANCE REQUIREMENTS

\*\* NOTE TO SPECIFIER \*\* Fire-Resistance Ratings Paragraph below refers to sheathing products used as an approved product that is part of a fire-resistance-rated assembly indicated on the Drawings. Delete if not required.

* + 1. Fire-Resistance Ratings: Provide approved products that are part of fire-resistance-rated assemblies tested for fire resistance per ASTM E119/UL 263.
    2. Acoustic Performance: Provide approved products that are part of acoustically tested floor/ceiling assemblies tested for as follow:
       1. Sound transmission loss (STC) in accordance with ASTM E 90: Not less than 60.
       2. Impact sound transmission, (IIC) in accordance with ASTM E 492: Not less than 55.
  1. WOOD PANEL PRODUCTS
     1. Provide combination floor sheathing/underlayment product by RSP Industries, Inc.:
     2. Oriented Strand Board: Comply with the following Product Standards:
        1. DOC PS 2, made with binder containing no added urea formaldehyde, with visible grade stamp and field identification.
        2. ICC-ES AC182.
     3. Code Compliance Standard: ICC-ES ESR-1785 for basis of design product, or ICC-ESR of comparable product acceptable to Architect.
     4. Panel Exposure: Warranted by manufacturer to resist weather exposure for 300 days.
     5. Fastener Marking: On top panel surface with pre-spaced fastening symbols for 16 inches (406 mm) and 24 inches (610 mm) on center spacings

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* + 1. The first viable alternative to cementitious underlayments in wood frame construction. SAP Board floor/ceiling assemblies provide sound dampening abilities while eliminating disruptive use of wet cementitious underlayments.
    2. Sound Transfer: SAP Board allows sound barriers to be incorporated into the structure as the building is framed, providing continuity of installation without the need to demobilize trades while pouring and curing gypcrete. Sound absorption rates as high as 58 IIC and 62 STC.
    3. Fire Resistance: SAP Board is a component of several commonly used floor/ceiling fire-resistance rated assembly designs including the following ANSI/UL 263 and CAN/ULC-S101 certifications:
    4. UL L501, UL L510, UL L511, UL L528, UL L538, UL L570, UL L577, UL M510, and UL M539.
    5. Reduce Risk of Mold: Because SAP Board eliminates introduction of wet cementitious underlayments into an otherwise dry environment. The risk of mold development during the construction process is reduced or eliminated.
    6. Quality: SAP Board features a robust design with exceptional strength and stiffness as well as easy machining and adhesion, allowing for a hassle-free installation. Additionally, the exceptional dimensional stability resists warping, twisting, and bowing.
    7. Environmentally Friendly: Manufactured with yellow pine from renewable sources and recycled rubber, SAP Board has a near zero carbon footprint. The water-based adhesive system is resistant to moisture and creates a strong, stable product that is free from solvents and other harmful emissions. SAP Board may contribute to credit points in green certification programs including:
    8. Earth Craft House,
    9. LEED for Homes; LEED for New Construction,
    10. ENERGY STAR,
    11. NAHB Model Green Home Building Guidelines,
    12. National Green Building Standard,
    13. Ease of Installation: SAP Board is available in 4x8 sheets. Installed in the same manner as traditional subfloor, saving time and reduces schedule duration by as much as 3 weeks on a typical 4 story, 80,000 sq ft multifamily building and more on larger projects.
    14. Cost Savings: In addition to competitive installation costs, SAP Board offers savings resulting from schedule improvements, reduced general conditions and floor prep time for finish floor contractors.
  1. SUBFLOOR-UNDERLAYMENT
     1. Composite Acoustical Subfloor-Underlayment: One sheet of 23/32 inches (18 mm) and one sheet of 7/16 inches (11 mm) oriented strand board Exposure 1 floor panels pressure and adhesive laminated with acoustically insulating recycled rubber membrane interlayer.
        1. Basis-of-Design Product: Provide RS Panels, Inc., SAP Board.
        2. Size: 48 by 96 inches (1219 by 2438 mm).
        3. Thickness: Nominal 1-3/16 inches (30 mm).
        4. Edge Profile: Tongued-and-grooved.
        5. Surface Finish: Fully sanded face.
  2. FASTENERS
     1. Fasteners, General: Size and type complying with manufacturer's written instructions for Project conditions and requirements of authorities having jurisdiction.
     2. Power-Driven Fasteners: ICC-ES ESR-1472.
     3. Subflooring Panel Adhesive: Product complying with ASTM D3498 or APA AFG-01 and recommended by floor panel manufacturer and adhesive manufacturer for application.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly constructed and prepared.
         1. Examine framing spacing and alignment to determine if work is ready to receive sheathing.
      2. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION, WOOD STRUCTURAL PANEL
      1. Sheathing Installation, General: Install sheathing panels in accordance with manufacturer's written instructions, requirements of applicable Evaluation Reports, and requirements of authorities having jurisdiction.
         1. Do not bridge expansion joints; allow joint spacing equal to spacing of structural supports.
         2. Stagger end joints of adjacent panel runs.
         3. Continuously support panel edges without tongue-and-groove edge profile where indicated.
         4. Attach sheathing panels securely to substrate with manufacturer-approved fasteners in compliance with the following:
            1. ICC-ES ESR-1472 for power-driven fasteners.
         5. Optimize joint arrangements resulting in minimum number of joints. Cut panels cleanly at penetrations.
      2. Combination Subfloor-Underlayment Fastening:
         1. Wood Framing: Glue and screw. Penetrate wood framing members at least 1 inch (25 mm).
         2. Space Panels: 1/8 inch (3 mm) apart at supported panel ends.
         3. Install fasteners 1 inch (25 mm) from tongued and grooved panel edges and 3/8 inch (10 mm) from square panel edges.
         4. Space fasteners 6 inches (152 mm) on centers on supported panel ends and 12 inches (305 mm) on centers at intermediate support locations.
   4. FIELD QUALITY CONTROL
      1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection, or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
  1. CLEANING AND PROTECTION
     1. Clean products in accordance with the manufacturers recommendations.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION