SECTION 09 65 16

RESILIENT LUXURY VINYL SHEET FLOORING

FOR BEHAVIORAL MENTAL HEALTH

\*\* NOTE TO SPECIFIER \*\* Altro USA, Incorporated; resilient flooring and walls.  
This section is based on the products of Altro USA, Incorporated, which is located at:  
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Wilmington, MA 01887  
Toll Free Tel: 800-377-5597  
Tel: 978-657-6464  
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Email:[request info (support@altrofloors.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Altro+USA,+Incorporated&coid=30328&rep=&fax=610-746-4325&message=RE:%20Spec%20Question%20(09652alt):%20%20&mf=)  
Web:<http://www.altrofloors.com>  
In Canada:  
Altro Canada, Incorporated  
6221 Kennedy Road, Unit 1  
Mississauga, ON L5T 2S8  
Your local Altro representative is: Please contact support@altrofloors.com.  
[[Click Here](http://www.arcat.com/arcatcos/cos30/arc30328.html)] for additional information.  
Altro has been at the forefront of innovation for almost 100 years. Today, working closely with architects, end customers, engineers, designers and contractors around the world, our insight and expertise help them transform everyday spaces into environments that can improve the well being of everyone that uses them.

1. GENERAL
   1. SECTION INCLUDES
      1. Safety flooring. (Aquarius) (Atlas 40) (Classic 25) (Stronghold 30)
         1. Accessories: Behavioral and mental health facilities. (Aquarius)
      2. Slip resistant flooring. (Reliance 25) (Walkway 20)
         1. Accessories: Behavioral and mental health facilities. (Reliance 25) (Walkway 20)
      3. Smooth resilient sheet flooring. (Symphonia) (Orchestra) (Operetta) (Serenade) (Wood) (Wood Comfort) (Wood Acoustic)
         1. Accessories: Behavioral and mental health facilities. (Symphonia) (Orchestra) (Operetta) (Serenade) (Wood) (Wood Comfort) (Wood Acoustic)
   2. RELATED SECTIONS

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

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
    2. Section 06 10 00 - Rough Carpentry.
    3. Division 7 - Thermal and Moisture Protection.
  1. REFERENCES

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

* + 1. American Concrete Institute (ACI):
       1. ACI 302.1R - Guide to Concrete Floor and Slab Construction.
       2. ACI 302.2R - Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.
    2. ASTM International (ASTM):
       1. ASTM D 2047 - Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine.
       2. ASTM E 648 / NFPA 253 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
       3. ASTM E 662 - Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
       4. ASTM F 710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
       5. ASTM F 970 - Standard Test Method for Measuring Recovery Properties of Floor Coverings after Static Loading.
       6. ASTM F 1303 - Standard Specification for Sheet Vinyl Floor Covering with Backing.
       7. ASTM F 1482 - Standard Guide to Wood Underlayment Products Available for Use Under Resilient Flooring.
       8. ASTM F 2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.
       9. ASTM F 3010 - Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings.
    3. German Institute for Standardization (DIN):
       1. DIN 51130 - Testing of Floor Coverings - Determination of the Anti-Slip Property - Workrooms and Fields of Activities with Slip Danger - Walking Method - Ramp Test.
    4. Underwriters Laboratories of Canada (ULC):
       1. CAN/ULC-S102.2, Surface Burning Characteristics of Flooring, Floor Covering and Miscellaneous Materials and Assemblies.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. 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. Installation methods.
     3. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (152 mm) square representing actual product, color, and patterns.
  2. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
     2. Installer Qualifications: Trained journeymen with a minimum of three years successful experience in the installation of resilient flooring.
     3. Regulatory Requirements: Provide slip resistant sheet vinyl safety flooring in compliance with the following:
        1. Americans with Disabilities Act Architectural Guidelines (ADAAG).
        2. Occupational Safety and Health Administration (OSHA).

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project 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: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship is approved by Architect.
       3. Remodel mock-up area as required to produce acceptable work.
  1. PRE-INSTALLATION MEETINGS
     1. Convene minimum two weeks prior to starting work of this section.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
     2. Store rolls of sheet goods in a secured upright position. Store materials in dry spaces protected from the weather, with ambient temperatures not less than 55 degrees F (12.8 degrees C) or more than 85 degrees F (29.4 degrees C).
     3. Handle materials to avoid damage.
  3. PROJECT CONDITIONS
     1. Temperature Requirements: If storage temperature is below 65 degrees F (18 degrees C), the Altro Whiterock wall panel must be moved to a warmer place and allowed to reach this temperature before installation. For further information, refer to current Installation Guide.
     2. Maintain ambient temperatures of 68 degrees F (20 degrees C) and 80 degrees F (26.7 degrees C) in spaces to receive resilient products for 72 hours before installation, during installation and 24 hours after installation.
     3. Maintain the ambient relative humidity between 40 percent and 60 percent during installation.
     4. Allow sufficient time for proper preparation, installation and cuing.
     5. Close spaces to traffic during resilient flooring installation until the installer is satisfied the adhesive has set.
     6. Verify permanent HVAC is operational. If temporary heat is required, use electric or indirect heat sources. Do not use kerosene or propane in direct contact with the ambient air.
     7. Verify other finishing operations, including painting, have been completed.
     8. Where demountable partitions and other items are indicated for installation on top of sheet resilient flooring material, install flooring material before these items are to be installed.
     9. Coordinate with plumbing subcontractor that approved surface membrane clamping drainage connections will be used, including but not limited to, surface clamping round drains, surface clamping trench drains, surface clamping floor sinks, surface clamping grease traps, or use of Altro Gulley Edge/Angle, or employment of Altro's Modified Surface Clamping Drain System.
     10. Conform to all pertinent ASTM, ACI and Altro Standards listed in, but not limited to, this specification.
  4. SEQUENCING
     1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
  5. WARRANTY
     1. Warranty: Provide manufacturer's standard limited warranty.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Altro USA, Incorporated, which is located at: 80 Industrial Way; Wilmington, MA 01887; Toll Free Tel: 800-377-5597; Tel: 978-657-6464; Fax: 610-746-4325; Email: [request info (support@altro.com)](mailto:request%20info%20(support@altro.com)); Web:<http://www.altro.com>
      2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
   2. SAFETY FLOORING
      1. Slip Resistant Sheet Vinyl:
         1. Basis of Design: Aquarius, as manufactured by Altro USA, Inc.
            1. Wear Layer: Homogeneous construction.
            2. Overall Thickness: 0.08 in (2 mm).
            3. Sheet/Roll Width: 79 in (2 m).
            4. Sheet/Roll Length: 66 ft (20.1 m).
            5. Weight: 4.79 lbs per sq yd (2.6 kg per sq m).
            6. Backing: Non-woven polyester and cellulose glass fiber reinforcement scrim.
            7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.88; Wet: 1.03.

* + - * 1. Static Load Limit per ASTM F 970: 1500 lbs per sq in (10342 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

* + - * 1. Product Identification: AQ2004 Cygnet.
        2. Product Identification: AQI2023 Gosling.
        3. Product Identification: PX2001 Lighthouse.
        4. Product Identification: PX2013 Deckchair.
        5. Product Identification: PX2015 Houseboat.
        6. Product Identification: As selected by Architect.
    1. Accessories: For behavioral and mental health facilities.
       1. Vinyl Welding Rod: Weldrod.
       2. Floor Drains: Must have ligature-resistant covers and be secured with tamper-proof screws.
       3. Subfloor Filler and Leveler: Use only gray Portland cement-based "moisture tolerant" underlayments, and patching compounds. Use for filling cracks, holes or leveling. White gypsum materials are not acceptable.
       4. Caulking: Recommend or similar approved security sealant such as Pecora DynaFlex SC, with manufacturer recommended primer
       5. Adhesives:
          1. Altrofix 30: 2 part polyurethane for areas prone to moisture.
          2. Adhesive Applications:

All Wet Areas: Altrofix 30.

Safety Flooring: Altrofix 30.

Slip-Resistant Flooring: Ecofix 20E.

Adhesive-Free Sheet: Altro Looselay tape.

Smooth Sheet: Ecofix 20E.

* 1. SMOOTH RESILIENT SHEET FLOORING
     1. Smooth Sheet Vinyl:
        1. Basis of Design: Orchestra, as manufactured by Altro USA, Inc.
           1. Wear Layer: 0.028 (0.7 mm).
           2. Overall Thickness: 0.11 in (2.85 mm).
           3. Sheet/Roll Width: 79 in (2 m).
           4. Sheet/Roll Length: 66 ft (20.1 m).
           5. Weight: 4.79 lbs per sq yd (2.6 kg per sq m).
           6. Backing: Slighty blown PVC with black fleece backing.
           7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.7; Wet: 0.8.

Ramp Test per DIN 11530: R10.

* + - * 1. Static Load Limit: 1000 lbs per sq in (6895 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

* + - * 1. Product Identification: Salsa CH2802U.
        2. Product Identification: Chant CH2814U.
      1. Basis of Design: Wood, as manufactured by Altro USA, Inc.
         1. Wear Layer: 0.028 (0.7 mm).
         2. Overall Thickness: 0.08 in (2 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 4.90 lbs per sq yd (2.66 kg per sq m)
         6. Backing: Compact PVC backing.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.79; Wet: 0.94.

Ramp Test per DIN 11530: R10

* + - * 1. Static Load Limit: 2500 lbs per sq in (17237)
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

* + - * 1. Product Identification: Bleached Oak WSM2051.
        2. Product Identification: Autumn Maple WSM2055.
        3. Product Identification: Vintage Cherry WSM2052.
        4. Product Identification: Washed Oak WSM2063.
      1. Basis of Design: Wood Comfort, as manufactured by Altro USA, Inc.
         1. Wear Layer: 0.028 (0.7 mm).
         2. Overall Thickness: 0.11 in (2.85 mm).
         3. Sheet/Roll Width: 79 in (2 m).
         4. Sheet/Roll Length: 66 ft (20.1 m).
         5. Weight: 4.79 lbs per sq yd (2.6 kg per sq m).
         6. Backing: Slighty blown PVC with black fleece backing.
         7. Slip Resistance per ASTM D 2047: ADA compliant.

Dry: 0.79; Wet: 0.94.

Ramp Test per DIN 11530: R10.

* + - * 1. Static Load Limit: 1000 lbs per sq in (6895 kPa).
        2. Fire Performance:

CAN/ULC - S102.2.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

* + - * 1. Product Identification: Autumn Maple Comfort WSMSC2802.
        2. Product Identification: Urban Cherry Comfort WSMSC2804.
        3. Product Identification: Washed Oak Comfort WSMSC2808.
        4. Product Identification: Antique Walnut Comfort WSMSC2810.

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

* 1. Vinyl Welding Rod: Weldrod.
  2. Floor Drains: Must have ligature-resistant covers and be secured with tamper-proof screws.
  3. Subfloor Filler and Leveler: Use only gray Portland cement-based "moisture tolerant" underlayments, and patching compounds. Use for filling cracks, holes or leveling. White gypsum materials are not acceptable.
  4. Caulking: Recommend or similar approved security sealant such as Pecora DynaFlex SC, with manufacturer recommended primer
  5. Adhesives:
     1. EcoFix 20E: Hard set for heavy rolling loads.
     2. Adhesive Applications:
        1. All Wet Areas: Altrofix 30.
        2. Safety Flooring: Altrofix 30.
        3. Slip-Resistant Flooring: Ecofix 20E.
        4. Adhesive-Free Sheet: Altro Looselay tape.
        5. Smooth Sheet: Ecofix 20E.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly prepared. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
      2. Confirm concrete slabs conform to ACI 302.1R and ACI 302.2R.
      3. Perform moisture tests on concrete floors regardless of the age or grade level. Verify concrete substrate is dry in accordance with ASTM F 2170, in strict accordance with instructions.
   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.
         1. Concrete per ASTM F 710.
         2. Other Monolithic Floors; ASTM F 1482
      3. When patching, a moisture-tolerant patching compound must always be used.
   3. INSTALLATION
      1. Install in accordance with Altro Installation Practices and Quick Facts Guide, approved submittals, and in proper relationship with adjacent materials.
         1. All Seams shall be heat welded with Altro Weldrod only.
         2. Failure to install flooring per recommended procedures will void the limited product warranty.

\*\* NOTE TO SPECIFIER \*\* Coved installation must be used if installation is in a behavioral or mental health facility. Otherwise delete if not required..

* + 1. Coved Installation: Where Altro flooring is coved up wall surfaces and other abutments, install per Altro Installation Practices using the following accessories:
       1. Standard Wall Finishes: Rebate method. Firmly secure sheet vinyl beneath wall panel prior to sealing with security sealant.
       2. Shower Transitions: Pencil cove method. With wall flush against flooring. Ensure there are no opportunities to pick at finishes by installing Altro Whiterock wall cladding over flooring per this installation method.
  1. PROTECTION
     1. Protect installed products until completion of project.
     2. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.
     3. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION