SECTION 09652

RESILIENT LUXURY VINYL SHEET AND TILE FLOORING

\*\* 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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Web:<http://www.altrofloors.com>
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6221 Kennedy Road, Unit 1
Mississauga, ON L5T 2S8
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[[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 wellbeing of everyone that uses them.
And by consistently turning creative thinking into practical, real-world solutions - that maintain the highest standards of safety and durability - Altro has become synonymous with quality.
As a family-founded business, we have a strong sense of what we value and a way of thinking inspired by The Bauhaus - a balance of quality, form and design-led function - that puts people's needs at the heart of everything we do. It's a human-centered approach to designing for the demands of 21st century life.
It's a history that means we value the bold, the brave and the new. From focusing on how the different sectors we serve need their spaces to perform, to the call for more environmentally sustainable materials, Altro is constantly challenging what is possible and seeking new ways of inspiring our customers and answering their biggest challenges.
With offices across Europe, the Americas, Asia Pacific and the Middle East, we remain committed to developing solutions that stand the test of time.
We combine the best in contemporary style with the functionality required to improve the way we all live and work, wherever in the world that may be.

1. GENERAL
	1. SECTION INCLUDES
		1. Smooth resilient tile flooring. (Altro Lavencia)
	2. RELATED SECTIONS

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

* + 1. Section 03300 - Cast-in-Place Concrete.
		2. Section 06100 - Rough Carpentry: Plywood floor sheathing.
		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 1066 - Standard Specification for Vinyl Composition Floor Tile.
			7. ASTM F 1303 - Standard Specification for Sheet Vinyl Floor Covering with Backing.
			8. ASTM F 1482 - Standard Guide to Wood Underlayment Products Available for Use Under Resilient Flooring.
			9. ASTM F 2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.
			10. 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 01300 - 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@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>
		2. Requests for substitutions will be considered in accordance with provisions of Section 01600 - Product Requirements.
	2. SMOOTH RESILIENT TILE FLOORING

Heavy Duty Luxury Tile Flooring:

\*\* NOTE TO SPECIFIER \*\* Altro Lavencia may be produced in various custom thickness and wear layers. Edit thickness and wear layer according to product specified. Number of planks per carton and square foot per carton can also change depending on thickness. Adjust accordingly.

* + - 1. Basis of Design: Altro Lavencia, as manufactured by Altro USA, Inc.
				1. Wear Layer: 0.028 in (0.71 mm).
				2. Overall Thickness: 0.12 in (3.0 mm).
				3. Backing: PVC.
				4. Slip Resistance per ASTM D 2047: Dry: 0.6.
				5. Static Load Limit per ASTM F970: 2000 lbs per sq in (13790 kPa).
				6. Short Term and Residual Indentation per ASTM F1914: Pass.
				7. Color Stability:

Light per ASTM F1515: Pass.

Heat per ASTM F1514: Pass.

* + - * 1. Dimensional Stability per ASTM F2199: Pass.
				2. Flexibility per ASTM F137: Pass.
				3. Fire Performance:

CAN/ULC - S102.2: Tested.

ASTM E 648: Tested Class I.

ASTM E 662: Less than 450.

* + - * 1. Chemical Resistance per ASTM F925: Tested.
				2. VOC Emissions:

CA 01350: Pass.

FloorScore: Certified.

* + - * 1. Manufactured with rapidly renewable bio-based content.
				2. Ortho-phthalate-free.
				3. Recyclable: 100 percent.
				4. Composition: UV-cured, ceramic-reinforced urethane, film print, 100 percent virgin vinyl layers and backing.
				5. Plank Type: Long plank.

Plank Size: 9.25 x 59.25 inches (235 x 1505 mm).

Pieces per Carton: 10.

Square Feet per Carton: 38.07 sq ft (3.54 sq m).

Weight per Carton: 42.18 lbs (19.13 kg)

Product Identification: LAV99011, Malmo Timber, 3.0mm, 28 MIL.

Product Identification: LAV99044, Scandi Timber, 3.0mm, 28 MIL.

Product Identification: LAV99099, Barnboard, 3.0mm, 28 MIL.

Product Identification: LAV55099, American Redwood, 3.0mm, 28 MIL.

Product Identification: LAV13011, Chateau Nordic, 3.0mm, 28 MIL.

Product Identification: LAV55088, Tavern Mesquite, 3.0mm, 28 MIL.

Product Identification: LAV88077, Oak Butternut, 3.0mm, 28 MIL.

Product Identification: LAV99077, Vintage Walnut, 3.0mm, 28 MIL.

Product Identification: LAV99088, Tavern Bourbon, 3.0mm, 28 MIL.

Product Identification: LAV99077, Vintage Walnut, 2.5mm, 12 MIL.

Product Identification: LAV99044, Scandi Timber, 2.5mm, 12 MIL.

* + - * 1. Plank Type: Standard plank.

Pieces per Carton: 18.

Plank Size: 6 x 48 inches (152 x 1219 mm).

Square Feet per Carton: 36 sq ft (3.34 sq m).

Weight per Carton: 38 lbs (17.24 kg).

Product Identification: LAV14066, Colonial Oak, 3.0mm, 28 MIL.

Product Identification: LAV88055, Sienna, 3.0mm, 28 MIL.

Product Identification: LAV88099, Rosewood, 3.0mm, 28 MIL.

Product Identification: LAV17011, Dove, 3.0mm, 28 MIL.

Product Identification: LAV17022, Tweed, 3.0mm, 28 MIL.

Product Identification: LAV13022, Chateau Cellar, 3.0mm, 28 MIL.

Product Identification: LAV13033, Chateau Saddle, 3.0mm, 28 MIL.

Product Identification: LAV13066, Farmhouse Whiskey, 3.0mm, 28 MIL.

Product Identification: LAV13077, Farmhouse Smoke, 3.0mm, 28 MIL.

Product Identification: LAV14011, Classic Oak, 3.0mm, 28 MIL.

Product Identification: LAV14022, Ash Oak, 3.0mm, 28 MIL.

Product Identification: LAV14033, Blonde Oak, 3.0mm, 28 MIL.

Product Identification: LAV23066, Hampton Greige, 3.0mm, 28 MIL.

Product Identification: LAV23088, Frontier, 3.0mm, 28 MIL.

Product Identification: LAV44011, Amber, 3.0mm, 28 MIL.

Product Identification: LAV44022, Marmalade, 3.0mm, 28 MIL.

Product Identification: LAV44033, Crimson, 3.0mm, 28 MIL.

Product Identification: LAV44044, Pear, 3.0mm, 28 MIL.

Product Identification: LAV44055, Cobalt, 3.0mm, 28 MIL.

Product Identification: LAV55022, Warm Walnut, 3.0mm, 28 MIL.

Product Identification: LAV55044, Pale Persimmon, 3.0mm, 28 MIL.

Product Identification: LAV55055, Black Persimmon, 3.0mm, 28 MIL.

Product Identification: LAV55077, Persimmon, 3.0mm, 28 MIL.

Product Identification: LAV66099, Farmhouse Heritage, 3.0mm, 28 MIL.

Product Identification: LAV88011, Laurel Oak, 3.0mm, 28 MIL.

Product Identification: LAV88066, Antique Burled Oak, 3.0mm, 28 MIL.

Product Identification: LAV88033, Country Hickory, 3.0mm, 28 MIL.

Product Identification: LAV88044, African Mahogany, 3.0mm, 28 MIL.

Product Identification: LAV88088, Spalted Cherry, 3.0mm, 28 MIL.

Product Identification: LAV14044, Ansel Oak, 3.0mm, 28 MIL.

Product Identification: LAV14055, Newfound Oak, 3.0mm, 28 MIL.

Product Identification: LAV99055, Tavern Tobacco, 3.0mm, 28 MIL.

Product Identification: LAV13077, Farmhouse Smoke, 2.5mm, 12 MIL.

Product Identification: LAV1213066, Farmhouse Whiskey, 2.5mm, 12 MIL.

Product Identification: LAV1288011, Laurel Oak, 2.5mm, 12 MIL.

Product Identification: LAV13066, Hampton Greige, 2.5mm, 12 MIL.

* + - * 1. Plank Type: Tile.

Pieces per Carton: 18.

Plank Size: 12 x 24 inches (305 x 610 mm).

Square Feet per Carton: 36 sq ft (3.34 sq m).

Weight per Carton: 36 lbs (16.33 kg)

Product Identification: LAV16055, Cordova, 3.0mm, 28 MIL.

Product Identification: LAV16066, Umber, 3.0mm, 28 MIL.

Product Identification: LAV16077, Armor, 3.0mm, 28 MIL.

Product Identification: LAV16088, Monterey, 3.0mm, 28 MIL.

Product Identification: LAV16099, Interlace, 3.0mm, 28 MIL.

Product Identification: LAV33011, Weave, 3.0mm, 28 MIL.

Product Identification: LAV33044, Weft, 3.0mm, 28 MIL.

Product Identification: LAV16022, Sterling, 3.0mm, 28 MIL.

Product Identification: LAV16033, Alabaster, 3.0mm, 28 MIL.

Product Identification: LAV16044, Asher, 3.0mm, 28 MIL.

Product Identification: LAV33022, Grasscloth Linen, 3.0mm, 28 MIL.

Product Identification: LAV33033, Grasscloth Tweed, 3.0mm, 28 MIL.

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.
		4. Meet and prepare concrete per ASTM F 710. For other monolithic floors; ASTM F 1482 Standard for Wood Subfloors.
	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
		1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent materials.
	4. 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