

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Provide new resilient flooring and base where noted on drawings.

1.2 SUBMITTALS

A. Product Data:

1. Submit manufacturer's technical data and installation instructions for luxury vinyl tile (LVT), adhesives, and accessories.
2. Include manufacturer's written instructions for recommended maintenance practices for luxury vinyl flooring and accessories.

B. Samples:

1. For projects requiring initial selection of color and pattern by Owner, submit samples in the form of actual sections of resilient flooring, including accessories, showing manufacturer's full range of colors and patterns available, for each type of resilient flooring required.
2. For projects requiring verification of previously selected styles and colors; submit, for verification purposes, samples including accessories, selected by Owner, indicating full range of verification in color and pattern selected. Provide full-size tile samples.

C. Maintenance Instructions:

1. Submit manufacturer's written instructions for recommended maintenance practices for resilient flooring and accessories.

1.3 PRODUCT DELIVERY AND STORAGE

- A. Deliver materials to project site in manufacturer's original, unopened containers with labels indicating brand names, colors, patterns, and quality designations legible and intact.
- B. Do not open containers or remove markings until materials are inspected and accepted by installation contractor.
- C. Store and protect accepted materials in accordance with manufacturer's directions and recommendations.
- D. Materials should be stored flat for a minimum of 48 hours prior to installation. Installation instructions should be followed in accordance to manufacturer's instructions.
- E. All materials should be acclimated according to the manufacturer's specification.
- F. All products should be inspected for dye lot, style, color, size, quality and shipping damage prior to installation and should not be installed if any irregularities are observed. Inspect the cartons to be sure all colors are the same shade.
- G. Check all materials at the jobsite to the order.

1.4 INSTALLATION GUIDELINES

A. Subfloor Preparation

1. Moisture Test Methods

ASTM F1869 and ASTM F2170 and pH testing is required when installing LVT. Testing should be performed in several areas including the perimeter of the room, at columns and wherever else moisture might occur. The maximum allowable moisture vapor emission rate (MVER) from the subfloor is 6.0 lbs. The maximum pH range is 9 or less. The In-Situ/RH requirement is not to exceed 80%. All test results must pass below the allowable limits for the LVT. Three test results

for the first 1,000 sq. ft. are required, with 1 test result for every 1,000 sq. ft. thereafter. The installer may alternate every 1,000 sq. ft. between RH and Calcium Chloride test sites after the first 1,000 sq. ft. If the concrete exceeds the moisture limitations, the installation should not proceed until the problem is corrected. A moisture problem can be corrected by using various methods. After remediation, always retest to ensure that the problem has been corrected. A moisture test indicates the conditions at the time of testing only. The flooring contractor cannot be held responsible if the moisture appears in the future causing adhesive failure. A new concrete floor contains a high percentage of moisture; therefore, it must be allowed adequate drying time. This drying time normally requires 28 to 30 days, but it can vary depending on several conditions such as the type of concrete used, average air temperature and the thickness or location of the slab.

2. Preparation of New Floors

Underlayment panels can be used to correct deficiencies in the subfloor and to provide smooth, sound surface for Tandus Centiva LVT flooring. There are numerous suitable underlayment panels such as Structurwood®, Multiply and Masonite™ brand underlayments. The most common of these is 1/4" APA underlayment grade plywood. RFCI does not recommend Luan, particle board, strand board and flake board; therefore, they are not recommended as a subfloor for Tandus Centiva LVT. Always fasten underlayment panels in accordance with the manufacturer's recommendations because any failure of the underlayment or Tandus Centiva LVT flooring as a result of the underlayment is the responsibility of the underlayment manufacturer and installer. Suitable underlayment with a fully sanded surface and a minimum thickness of 1/4" is preferred. Always make sure that the subfloor is free of any foreign material such as dust, grease, oil, polish and loose material that may cause staining, telegraphing or adhesive failure. Concrete subfloors are acceptable as long as the concrete's moisture content is within the specified parameters. Tandus Centiva fully supports the ASTM F710 standard practices methods of preparing concrete floors to receive resilient flooring. The customer or installer is responsible to assure the subfloor meets all associated manufacturer's recommendations including local codes/standards. A Portland based patching compound or leveler should be used to cover subfloor irregularities such as seams, cracks, indentations, etc. Tandus Centiva does not recommend that calcium sulfate/plaster/gypsum* based patching or leveling compound materials be used for these same type subfloor issues as these compounds can harbor moisture, promote mildew growth, offer poor permanent bonding that affects adhesive strength and typically have low indentation resistance.

3. Preparation of Existing Floors

Asbestos: Tandus Centiva luxury vinyl tile or planks contain no asbestos fibers. When removing existing resilient floor coverings, carefully observe the following warning: *Existing resilient floor coverings and black asphalt adhesive may contain asbestos. Improper procedures used to remove these products could release asbestos fibers into the air. Asbestos fibers, if inhaled, may cause serious bodily harm. Do not sand or dry scrape these materials. A preferred alternative to removal is to install a new floor over the old asbestos containing floor whenever possible. If removal of existing floor covering is necessary, be sure that all precautions are taken and proper procedures are followed.*

4. Installation

Venue comes in various sizes and can be installed in multiple configurations. Please review and confirm the recommended installation method(s) for the style(s) to be installed. The installation methods include quarter turn, vertical ashlar, horizontal ashlar, unidirectional and herringbone. Consult with Owner for desired pattern.

The Contour Series multi-layered square tiles are to be installed quarter turn (tessellated) or unidirectional. However, for best design appeal and results Tandus Centiva recommends the quarter turn method. Consult with Owner for desired pattern.

Note (Shuffling): In order to achieve a consistently diverse visual appearance, color or pattern on the floor, we recommend the following –

- A. Shuffling tiles or planks from the same carton.
- B. Shuffling tiles or planks from multiple cartons.

Check all materials at the jobsite to the order. Check color, size and design to be sure everything is correct before commencing the job. Inspect the cartons to be sure all colors are the same shade. Remember that in some Tandus Centiva LVT styles, shading and subtle color variations may be part of the design. This is desirable to enhance the look of the tile. When working with an Imaginations™ Custom Flooring Design, find the CAD drawing which accompanies the shipment and be sure all pieces are included. Tandus Centiva does an outstanding job of quality control, but checking the shipment beforehand will assure there is no work stoppage. Do not install materials with an apparent defect.

5. Acclimation

All Tandus Centiva LVT tiles, planks and adhesive should be present at the jobsite for at least 48 hours at temperature between 68-72 degrees F in order to acclimate properly. Avoid installations with ambient temperatures above 85 degrees F and below 65 degrees F. The tiles, room and existing floor must be at room temperature (68-72 degrees F). It is helpful to stack the cartons two high around the area. Slabs in 36" x 36" are stacked on a pallet and may have to be acclimated up to 72 hours prior to installation. Avoid extreme cold and hot situations.

6. Adhesives

Tandus Centiva US LLC recommends that all tiles and planks be installed with Tandus Centiva LVT preferred adhesives only. Choose the following adhesives that apply to your specific job specifications.

Adhesive	CENTI 2001 Wet Set	Centi 6000 SP	Centi 2000 EP	Schonox Roll and Go™
Installation	Wet set	Wet set with pressure sensitive characteristics	Epoxy mix	Wet set (thin) applied with included Schonox Roll and Go Roller
Sub-floor	Porous only	Porous/non-porous	Porous/non-porous	Porous only
Trowel Size	1/16 x 1/16x1/16 sq. notch	Porous: 1/16 x 1/16x1/16 sq. notch Non-porous: 1/32 x 1/16 x 1/32 sq. notch	1/16 x 1/16x1/16 sq. notch	No trowel. Apply with Roll and Go Roller
Spread rate	125 sq ft. per gallon per trowel size	120-130 sq ft. per gallon per trowel size	130-150 sq ft. per gallon per trowel size	540 sq ft per 1.56 gal. unit
Open time	25 minutes	45 minutes	40-50 minutes	2 hours
Roller	100 lb.	100 lb.	100 lb.	100 lb.
Max. moisture	6 lbs/1,000 sq.ft. in 24 hours or	6 lbs/1,000 sq.ft. in 24 hours or	6 lbs/1,000 sq.ft. in 24 hours or	6 lbs/1,000 sq.ft. in 24 hours or

Centiva Floor	80% Relative Humidity	80% Relative Humidity	85% Relative Humidity	85% Relative Humidity
	Victory, Contour, Event, Venue	Contour, Event, Venue	Victory, Contour, Event, Venue	Contour, Event, Venue

PART 2 - PRODUCTS

2.1 LUXURY VINYL TILE

A. Luxury Vinyl Tile (LVT) (Type 1) Venue Series by Tandus Centiva by Tarkett or equivalent.

1. Meets ASTM Testing as follows:
 - a. Flexibility: ASTM F137 Passes
 - b. Dimensional Stability: ASTM F2199 Passes
 - c. Static Load: ASTM F970 Passes
 - d. Residual Indentation: ASTM F1914 Excellent
 - e. Flammability: ASTM E648 CRF \geq 0.45 watts/cm² NFPA Class I
 - f. Slip Resistance: ASTM D2047 Passes \geq 0.50 ADA Compliant
 - g. Smoke Density: ASTM E662 Passes \leq 450 D^m
 - h. Resistance to Light: ASTM F1515 Excellent
 - i. Chemical Resistance: ASTM F925 Excellent
 - j. Resistance to Heat: ASTM F1514 Excellent
2. Offer a minimum 1500 PSI rating.
3. Available with the following emboss selections: Quarry, Linear Wood, Slate, Weathered Grain, Cross Grain.
4. Offer a variance in size selection.
5. Offer a design selection between wood, stone, or abstract products.
6. Offer a minimum wear layer thickness of 20 mil.
7. Offer a 3.0 mm overall thickness.
8. Offer a 10 year commercial warranty.
9. Manufactured in the United States.

B. Luxury Vinyl Tile (LVT) (Type 2) Contour Series by Tandus Centiva by Tarkett or equivalent.

10. Meets ASTM Testing as follows:
 - a. Flexibility: ASTM F137 Passes
 - b. Dimensional Stability: ASTM F2199 Passes
 - c. Static Load: ASTM F970 Passes
 - d. Residual Indentation: ASTM F1914 Excellent
 - e. Flammability: ASTM E648 CRF \geq 0.45 watts/cm² NFPA Class I
 - f. Slip Resistance: ASTM D2047 Passes \geq 0.50 ADA Compliant
 - g. Smoke Density: ASTM E662 Passes \leq 450 D^m
 - h. Resistance to Light: ASTM F1515 Excellent
 - i. Chemical Resistance: ASTM F925 Excellent
 - j. Resistance to Heat: ASTM F1514 Excellent
11. Offer a minimum 1500 PSI rating.
12. Available with the following emboss selections: Pathway, Frost, Natural Grain, Fresco, Quarry, Rough Grain, Sawn, Straight Grain and Tick.
13. Offer a variance in size selection.
14. Offer a design selection between wood, stone, or abstract products.
15. Offer a minimum wear layer thickness of 32 mil.
16. Offer a 3mm overall thickness.
17. Offer a 20 year commercial warranty.
18. Manufactured in the United States.

PART 3 - EXECUTION

3.1 MAINTENANCE

- A. Protect floors from rolling loads for 72 hours after installation. Protect the floors with undyed, untreated building paper until final inspection.
- B. Initial cleaning and maintenance is the responsibility of the installing contractor and must be performed as soon as possible after the installation. The installer should follow the manufacturer's installation and maintenance instructions.

END OF SECTION 09650