

Starnet High Performance LVT Installation Guidelines (01/25/13)

1.0 SUBFLOOR PREPARATION

1.1 Testing

Moisture Test Methods

A moisture test is essential on all concrete floors. Two methods are recognized. ASTM F 1869 (calcium chloride test) or ASTM F 2170 (relative humidity). Care should be taken to follow proper testing procedures for both to insure accuracy. Testing should be performed in several areas including the perimeter of the room, at columns, and wherever else moisture might occur. The moisture level from the concrete should not exceed 6.0 lbs./1000 sq. ft. (CC) or 75% relative humidity in a 24 hour time period. 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.

PH Test

Ph levels are important. A concrete slab should have a ph level not to exceed 9.0 before, during, and after installation.

1.2 Preparation of New Floors

Underlayment panels can be used to correct deficiencies in the subfloor and to provide a smooth, sound surface for Starnet High Performance LVT. 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 flakeboard; therefore, they are not recommended as a subfloor for Starnet High Performance LVT.

Always fasten underlayment panels in accordance with the manufacturer's recommendations because any failure of the underlayment or 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.

The manufacturer fully supports the ASTM F 710 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 seams, cracks, indentations, and subfloor irregularities. Calcium sulfate/plaster/gypsum based compounds are NOT recommended as they may harbor and promote mildew growth, offer poor bond and adhesion strength, and/or have low indentation resistance.

1.3 Preparation Existing Floors

Asbestos

Starnet High Performance LVT contains no asbestos fibers. When removing existing resilient floor coverings, carefully observe the following warning:

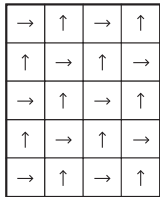
Existing resilient floor coverings and black asphalt adhesive may contain asbestos. Improper procedures used to remove these products could release asbestos fibers into the air. Asbestos fibers, if inhaled, may cause serious bodily harm. Do not sand or dry scrape these materials. A preferred alternative 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. For information regarding proper removal procedures, please consult the Starnet Member dealer who may refer you to Centiva technical services or the Resilient Floor Covering Institute, 401 East Jefferson Street, Suite 102, Rockville, MD, 20850, phone: 301-340-8580. Request the "Recommended Work Practices for Removal of Resilient Floor Coverings" brochure or view it online at www.rfci.com. Check state and local laws regarding removal of asbestos-containing materials.

After removing existing flooring, make sure to also remove old cutback adhesive, grease, wax, or other foreign matter. Painted and/or varnished surfaces must be sanded and dust free. In some cases old concrete subfloors must be shot blasted and a floor leveler should be applied prior to installation. Poor subfloor preparation may eventually telegraph through the flooring causing visible irregularities. Between floor prep and start of installation, make sure to keep the floor dry, free from dirt, dust, and grit.

If the flooring contractor and owner want to install over an existing floor, they are accepting the responsibility of the condition of the floor. Your Starnet Member dealer retains the right to negate or limit their warranty.

2.0 INSTALLATION (Extremely Important)

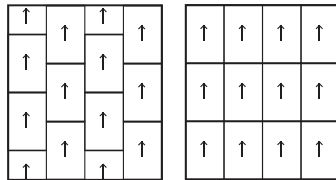
Before any installation takes place, please read the following information carefully.



The Starnet High Performance LVT multi-layered square tiles are recommended to be installed one-quarter turn (tessellated) for best design appeal.

One-quarter turn (tessellated)

The 12" x 18" Starnet tiles are recommended to be installed in one direction for best design appeal.



1/2 Off

Cross Joint

2.1 Material Supply Check

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 styles, shading and subtle color variations may be part of the design. This is desirable to enhance the look of the tile. Although quality control measures are taken prior to shipment, jobsite inspection by the installer will help assure there is no work stoppage. **Do not install materials with an apparent defect.**

2.2 Acclimation

All Starnet High Performance LVT tiles, planks, and recommended adhesive should be present at the jobsite for at least 48 hours at a temperature between 68-72 degrees F in order to acclimate properly. Avoid installations with ambient temperatures above 80 degrees F and below 60 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. Avoid extreme cold and hot situations.

2.3 Tools

- Pencil and paper
- Chalk line and chalk
- Carpenter's square
- Steel measuring tape and steel rule
- Utility knife and blades, straight edge knife, and curved edge knife
- Trowels (notched to meet the adhesive being used and the subfloor requirements)
- Clean cloths and clean water
- 100 lb. roller

2.4 Calculating

Measure the room's length and width to calculate the number of tiles and/or planks you will need. Multiply the width times the length to get the square footage.

Measure all offsets and alcoves separately, and add the square footage for each area to arrive at the total square footage. Always add approximately 5% allowance for cutting waste and always round up to the next full carton.

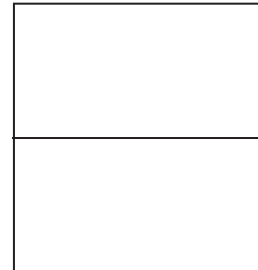
2.5 Layout Using Tiles

Carefully determining where to begin your tile installation, results in the most professional looking job. Always try to end up with at least half a tile at each wall for best appearance.

Follow these steps:

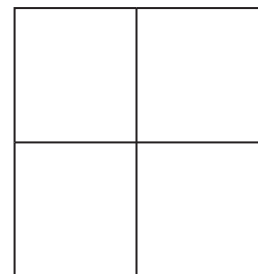
1. Treat the room as a rectangle, disregarding offsets, alcoves, etc. Find the center points of the two end walls and strike a chalk line between them.

Figure 1



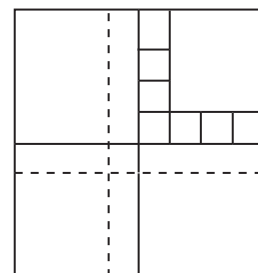
2. Find the center of the chalk line, using T-square or a tile to line up. Strike a second chalk line at right angles to the first one. The room is now divided into four equal parts.

Figure 2



3. Starting in center of room where the two chalk lines intersect, loose lay several tiles in a row to one end of wall and a second row to a sidewall. Measure distance from last tile to wall. If it is less than half a tile, move centerline a half a tile nearer the opposite wall. Do this in both directions.

Figure 3

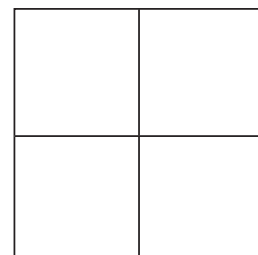


2.6 Diagonal Layout Using Tiles

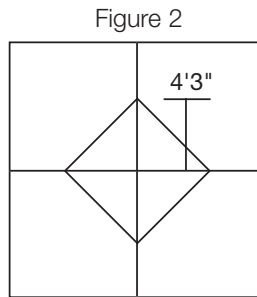
Extra measurements and guidelines are needed for diagonal installations. A sketch is useful for any complicated installation. Follow these guidelines for diagonal installations:

1. Divide the room into equal quarter sections and adjust the same way you would for normal installations.

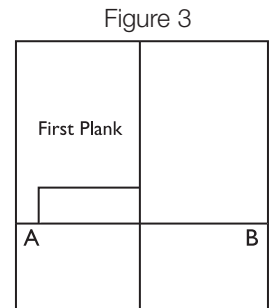
Figure 1



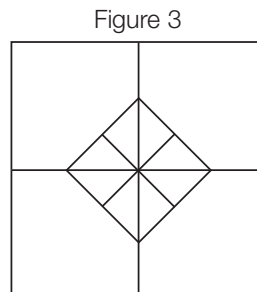
2. Measure and mark a point 4'3" from the center point on each centerline. Snap a chalk line to connect the four new points.



If less than half a plank ($1\frac{1}{2}$ ") remains as the border plank, adjust the point by $1\frac{1}{2}$ ". This will give a large border along the wall and reduce the chance of having to cut a small sliver of flooring to place along the wall.



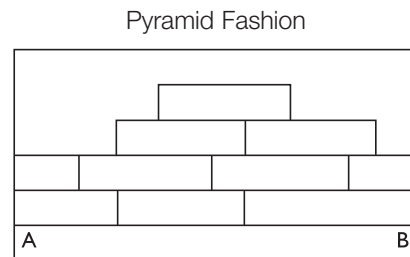
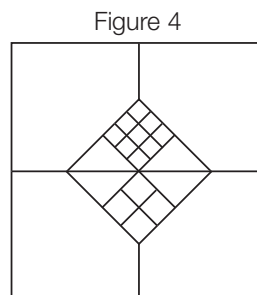
3. Mark the midpoint on the new guidelines and snap another chalk line to its opposite midpoint. These lines should intersect the original center point or the measurements will be incorrect.



2.8 Laying of the Plank

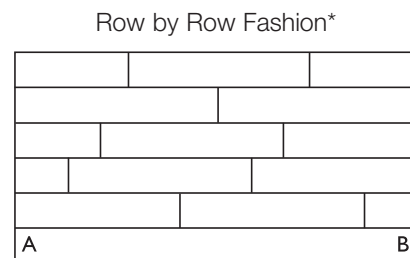
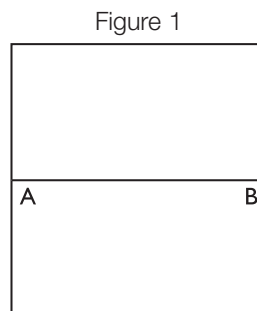
Spread adhesive following the specific recommendations outlined in the Section 3.0 Adhesives. Place the first piece of plank at the junction of the chalk lines. Continue to lay the plank, making sure each plank is flush against the chalk line and tight against the adjoining plank. Make sure the plank is well seated into the adhesive, paying special attention to the edges. Lay row by row or in a pyramid fashion. Roll the installed floor approximately five minutes after installation and again, 15 minutes after installation. Promptly remove any excess adhesive that appears after rolling.

4. Using the guidelines for the installation, lay four 18-inch tiles as shown beginning with the center point and working outward. Continue with this method.



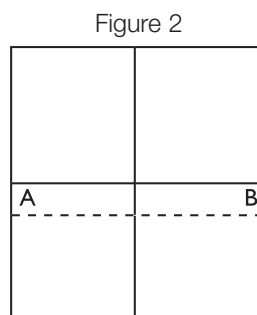
2.7 Layout Using Planks

Find the center point of the room. Strike a line (A-B).

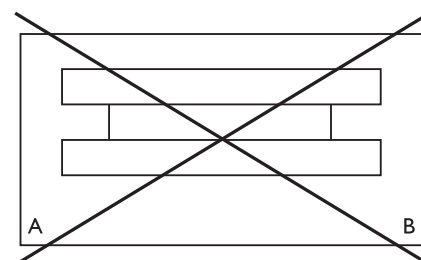


*Row by row fashion installation specially recommended when using CENTI 2001 Wet Set Adhesive.

Obtain a true 90° angle by using a carpenter's square. Strike a second line, which will divide the room into four equal parts. Measure the distance from the center to the wall parallel to the direction of the plank. Divide that measurement by the width of a plank (3").



This is the incorrect way to lay the plank!



Fitting the Border:

Measure the distance from the last plank in the row to the wall. Mark the plank and cut it against the mark. Lay the plank in place, making sure the cut edge is against the wall.

Fitting Around Irregular Objects:

Make a pattern out of heavy paper to fit around pipes and other irregularities. Place the pattern on the plank, trace, cutting along the trace lines with scissors or a sharp knife. Place the cut plank into position.

The manufacturer or supplier will not be liable for any loss, damage, or complaint of any kind if the specific procedures in the Installation Guidelines are not followed.

2.9 Useful Installation Tips

- It is always recommended to fit in intricate cuts around door frames, cabinets, and transitions prior to spreading adhesive.
- Never begin installation without all necessary tools available. (straight edge knife, ruler, trowel, roller, etc.)

- Have several clean white cloths and a container of denatured alcohol or mineral spirits available for cleaning off excess adhesive from the tile as you work. Any excess adhesive must be removed from the tile surface, in between tile seams, or the surrounding area. As long as the adhesive has not dried, CENTI 2001 WET SET and CENTI 6000 SP may be cleaned with soap and water while CENTI 2000 EP may only be cleaned with denatured alcohol or mineral spirits. Please refer to page 9 for SCHÖNOX ROLL AND GO adhesive removal. DO NOT ALLOW EPOXY ADHESIVE TO DRY ON TILE SURFACE. To obtain best results, dampen a clean cloth with cleaner and gently rub areas as to not move the tiles out of place. Do not saturate the area with cleaner and make sure that you clean up any excess cleaning solution as you go.
- Like any flooring material, Starnet High Performance LVT tiles and planks should not be installed over expansion joints. As with real stone or wood products a cut should be made through the flooring to open the joint. Because of visual appearance this method is mostly not preferred. It is left to the discretion of the end consumer. For more information please contact your Starnet Member dealer.

3.0 ADHESIVES

It is recommended that all Starnet High Performance LVT tiles and planks be installed with Centiva 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	SCHÖNOX® ROLL AND GO™
Installation	wet set	wet set with pressure sensitive characteristics	epoxy mix	wet set (thin) applied with included Schönnox Roll and Go Roller
Sub-floor	porous only	porous/non-porous	porous/non-porous	porous only
Over old vinyl	No	Yes ¹	Yes ¹	No
Rating	Commercial	Commercial	Commercial	Commercial
Trowel size	1/16 x 1/16 x 1/16 sq. notch	Porous: 1/16 x 1/16 x 1/16 sq. notch Non-porous: 1/32 x 1/16 x 1/32 U-notch	1/16 x 1/16 x 1/16 sq. notch	No Trowel; Apply with included ⁴ Schönnox Roll and Go Roller
Spread rate	~125 sq. ft. per gallon	~120-130 sq. ft. per gallon	~130-150 sq.ft. per gallon per trowel size	~540 sq. ft. per 1.56 gal. unit
Open time ²	25 minutes	45 minutes	40-50 minutes	~2 hours
Roller	100 lb.	100 lb.	100 lb.	100 lb.
Max. moisture ³	6 lbs/1,000 sq. ft. in 24 hours	6 lbs/1,000 sq. ft. in 24 hours	6 lbs/1,000 sq. ft. in 24 hours	6 lbs/1,000 sq. ft. in 24 hours

¹ If the flooring contractor and owner want to install over an existing floor, they are accepting the responsibility of the condition of the floor. The Starnet Member dealer retains the right to negate or limit the warranty.

² Open time is subject to temperature/humidity and sub-floor porosity.

³ For installation over 6 lbs/1,000 sq. ft. or 75% relative humidity in 24 hours, please contact your Starnet Member dealer.

⁴ Schönnox Roll and Go comes as a boxed kit and includes one container (4 kg/1.06 gal.) of Schönnox Roll and Go Adhesive, Roll and Go Roller, Handle, Tray, two containers (1kg/0.25 gal.) of KH Fix Primer, and KH Fix Primer Roller.

CENTI 2001 Wet Set Adhesive

Resilient Floor Tile and Plank Adhesive



Product Description

CENTI 2001 Wet Set adhesive is solvent-free, non-flammable, freeze/thaw stable, and odorless when dry. CENTI 2001 Wet Set can be used where other adhesives might present potential health risks. It is suitable for office buildings, hotels, hospitals, schools, restaurants, assisted living facilities, etc. CENTI 2001 Wet Set contains micro-biocides to inhibit the growth of mold and mildew. CENTI 2001 Wet Set can be used to install luxury vinyl tile and vinyl plank flooring over porous floors. CENTI 2001 Wet Set exhibits quick grab, excellent moisture resistance, and spreads easily. Only Centiva preferred adhesive is to be used for installing Starnet High Performance LVT flooring.

Product Specifications

Base:	Latex
Color:	Cream
Weight:	9.3 lbs/gal
VOC's:	-0- calculated*
Consistency:	Medium Paste
Shelf Life:	One year, unopened
Open Time:	approximately 25 minutes, depending on temperature/humidity and sub-floor porosity
Coverage:	125 sq. ft./gal. Coverage will vary depending on floor type

* All Centiva adhesives meet SCAQMD Rule 1168 standards as well as have received GREENGUARD Certification and GREENGUARD for Children and Schools Certification.

Prepare Surface

1. Do not use CENTI 2001 Wet Set over existing resilient flooring or painted sub-floors. **Not for use over non-porous floors** such as sealed concrete, metal, existing sheet flooring. It is the responsibility of the user to determine whether or not the sub-floor to be covered is porous. To determine if a sub-floor is porous, place two droplets of water in various areas. If the sub-floor is porous, the water will be absorbed within a few seconds.
2. Use CENTI 2001 Wet Set on grade, above grade, or below grade. CENTI 2001 Wet Set may be used over **porous** structurally-sound surfaces of plywood and concrete.

3. Make sure all sub-floors are clean, dry, free of dirt, dust, old adhesives, grease, wax, and other foreign matter that might interfere with the adhesive bond. Painted or varnished surfaces must be sanded and dust-free. Concrete floors must be fully cured, free from dust, moisture, excessive alkalinity, curing agents, and excessive moisture vapor emissions. If applying over old cutback, all old adhesive must be removed so that the floor is smooth.
4. Use a high-quality latex/Portland cement based-type patching compound to fill or level any irregular areas.
5. The sub-floor, flooring material, and adhesive must be acclimatized to the installation area for a minimum of 48 hours prior to installation. The area should be fully enclosed, weather-tight, with permanent HVAC system set and maintained at a minimum temperature of minimum temperature of 68-72°F for 48 hours prior to, during, and after installation.
6. It is essential that moisture tests be performed on all concrete sub-floors regardless of grade level or whether or not the concrete is freshly poured or is classified as an older slab. Moisture testing should be performed using ASTM F 1869 (calcium chloride test) or ASTM F 2170 (relative humidity). Moisture levels should not exceed 6 lbs/1,000 sq. ft. (CC) or 75% relative humidity in a 24 hour time period. If test results exceed the limitations, the installation should not proceed until the problem is corrected. See ASTM F-710 for additional information.

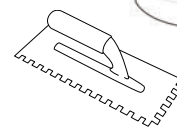
Apply Adhesive

7. Apply adhesive using a 1/16 x 1/16 x 1/16 inch square notched trowel.
8. Apply only that amount of adhesive that can be covered in 25 minutes. Open time will vary according to temperature, humidity, and porosity of the sub-floor. For best results, let the adhesive flash off before installing the planks or tile. **Do not allow adhesive to skin over.** If the open time is exceeded and the film has skinned over, adhesive must be scraped up, then reapplied.
9. Check open time periodically by lifting a section just laid to be certain that at least 95% of the adhesive pattern has been transferred to the back of the plank or tile.
10. Position plank or tile firmly in the adhesive without sliding them.

11. Roll each section immediately upon completion with a 100 lb sectional roller. Re-roll the entire floor after 1-2 hours.
12. Remove wet adhesive immediately with a damp cloth. Use mineral spirits to remove dried adhesive. Do not apply solvents directly to flooring material as a loss of strength/gloss/texture may result. If a tile needs to be cleaned of excess adhesive material on the finished surface, use the solvent sparingly in a slight rubbing manner.

Limitations

13. Store indoors only. Protect from freezing. Adhesive is freeze/thaw stable to 10 degrees F. Prolonged or repeated freeze/thaw cycles should be avoided. Should adhesive freeze, allow to thaw at room temperature and stir well before using. The finished installation must be protected from moisture and/or freezing for a minimum of 48 hours.
14. Restrict heavy foot traffic or rolling loads for at least 24 hours.
15. Do not wash or wax the floor for a minimum of 48 hours after installation.
16. **Not for use over non-porous floors.**



Use a 1/16 x 1/16 x 1/16 inch square notched trowel.

CENTI 2000 EP Epoxy Adhesive Parts A & B

Resilient Floor Tile and Plank Adhesive

Product Description

CENTI 2000 EP Epoxy adhesive is solvent-free, non-flammable, and odorless when dry. CENTI 2000 EP can be used where other adhesives might present potential health risks. It is suitable for office buildings, hotels, hospitals, schools, restaurants, assisted living facilities, etc. CENTI 2000 EP contains microbicides to inhibit the growth of mold and mildew. CENTI 2000 EP is a two-component product and cures to a tough, flexible film. It is recommended for the installation of vinyl flooring products on approved sub-floors for both porous and non-porous applications. It is especially recommended for use on non-porous sub-floors. Only Centiva preferred adhesive is to be used for installing Starnet High Performance LVT flooring.

Product Specifications

Base:	Epoxy
Color:	Beige
Weight:	12.5 lbs/gal
VOC's:	-0- calculated*
Consistency:	Medium Paste
Shelf Life:	1 year at 70° F, unopened
Open Time:	40-50 minutes, depending on temperature/humidity and sub-floor porosity
Coverage:	130-150 sq. ft./gal. Coverage will vary depending on floor type

* All Centiva adhesives meet SCAQMD Rule 1168 standards as well as have received GREENGUARD Certification and GREENGUARD for Children and Schools Certification.

Prepare Surface

1. CENTI 2000 EP may be used on all grade levels of concrete-on, above, or below grade, in the absence of moisture, as well as suspended approved wood floors (APA).
2. Make sure all sub-floors are clean, dry, free of dirt, dust, old adhesives, grease, wax, and other foreign matter that might interfere with the adhesive bond. Painted or varnished surfaces must be sanded and dust-free. Concrete floors must be fully cured, free from dust, moisture, excessive alkalinity, curing agents, and excessive moisture vapor emissions.

3. Use a high-quality latex/Portland cement based-type patching compound to fill or level any irregular areas.
4. The sub-floor, flooring material, and adhesive must be acclimatized to the installation area for a minimum of 48 hours prior to installation. The area should be fully enclosed, weather-tight, with permanent HVAC system set and maintained at a minimum temperature of 68-72°F for 48 hours prior to, during, and after installation. If adhesive is subject to heat, setup time will be shortened significantly. The opposite will occur if stored in a cold area.
5. It is essential that moisture tests be performed on all concrete sub-floors regardless of grade level or whether or not the concrete is freshly poured or is classified as an older slab. Moisture testing should be performed using ASTM F 1869 (calcium chloride test) or ASTM F 2170 (relative humidity). Moisture levels should not exceed 6 lbs/1,000 sq. ft. (CC) or 75% relative humidity in a 24 hour time period. If test results exceed the limitations, the installation should not proceed until the problem is corrected. See ASTM F-710 for additional information.

Apply Adhesive

6. A unit of CENTI 2000 EP consists of two (2) parts labeled Part A and Part B. After opening each container use a can opener to cut the rims off both containers. Thoroughly mix Part A and Part B separately. Combine the two (2) parts making sure that ALL of the contents of one can are added to ALL the contents of the second can. Mix the two parts together thoroughly until they are a uniform color. Immediately after mixing the two parts together, pour the contents into an open, flat pan or on the floor. Epoxy adhesive cures by chemical reaction; the heat generated by that process reduces the open time and curing is accelerated if left in the can.
7. Spread the adhesive using a $\frac{1}{16} \times \frac{1}{16} \times \frac{1}{16}$ inch square notched trowel. After spreading the adhesive lay the tile into it immediately. Check open time periodically by lifting a section just laid to be certain there is transfer of adhesive to the back of

the floor covering. The open time will vary with the temperature, humidity, and porosity of the sub-floor. Use a kneeling board or work off of the tile whenever possible.

8. After installation roll the floor using a 100 lb. sectional roller, first in one direction and then in a direction at a right angle to the first line of direction. Remove any excess adhesive when rolling. THE FLOOR MUST BE ROLLED BEFORE THE ADHESIVE HARDENS.
9. Use denatured alcohol or mineral spirits to remove wet adhesive. Do not apply solvents directly to flooring material as a loss of strength/gloss/texture may result. If a tile needs to be cleaned of excess adhesive material on the finished surface, use the solvent sparingly in a slight rubbing manner. Cured adhesive is very difficult to remove.

Limitations

10. Store indoors only. Protect from freezing. Adhesive is freeze/thaw stable to 0 degrees F. Prolonged or repeated freeze/thaw cycles should be avoided. Should adhesive freeze, allow to thaw at room temperature and stir well before using. The finished installation must be protected from moisture and/or freezing for a minimum of 24 hours.
11. Allow 8-12 hours for light foot traffic and 24-48 hours for heavy foot traffic.
12. Do not wash or wax the floor for a minimum of 48 hours after installation.



CENTI 6000 SP Special Purpose Adhesive

Resilient Floor Tile and Plank Adhesive



Product Description

CENTI 6000 SP Special Purpose adhesive is solvent-free, non-flammable, freeze/thaw stable, and odorless when dry. CENTI 6000 SP can be used where other adhesives might present potential health risks. It is suitable for office buildings, hotels, hospitals, schools, restaurants, assisted living facilities, etc. CENTI 6000 SP contains micro-biocides to inhibit the growth of mold and mildew. CENTI 6000 SP can be used to install luxury vinyl tile and vinyl plank flooring over porous and non-porous floors. CENTI 6000 SP exhibits quick grab, excellent moisture resistance, and spreads easily. Centi 6000 SP has excellent resistance to plasticizer migration and sets to a tough permanent bond. Only Centiva preferred adhesive is to be used for installing Starnet High Performance LVT flooring.

Product Specifications

Base:	Acrylic
Color:	White
Weight:	9.7 lbs/gal
VOC's:	-0- calculated*
Consistency:	Medium Paste
Shelf Life:	1 year at 70° F, unopened
Open Time:	45 minutes, depending on temperature/humidity and sub-floor porosity
Coverage:	130-150 sq. ft/gal. Coverage will vary depending on floor type

* All Centiva adhesives meet SCAQMD Rule 1168 standards as well as have received GREENGUARD Certification and GREENGUARD for Children and Schools Certification.

Prepare Surface

1. CENTI 6000 SP may be used on all grade levels of concrete-on, above, or below grade, in the absence of moisture, as well as suspended approved wood floors (APA).
2. Make sure all sub-floors are clean, dry, free of dirt, dust, old adhesives, grease, wax, and other foreign matter that might interfere with the adhesive bond. Painted or varnished surfaces must be sanded and dust-free. Concrete floors must be fully cured, free from dust, moisture, excessive alkalinity, curing agents, and excessive moisture vapor emissions.

3. Use a high-quality latex/Portland cement based-type patching compound to fill or level any irregular areas.
4. The sub-floor, flooring material, and adhesive must be acclimatized to the installation area for a minimum of 48 hours prior to installation. The area should be fully enclosed, weather-tight, with permanent HVAC system set and maintained at a minimum temperature of minimum temperature of 68-72°F for 48 hours prior to, during, and after installation.
5. It is essential that moisture tests be performed on all concrete sub-floors regardless of grade level or whether or not the concrete is freshly poured or is classified as an older slab. Moisture testing should be performed using ASTM F 1869 (calcium chloride test) or ASTM F 2170 (relative humidity). Moisture levels should not exceed 6 lbs/1,000 sq. ft. (CC) or 75% relative humidity in a 24 hour time period. If test results exceed the limitations, the installation should not proceed until the problem is corrected. See ASTM F-710 for additional information.
6. CENTI 6000 SP is recommended for porous and non-porous applications. It is the responsibility of the user to determine whether or not the sub-floor to be covered is porous. To determine if a sub-floor is porous, place two droplets of water in various areas. If the sub-floor is porous, the water will be absorbed within a few seconds.

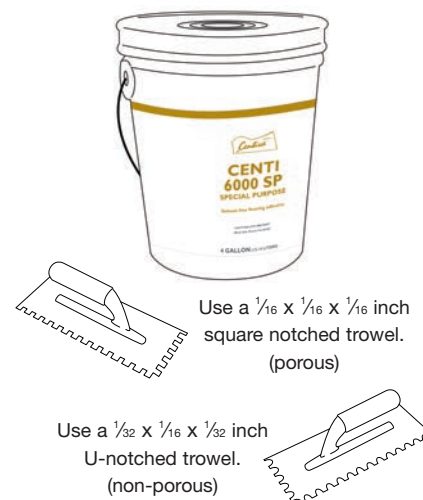
Apply Adhesive

7. For porous sub-floors, apply adhesive using a 1/16 x 1/16 x 1/16 inch square notched trowel. Once troweled, the adhesive should be allowed to remain open (flash off) for 5-10 minutes before placement of the flooring material. Once placed, the material should be rolled immediately using a 100 lb roller. Remove any excess adhesive when rolling.
8. For non-porous sub-floors, apply adhesive using a 1/32 x 1/16 x 1/32 inch U-notched trowel. Adhesive must be allowed to dry to touch, so that there is little or no transfer of adhesive to the finger. Once the adhesive dries to the touch, it is ready to accept flooring material. Roll immediately after the flooring material has been placed into the adhesive with a 100 lb roller. Remove any excess adhesive when rolling.

9. From the time the adhesive is allowed to dry to the touch, to the time it must be covered is 30-40 minutes depending on temperature and humidity. If the adhesive is allowed to remain uncovered, after initially drying, for periods longer than recommended, a loss in adhesion strength will result. The installer must take care not to spread more adhesive than can be worked appropriately within the recommended time frame.
10. Remove wet adhesive immediately with a damp cloth. Use mineral spirits to remove dried adhesive. Do not apply solvents directly to flooring material as a loss of strength/gloss/texture may result. If a tile needs to be cleaned of excess adhesive material on the finished surface, use the solvent sparingly in a slight rubbing manner.

Limitations

11. Store indoors only. Protect from freezing. Adhesive is freeze/thaw stable 5 cycles to 0 degrees F. Prolonged or repeated freeze/thaw cycles should be avoided. Should adhesive freeze, allow to thaw at room temperature and stir well before using. The finished installation must be protected from moisture and/or freezing for a minimum of 48 hours.
12. Restrict heavy foot traffic and rolling loads for 24 hours.
13. Do not wash or wax the floor for a minimum of 48 hours after installation.



SCHÖNOX[®] ROLL AND GO[™]

Product data sheet **10.67**

Rollable Acrylic Adhesive for Luxury Vinyl Tiles

suitable for bonding of luxury vinyl tiles (LVT) on suitable substrates in interior areas.

Product characteristics

- EMICODE EC1: very low emission
- for interior use only
- solvent free
- long open time
- high coverage
- to be applied with SCHÖNOX ROLL AND GO[™] ROLLER
- upright application
- easy to apply
- low odor
- can take immediate loading
- suitable for castor chair wheels according to DIN EN 12529
- suitable on under floor heating systems
- suitable on all SCHÖNOX floor leveling compounds, preferably SCHÖNOX AP
- conforms with MED 96/98/EC

Applications

SCHÖNOX ROLL AND GO[™] is suitable for bonding of:

- Luxury Vinyl in Sheets and Tiles following the list of approved LVTs (available on Internet) on SCHÖNOX self leveling compounds or smooth, porous concrete in residential and commercial areas.

Requirements of substrate

- Before using SCHÖNOX ROLL AND GO[™] prime the thoroughly dried SCHÖNOX self leveling compound (preferably SCHÖNOX AP) or smooth, porous concrete with SCHÖNOX KH FIX following the referring product data sheet.
- Subfloors must be smooth, sound, clean, dry and free of any contaminants which may hinder adhesion.
- Surface treatments or any "friable" areas of the subfloor must be mechanically removed and the subfloor repaired with SCHÖNOX underlayments as required.
- With subsequent laying of floor coverings on cementitious substrates, where moisture readings are above 85%RH or 5 lbs./1000 sq.ft./24 hrs. then application of SCHÖNOX SDG may be used to suppress residual moisture (see data sheet).
- Gypsum screeds should always be dry. Do not use damp proof membranes on gypsum substrates.
- Old water-soluble adhesives should be removed completely, old water-resistant

adhesives should be mechanically removed as far as possible. The complete mechanical removal of cutback (i.e. grinding, sanding, blasting) can be hazardous as old cutback adhesive may contain asbestos. Do not sand or grind adhesive residue. Harmful dust may result. Inhalation of asbestos dust may cause asbestosis or other serious bodily harm. Please consult the adhesive manufacturer and all applicable government agencies for rules and regulations concerning the removal of flooring and adhesives that contain asbestos. Prime remaining adhesive residues accordingly.

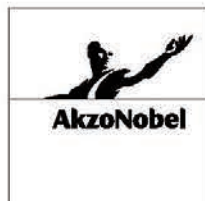
- Follow the technical product information of the LVT manufacturers regarding specific substrate requirements for their coverings.
- All slabs on or below grade level must be known to have an intact vapor retarder directly beneath the concrete in conformance to the relevant standards.
- Old, suitable and well fitted coverings should be thoroughly cleaned, sanded, primed and leveled with SCHÖNOX AP.
- The requirements of the relevant valid standards, guidelines and data sheets apply.

Recommended method of working

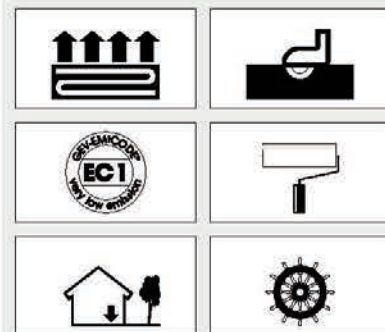
- SCHÖNOX ROLL AND GO[™] is stirred before use.
- Coverings to be bonded with SCHÖNOX ROLL AND GO[™] should be conditioned, unstressed and in a flat position.
- Apply SCHÖNOX ROLL AND GO[™] with the SCHÖNOX ROLL AND GO[™] ROLLER evenly on the substrate avoiding pools of adhesive.
- After fitting the LVT without any bubbles, roll the covering using a metal roller. A second rolling should be done if required at a later stage.
- Trafficking, loading and polishing of coverings bonded with SCHÖNOX ROLL AND GO[™] can be done immediately.
- The replacement of planks/tiles is possible without further substrate preparation using SCHÖNOX ROLL AND GO[™]. Replacements are done using the

Technical data

- Basis: acrylic dispersion with bonding additives
 - Color: light green
 - Density: 1.0 kg/l
 - storage temperature: not below 41 °F
 - floor temperature: not below 51 °F
 - coverage: approx. 540 sq.ft. per unit
 - waiting time: approx. 10-15 min
 - open time: approx. 2 hours
 - drying time: none, immediately loadable
 - final strength: after approx. 72 hours
- All values are approximate, are subject to local climatic fluctuations based upon conditions at 70°F with atmosphere of less than 65 % relative humidity following the recommended mixing ratio. Do not install underlayment or topping before the substrate has dried thoroughly.



www.schonox.us



SCHÖNOX[®]

SCHÖNOX® ROLL AND GO™

Product data sheet **10.67**

contact method first applying SCHÖNOX ROLL AND GO™ on the backing of the new LVT. After drying to transparency press the covering to the substrate covered with SCHÖNOX ROLL AND GO™.

- Remove fresh securing spots by using soapy water, dried spots clean with SCHÖNOX FIX CLEAN.
- Limited suitability in heavy loaded areas (humidity, temperature) as conservatories. Contact us for further advice.

Packaging

- 4 kg / 1.06 gallons in plastic container as part of the SCHÖNOX ROLL AND GO™-SET:

1 SCHÖNOX ROLL AND GO™ 4 kg/1.06 gal.
1 SCHÖNOX ROLL AND GO™ ROLLER
2 SCHÖNOX KH FIX 1 kg/0.25 gal.
1 SCHÖNOX KH FIX ROLLER
1 SCHÖNOX HANDLE
1 SCHÖNOX TRAY

Storage

- Store in cool, frost-free conditions.
- Shelf life: 1 year unopened.
- Containers that have been opened should be closed immediately.
- Remove any skin that has formed, do not stir in.

Disposal

- Empty containers and dispose of in accordance with federal, state and local waste disposal regulations.

VOC Content

- 0g/l (calculated), SCAQMD 1168

LEED

May help contribute to LEED certification of projects in the categories:

- IEQ Credit 4.1
Low-Emitting Materials –
Adhesives & Sealants 1 point

Precautions

- Follow the product data sheets for the SCHÖNOX supplementary products mentioned and used.
- If in doubt, please obtain further manufacturer's information or test in a small area.
- Avoid eye and skin contact. Close container after each use. Do not reuse container. Do not flush adhesive down drains, sewers or waterways. KEEP OUT OF REACH OF CHILDREN. Carefully read and follow all cautions and warnings on product label. For complete safety information, please refer to the Material Safety Data Sheet, or visit our website at www.schonox.us.

Limitation of Liability

To the best of our knowledge, the technical data contained herein are true and accurate at the date of issuance but are subject to change without prior notice. We guarantee our product to conform to the specifications contained herein. We make no other warranty or guarantee of any kind, express or implied, including merchantability and fitness for particular purpose. Liability, if any, is limited to replacement of the product or refund of the purchase price. Labor or cost of labor and other consequential damages are hereby excluded. SCHÖNOX does not authorize anyone, including SCHÖNOX Representatives, to make any statements which supersede, modify or supplement the information provided on its printed literature or package labels without written confirmation.

The applicable recommendations, guidelines, DIN regulations and safety data sheets are to be observed, together with the recognized architectural and engineering regulations. We guarantee that our products leave the factory in perfect condition. While our recommendations for use are based on tests and practical experience, they can only provide general guidance without any assurance as to product characteristics, since we have no influence over the conditions on site, the execution of the work or the method of processing. This product data sheet supersedes all previous editions.



The SCHÖNOX management system is certified to ISO 9001 and 14001 by DQS.

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 **SCHÖNOX®**

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4.0 TESTING

ASTM E 648	Critical Radiant Flux	Class 1 CRF > 0.45
ASTM E 662	Smoke Density	<450
ASTM F 925	Chemical Reaction	Excellent
Slip Resistance	All ADA Compliant and Varies with Surface Texture FTC Slip Resistant Classified Product	

ASTM F 925

This test was conducted in accordance with ASTM F 925, Resistance to Chemicals of Resilient Sheet Flooring. This method provides a procedure for determining the resistance of resilient sheet vinyl floor covering on surface deterioration when exposed to various chemicals.

The following categories are rated:

- Surface Dulling-indicating that the specimen suffered a loss of gloss
- Surface Attack-indicating that the specimen suffered surface damage such as softening, warping, swelling, blistering, peeling, raised, or rough area
- Color Change-indicating that the specimen suffered discoloring or bleaching or both

Each category is rated as No Change=NC, Slight Change=SC, Moderate Change=MC, or Severe Change=SC.

Chemical	Five Minutes			24 Hours		
	Surface Dulling	Surface Attack	Color Change	Surface Dulling	Surface Attack	Color Change
White vinegar	NC	NC	NC	NC	NC	NC
Rubbing alcohol	NC	NC	NC	NC	NC	NC
White mineral oil	NC	NC	NC	NC	NC	NC
Sodium hydroxide solution	NC	NC	NC	NC	NC	NC
Hydrochloric acid solution	NC	NC	NC	NC	NC	NC
Household ammonia solution	NC	NC	NC	NC	NC	NC
Household bleach solution	NC	NC	NC	NC	NC	NC
Disinfectant	NC	NC	NC	NC	NC	NC
Unleaded gasoline	NC	NC	NC	NC	NC	NC

ASTM F 925 Chemical/Stain Resistance

Chemical	One Hour	24 Hours
	Color Change	Color Change
Proline® Hand Cleaner with Natural Scrubber	NC	NC
GoJo® Premium Handwash with Skin Conditioner	NC	NC

5.0 CERTIFICATION

Sarnet High Performance LVT products are manufactured exclusively by Centiva who has received FloorScore® Certification through Scientific Certification Systems (SCS).

Sarnet also distributes the Centiva brand, CENTI adhesives which have received GREENGUARD Certification and GREENGUARD Children & Schools® Certification - AQS (Air Quality Systems) as required through GREENGUARD Environmental Institute (GEI).

Ask your local Sarnet Member dealer for their environmental and take-back policies. You may also visit centiva.com/thegreenway to learn more about The Centiva Green Way® program.



6.0 AIR QUALITY

Studies show that we spend 90% of our time indoors. The quality of the air surrounding us is crucial to our health. Poor indoor air quality can be caused by a number of reasons, including insufficient ventilation, poor cleaning practices, and excessive emissions of volatile organic compounds (VOCs). Therefore, the products inside our spaces have to be safe. Starnet High Performance LVT products along with recommended Centiva preferred adhesives adhere to the most stringent of these standards.

6.1 FloorScore®

Starnet High Performance LVT tiles and planks are exclusively manufactured by Centiva, and you can be assured that all products have undergone the rigorous FloorScore program. FloorScore was developed by the Resilient Floor Covering Institute (RFCI) in conjunction with Scientific Certification Systems (SCS) that tests and certifies flooring products for compliance with indoor air quality emission requirements adopted in California.

FloorScore tests to the California Section 01350 specifications for Collaborative High Performance Schools (CHPS). Section 01350 was developed by a California interagency task force on healthy, sustainable buildings. This includes maximum emission concentrations for more than 83 VOCs emitted from any building materials in schools and office buildings as established by the California Office of Environmental Health Hazard Assessment.

To earn the FloorScore Certification, a flooring product must satisfy all requirements of section SCS-EC-10-2004 Environmental Certification Program listed as Indoor Air Quality Performance. This includes:

- Testing which demonstrates compliance with emission concentrations for listed VOCs under California Section 01350
- Manufacturing facility site audits
- Annual product re-testing/certification
- Product record keeping
- A documented quality control plan

6.2 Rule 1168, GREENGUARD Certifications, LEED® Eligibility

Starnet High Performance LVT products should be installed with Centiva preferred adhesives for best performance. All Centiva brand, CENTI adhesives meet the California South Coast Air Quality Management District (SCAQMD) requirement Rule 1168 for low VOC's.

These adhesives also meet the more stringent standards of GREENGUARD Certification and GREENGUARD Children & Schools® Certification.

Because they meet these standards, Starnet High Performance LVT products and recommended adhesives can contribute to LEED credits.



7.0 RECYCLED CONTENT

Starnet High Performance LVT products contain pre- and post-consumer recycled content and can be 100% recycled at the end of their useful life cycle.