

## TECHNICAL DATA & INSTALLATION

siena cork | horizontal

### Product Overview

The Siena Cork tile collection is comprised of a variety of innovative patterns and colors in both homogenous & veneer constructions. Combined with a unique and attractive visual appearance, cork tile is also naturally insulating, sound reducing, soft under foot and made from a rapidly renewable, recycled and recyclable material. When installing homogenous colors

and patterns, cork tile can be sanded and refinished for the lifetime of the floor, allowing for long-term use and durability. Available in both glue-down tiles and planks, Siena Cork offers many size options & installation patterns for permanent interior installations in both commercial and residential environments.

Features	Technical Data
<ul style="list-style-type: none"> <li>Manufactured From Rapidly Renewable Resources</li> </ul>	Tile Dimensions: <b>12" x 12", 12" x 24", 24" x 24"</b> Plank Dimensions: <b>6" x 24"</b>
<ul style="list-style-type: none"> <li>Does Not Contain Red List Chemicals</li> </ul>	Thickness: <b>3/16", 5/16"</b> Finish: <b>Smooth</b>
<ul style="list-style-type: none"> <li>Sound-Reducing Material</li> </ul>	Weight / Sq. Ft.: <b>0.57 lbs (3/16"), 0.93 lbs. (5/16")</b> Sq. Ft. / Carton: <b>22 - 72 sq. ft. (depending on thickness)</b>
<ul style="list-style-type: none"> <li>Does Not Require A Finish</li> </ul>	ASTM F3008 - Cork Floor Tile: <b>Class I and II, Type A &amp; B</b> EN 434 - Curling: <b>Passes, &lt;6mm</b>
<ul style="list-style-type: none"> <li>Excellent Slip Resistance</li> </ul>	ASTM F137 - Flexibility: <b>Passes</b> ISO 4918 - Chair Castor Test: <b>Passes</b>
<ul style="list-style-type: none"> <li>Qualifies for LEED® Credits</li> </ul>	ASTM F970 - Static Load Limit: <b>Passes, 250 lbs.</b> ASTM F1914 - Residual Indentation: <b>Passes, &lt;8%</b>
<ul style="list-style-type: none"> <li>CHPS &amp; CA Section 01350 Compliant</li> </ul>	ASTM F2199 - Dimensional Stability: <b>Passes, &lt;0.02" per lin. ft.</b> ISO 24338 - Abrasion Resistance: <b>Passes</b>
<ul style="list-style-type: none"> <li>CHPS &amp; CA Section 01350 Compliant</li> </ul>	ASTM F925 - Chemical Resistance: <b>Passes (ask for chart)</b> ASTM E648 (NFPA 253) - Critical Radiant Flux: <b>Class II, 0.22-0.44 W/cm²</b>
<ul style="list-style-type: none"> <li>CHPS &amp; CA Section 01350 Compliant</li> </ul>	ASTM E662 (NFPA 258) - Smoke Density: <b>Passes, &lt;450</b> ASTM D2047 - Slip Resistance: <b>&gt;0.7 (wet), &gt;0.8 (dry)</b>
<ul style="list-style-type: none"> <li>CHPS &amp; CA Section 01350 Compliant</li> </ul>	ASTM E492/E989 – Impact Sound: <b>IIC 56**</b> ASTM E90 / E413 – Airborne Sound: <b>STC 53**</b>
<ul style="list-style-type: none"> <li>CHPS &amp; CA Section 01350 Compliant</li> </ul>	CHPS / CA Section 01350: <b>Compliant</b> LBC Red List 3.0 Chemicals: <b>None</b>
<ul style="list-style-type: none"> <li>CHPS &amp; CA Section 01350 Compliant</li> </ul>	Acclimation Time: <b>72 Hours</b> Storage & Acclimation Conditions: <b>65° - 75° F, 45% - 55% RH</b>
<ul style="list-style-type: none"> <li>CHPS &amp; CA Section 01350 Compliant</li> </ul>	* Non-Stocking ** 6" Concrete, Drop Ceiling

## Additional Information

### Approved Adhesives

Wakol D3540 Water-based Contact Adhesive

### Approved Finishes

Loba Supra AT Polyurethane Finish

### Custom Options

Siena Cork can be customized to meet other sizes and thicknesses by request.

Minimum quantities vary depending on color/pattern - contact a sales agent for more information.

### Sales Support

Siena products are sold through a nationwide network of sales agents. For more information, visit

[www.sienausa.com](http://www.sienausa.com) or send an e-mail to [sales@sienausa.com](mailto:sales@sienausa.com).

### Technical Support

Additional technical resources and documents are available online at [www.sienausa.com](http://www.sienausa.com). For additional technical support, send an e-mail to [sales@sienausa.com](mailto:sales@sienausa.com).

## Size & Packaging

### 3/16"

Tile Size: 12" x 12",  
12" x 24",  
24" x 24"

Weight / Sq. Ft.: 0.57 lbs.

Sq. Ft. / Carton - 12" x 12": 36 (12" x 12")

Sq. Ft. / Carton - All Others: 72

Plank Size: 4" x 18",  
6" x 24"

Weight / Sq. Ft.: 0.57 lbs.

Sq. Ft. / Carton: 72

### 5/16"

Tile Size: 12" x 12",  
12" x 24",  
24" x 24"

Weight / Sq. Ft.: 0.93 lbs.

Sq. Ft. / Carton - 12" x 12": 22

Sq. Ft. / Carton - All Others: 44

Plank Size: 4" x 18",  
6" x 24"

Weight / Sq. Ft.: 0.93 lbs.

Sq. Ft. / Carton - 18" wide: 42

Sq. Ft. / Carton - 24" wide: 44

## 1. PRE-INSTALLATION

- Consult all associated product literature concerning adhesive installation, maintenance and warranty prior to installation of flooring.
- Allow all trades to complete work prior to installation.
- Deliver all materials to the installation location in its original packaging with labels intact.
- Do not stack pallets to avoid damage.
- Remove all plastic and strapping from product after delivery.
- Do not remove material from packaging or store outside of packaging until ready for installation.
- Ensure that all adhesives intended for installation are approved for use with flooring material.
- Ensure HVAC system is operational and fully functioning at normal operating conditions.
- Ensure installation area and material storage conditions are between 65° F (19° C) and 85° F (30° C) and 45% and 55% RH for at least 72 hours before, during

and continuously after installation.

- Protect installation area from extreme climate changes, such as heat, freezing and humidity, as well as direct sunlight for at least 72 hours before, during and after installation.
- Ensure all substrate preparation and moisture testing requirements have been performed, read and/or understood by all interested parties.
- Do not proceed with installation until all conditions have been met.

## 2. PRODUCT LIMITATIONS

Do not install materials over existing flooring or asphaltic materials. Do not install flooring materials in outdoor areas, in or around commercial kitchens or areas that may be exposed to animal or vegetable fats and oils or petroleum-based hydrocarbons. Do not install in or around areas that may be exposed to sustained and/or repeated topical water or moisture. Do not install in areas that may be subjected to sharp, pointed objects, such as stiletto heels, cleats or spikes. Do not allow product to be directly exposed to extreme heat sources, such as radiators, ovens or other high-heat equipment. Do not install outdoors

or in areas that may be exposed to repeated and sustained UV light, as product may fade or discolor. Material may be susceptible to natural shrinkage and expansion due to seasonal environmental changes - avoid dramatic changes in temperature and humidity to prevent excessive gapping and buckling. Material may be susceptible to staining from rubber tires, casters or rubber-backed walk-off mats, as well as harsh disinfectants, cleaning agents, dyes or other harsh chemicals - ensure all chemicals and materials that may come in contact with flooring surface will not stain, mar or otherwise damage the flooring material prior to use.

## 3. SUBSTRATE PREPARATION

All substrates must be prepared according to ASTM F710, as well as all other applicable ASTM, ACI and RFCI guidelines. Substrates must clean, smooth, permanently dry, flat, and structurally sound. Substrates must be free of visible water or moisture, dust, sealers, paint, sweeping compounds, curing compounds, residual adhesives and adhesive removers, concrete hardeners or densifiers, solvents, wax, oil, grease, asphalt, visible alkaline salts or excessive efflorescence, mold, mildew and

all other extraneous coating, film, material or foreign matter.

All substrates must have all existing adhesives, incompatible materials, contaminants or bond-breakers mechanically removed via scraping, sanding or grinding prior to adhesive installation. In extreme situations, shotblasting may be required. Mechanical preparation must expose at least 90% of the original substrate. Following cleaning and removal, all substrates must be vacuumed with a flat vacuum attachment or damp mopped with clean, potable water to remove all surface dust. Sweeping without vacuuming or damp mopping will not be acceptable.

All porous substrates must be tested per ASTM F3191 to confirm porosity. All substrates that do not meet porosity requirements are considered non-porous. Ensure that all non-porous substrates are not contaminated with aforementioned contaminants and that all installation guidelines for non-porous substrates are followed. It is recommended that all substrates have a floor flatness of FF32 and/or a flatness tolerance of 1/8" in 6' or 3/16" in 10'. Substrates that do not meet this requirement should have a compatible cementitious patch or self-leveling underlayment installed to flatten the installation area.

Do not use solvent/citrus based adhesive removers prior to installation. Follow The Resilient Floor Covering Institute's (RFCI) "Recommended Work Practice for Removal of Existing Floor Covering and Adhesive", and all applicable local, state, federal and industry regulations and guidelines. When removing asbestos and asbestos containing materials, follow all applicable OSHA standards.

#### **CEMENTITIOUS SUBSTRATES**

All cementitious substrates, including self-leveling underlayments, must have a minimum compressive strength of 3000 PSI and be prepared in accordance with ASTM F710 and ACI 302.2R. When flooring is being installed directly over concrete, surfaces that have an ICRI Concrete Surface Profile (CSP) of 5 or more should be smoothed with a self-leveling underlayment or a cementitious patch to prevent imperfections from telegraphing through flooring materials. On or below grade concrete must have a permanent, effective moisture vapor retarder installed below the slab.

New or existing concrete substrates on all grade levels must be tested in accordance with ASTM F2170, using in situ Probes, to quantitatively determine relative humidity no more than one week prior to the installation.

In addition to ASTM F2170 Relative Humidity Testing, existing concrete that has previously had floor covering installed on all grade levels must be tested in accordance with ASTM F1869, using Calcium Chloride test kits, to quantitatively determine the Moisture Vapor Emissions Rate (MVER) of the concrete.

If ASTM F2170 or ASTM F1869 test results

#### **Adhesive Moisture Limits**

Wakol D3540 Water-based Contact Adhesive

- 80% RH
- 5 lbs. MVER

exceed the prescribed limits, a moisture mitigation product must be installed prior to proceeding with installation. Do not install flooring until moisture testing has been conducted per the appropriate standard and/or moisture mitigation has been installed and is dry to the touch. Do not install flooring in below grade areas when hydrostatic pressure is visible or suspected.

#### **LIGHTWEIGHT/GYPSUM SUBSTRATES**

Lightweight or gypsum substrates must have a minimum compressive strength of 2000 PSI when installed over a wood substrate or 3000 PSI when installed over a concrete substrate. Lightweight or gypsum substrates must be installed and prepared in accordance with ASTM F2419 or ASTM F2471, respectively. Lightweight or gypsum substrates that do not meet these requirements should be strengthened with a compatible repair product to improve the compressive strength of the substrate. Substrate must be structurally sound and firmly bonded to subfloor. All cracked or fractured areas must be removed and repaired with a compatible repair product. New or existing substrates may require a sealant or primer be installed prior to resilient floor installation. Follow the substrate manufacturer's recommendations regarding preparation for resilient flooring.

#### **WOOD SUBSTRATES**

Wood substrates must be compliant with and prepared in accordance with ASTM F1482. Wood substrates should be of double layer construction with a recommended total thickness of 1" or more (depending on federal, state and local building codes). For standard installations, the top layer must be an APA Underlayment Grade plywood or equivalent with a minimum thickness of 1/4". Plywood must be smooth, free of knots or voids and fully sanded. When floors may be subjected to moisture, use an APA approved exterior grade plywood.

Other wood subfloor materials, such as

CDX, OSB, I-joist, particleboard, chipboard, fiberboard or cementitious tile backer boards, are not acceptable substrates. Do not use preservative-treated and fire-retardant plywood, as some may be manufactured with resins or adhesives that may cause discoloration or staining of the flooring. Do not install flooring directly over solid or engineered hardwood flooring without first installing plywood or a suitable cementitious repair product at a minimum thickness of 1/4" over the hardwood flooring.

Wood subfloor deflection, movement, or instability may cause the flooring installations to release, buckle or deform. As such, do not use a plastic or resin filler to patch cracks. Do not use cement or rosin coated nails and staples or solvent-based construction adhesives to adhere the plywood. Do not install resilient flooring directly over a sleeper system (wood subfloor over concrete) or Sturd-I-Floor panels.

#### **RESINOUS SUBSTRATES**

When installing directly over a resinous products, such as an epoxy coating, ensure the coating is dry to the touch and has cured for the prescribed length of time. Substrate must be clean, dry, sound and free of contaminants. Be sure to follow adhesive installation procedures and trowel sizes for non-porous substrates. This may require abrasion of the resinous coating.

#### **METAL SUBSTRATES**

Metal substrates must be thoroughly sanded/ground to remove all residue, oil, rust and/or oxidation. Substrate must be smooth, flat and sound prior to installation. When installing in areas that may be subject to topical water, moisture and/or high humidity, an anti-corrosive coating should be applied to protect metal substrate. Contact a local paint or coating supplier for coating recommendations. Install flooring material within 12 hours after sanding/grinding to prevent re-oxidation. Deflection in the metal floor can cause a bond failure between the adhesive and the metal substrate. Be sure to follow installation procedures and trowel sizes for non-porous substrates.

#### **EXISTING FLOORING SUBSTRATES**

The suitability of existing flooring as a substrate depends on the specific requirements of the adhesive being used to install the material. As such, refer to the adhesive requirements for existing flooring substrates and ensure all adhesive requirements and guidelines are followed.

#### **RADIANT HEATING SUBSTRATES**

Only Siena Cork Medium, Dark, Light Tracks,

Espresso and Terrain colors may be installed over a radiant heating system. When installing flooring over a substrate that contains a radiant heating system, ensure the radiant heat is no higher than 70° F (21° C) 48 hours prior to and during the entire installation. 48 hours after installation, the radiant heat may be gradually increased over the course of 24 hours, until normal operating temperature is reached. Ensure the temperature of the radiant heating system does not exceed 85° F (29.5° C) and avoid making abrupt changes in radiant heating temperature.

#### 4. CONSTRUCTION JOINTS & CRACKS

All cracks, construction joints and other voids, as well as the areas surrounding them, must be clean and free of dust, dirt, debris and contaminants. All minor cracks 3/64" wide or less must be repaired with a compatible cementitious patch.

Due to the dynamic nature of concrete, manufacturer cannot warranty installations directly over construction joints (such as control cuts or saw joints), expansion joints, cracks or other voids wider than 3/64". Construction joints, expansion joints or cracks wider than 3/64" must have a suitable crack repair or joint repair system installed per the below recommendations.

All expansion joints should have a suitable expansion joint covering system installed to allow for expansion and contraction of the joint. To treat expansions joints where an expansion joint covering system can't be installed or to treat through cracks (depth at least 75% of the thickness of the concrete), chase joint or crack with a suitable saw or grinder and open to a minimum width of 1/4". Be sure to clean all dust, dirt and debris from crack. Joints and cracks should then be sealed with a suitable, elastomeric caulk designed for use in expansion joints. Install a closed-cell backer rod at prescribed depth and follow all caulk manufacturer's instructions for installation. Ensure surface is troweled flush with surface of concrete.

To treat construction joints and surface cracks over 3/64", chase joint or void with a suitable saw or grinder and clean all dust, dirt and debris from crack. Fill entire crack with a rigid crack treatment designed for use in construction joints or cracks. Follow material manufacturer's instructions for installation. Ensure surface is troweled flush with surface of concrete.

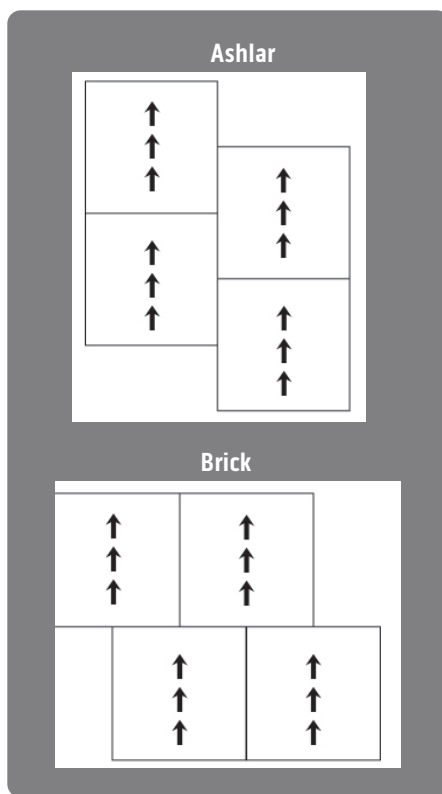
Consult a project engineer or architect prior to treating cracks or joints, especially those that may affect structural integrity (such as expansion joints). Review all manufacturer

installation instructions and/or consult manufacturer technical staff for all crack or joint filling products prior to treating construction joints and cracks.

#### 5. FLOORING INSTALLATION

Ensure substrate is clean, dry, flat, sound and suitably prepared prior to installation, as manufacturer is not responsible for substrates that have not been properly prepared and tested for moisture. Ensure adhesive is approved for use with flooring material and the proper trowel type and size is used, as manufacturer is not responsible for all adhesion issues related to improper adhesive selection or usage.

Prior to installation, confirm material installation pattern and direction per design specifications or work order. Siena Cork tile should be installed in an ashlar or brick pattern to ensure tight seams and an overall ideal visual appearance.



Inspect all tiles prior to and during installation to verify that there are no visible defects, damages or excessive shading variations. Blend tiles from several cartons and pallets to ensure consistent appearance and shade variation. Some flooring products, colors and textures have latent and acceptable color and shade variations. If there are concerns regarding shade or color variation, do not install material and consult a sales representative and manufacturer's technical staff. Material installed with obvious visual defects will not be covered under warranty.

Square the room using the 3-4-5 squaring rule or similar method to establish and mark initial installation starting line. Dry-lay several tiles to establish an ideal installation layout, ensuring perimeter tiles are as equal in size as possible. Ensure material around perimeter is 1/8" from wall or less, depending on depth of wall base or trim. Pre-cut borders and other specialty pieces to fit snugly against or around walls, thresholds, transition strips, fixtures and other protrusions or accessories. Avoid forcing material tightly against vertical surfaces, as material may buckle.

Prior to installation, stir adhesive to ensure a homogeneous and continuous consistency. Pour adhesive into a clean paint tray and close adhesive container when not in use. Be sure to only pour out adhesive that will be used immediately, as dried adhesive cannot be reused. Do not pour adhesive back into original container.

Apply adhesive with a paint roller evenly to both the back of the cork tile and the substrate, ensuring complete and even coverage - adhesive should form a consistent, glossy film on both surfaces. Incomplete adhesive coverage could result in adhesion issues, especially around the perimeter of the tile. If adhesive is not applied uniformly or if there are concerns about adhesion, apply an addition coat to the affected area or tile once the initial coat is dry. This may be required on extremely porous substrates. Do not allow adhesive to puddle or pool. Prevent all traffic in installation area until tile is installed.

Cork tiles may be pre-coated prior to coating the substrate. When pre-coating tiles, tiles may be stored front to back in the original packaging until final installation. Ensure that the back of the tiles do not make contact with each other, as this will cause full adhesion. Pre-coated tiles must be installed within 24 hours of being coated.

Allow adhesive to dry on both surfaces prior to installation. Immediately remove excessive adhesive from the tile face or fixtures with water and a pH neutral cleaner. Adhesive should turn from white to transparent/clear and be dry to the touch, usually within 30 - 60 minutes. Once dry, install tile within 2 hours (90 minutes when pre-coated). Adhesive will form an immediate bond once contact is made between the two surfaces. As such, care must be taken to ensure tile is in the correct position prior to making full contact. Avoid sliding or forcing tiles into place.

Use a soft, non-marking rubber mallet with a minimum 2" surface area to set each and every cork tile after installation in order to ensure that cork tile makes full contact with substrate.

Be sure to set the corners, edges and centers of all tiles in order to establish complete contact and proper adhesive bond. Failure to use an acceptable rubber mallet to set each tile immediately following installation could result in excessive movement, edge-lifting or an inadequate bond.

Visually inspect installation to ensure that material has not shifted and that adhesive has not been compressed onto the surface. Clean excessive adhesive or adhesive residue from the surface of the material per adhesive recommendations. Do not apply abrasive or solvent based cleaners directly to material.

## **6. INITIAL MAINTENANCE**

Ensure that adhesive has cured for 24 hours prior to conducting initial maintenance. Remove all protective coverings prior to cleaning. Sweep, dust mop and/or vacuum flooring to remove all dirt, dust or debris.

Mix 6-7 ounces of Hilway Direct Neutral Cleaner per gallon of clean, potable water (1:20 ratio). Use a clean microfiber mop or equivalent to damp mop flooring installation. Avoid wet mopping, puddling or pooling cleaning liquid on material. Allow floor to fully dry before allowing foot traffic.

Do not use detergents, abrasive cleaners or "mop and shine" type products, as they will dull the finish and sheen of the flooring material. Do not use vacuums that have a beater bar, electric brooms with hard plastic bottoms or no padding and vacuums which have a rubber bumper, as this may cause discoloration, scratching or loss of sheen.

For further information regarding daily or routine maintenance, please consult the product care & maintenance document or the associated product technical data sheet.

## **7. FLOORING PROTECTION**

Protect newly installed flooring with construction grade paper or protective boards, such as Masonite or Ram Board, to prevent flooring damage, especially by other trades. Do not slide or drag pallets or heavy equipment across the new flooring. Limit usage and foot traffic according to the adhesive's requirements. When moving appliances or heavy furniture, protect flooring from damage using temporary flooring protection.

All furniture casters must be rated for resilient flooring, made of a soft and have a contact point of at least 1" in width to limit indentation and flooring damage. All rolling

chairs or seating must have a resilient flooring chair pad installed over the finished floor to protect floor covering. All fixed furniture legs must have permanent felt or soft rubber floor protectors installed on all contact points and to reduce indentation. Floor protectors must have a flat contact point of at least 1 sq. in. or 1 in. diameter and must cover the entire bottom surface of the furniture leg.

Ensure all furniture castors and chair legs and are clean and free of all dirt and debris. Routinely clean chair castors and furniture legs to ensure that dirt or debris has not built up or become embedded in castors or floor protectors. Replace chair castors and floor protectors at regular intervals, especially if they become damaged or heavily soiled.

Place walk-off mats at outside entrances. Prevent water and moisture from accumulating underneath walk-off mats. Ensure mats are manufactured with non-staining backs to prevent discoloration.

## **8. WARRANTY**

Siena provides a Limited 10 Year Warranty for all Siena Cork tile. For additional information, see associated warranty documents.

**FOR PROFESSIONAL USE ONLY. PLEASE CAREFULLY REVIEW ALL ASSOCIATED TECHNICAL DATA SHEETS, SAFETY DATA SHEETS, MAINTENANCE DOCUMENTS AND WARRANTY INFORMATION PRIOR TO INSTALLATION.**