



MEDITERRA HOMOGENEOUS AND VENEER CORK TILE CORK: THE AMAZING STORY

...wine stoppers...fishing bobbers...hat liners...shoe soles...life preservers...inside core of baseballs...car engine gaskets...**flooring tiles and planks**...and more... Cork, a unique creation of nature, has many uses and can take on many forms.

The cork oak tree, *Quercus suber*, is unlike other oak trees as it is an evergreen native to the Mediterranean Sea region. There are an abundance of cork forests in this region resulting in an ample supply of available cork. The cork forests have an eco-system all their own, as well as being the home to a couple of endangered animals. The governments of most cork-producing countries have legislation protecting the cork supply.

Most trees will die if the bark is removed since the bark carries the sap, which is essential to a tree's survival. This is not true with the unique cork oak which grows bark in two layers with the outer bark or "cork" only serving as a protective coating that can be removed without causing injury to the tree. The outer bark is light weight, resistant to rot, fire, water and insects. The inner bark is alive and as new layers grow, the outer bark ceases to be a living part of the tree and merely serves as insulation to protect the tree against hot desert winds.

Early known uses of cork date back to the Greeks and Romans in 2000 BC when corks were used as fishing bobbers. The harvesting methods and properties of cork have not changed significantly over the centuries.

HARVESTING:

The harvesting of cork is performed in late spring and summer when the sap in the tree is flowing freely and separation of the bark from the tree is easiest. The removal or stripping of the bark "cork" is a natural process which begins when the tree is about 25 years old. The bark regenerates every 7-9 years and is stripped again. This process continues for about 150 years and as the tree matures, the quality and quantity of the cork improves. This renewable crop produces no waste when being harvested.

A simple two bladed hatchet is used to remove the bark. Care is needed not to damage the inner layer of bark. Two cuts are made, one at the base of the trunk and the other below the main branches. Two additional cuts made vertically allow the cork to be pried off.

The stripped bark is dried, then boiled and ready for one of many cork manufacturing processes. The cork used in flooring is the post-industrial waste left after cork stoppers are drilled. These leftovers are ground, compressed in large molds, and baked. The molds are approximately 2' x 3'. It is during the baking process that cork is naturally colored. The lightest shades are baked at the lowest temperatures for the least amount of time; the medium shades are baked at a higher temperature for a longer time; and the dark shades are basically burned. Due to the properties of the cork cell structure, which are bonded together by a strong natural resinous substance, little additional resins (binders) are needed to hold cork together.

The entire cork oak tree has uses; even the cork dust created in manufacturing processes is collected and used as fuel. There is no waste in a cork manufacturing facility regardless of the end product.

CORK'S UNIQUE PHYSICAL PROPERTIES:

The cell construction of cork is unique with approximately 200 million cells, about 0.025 mm in diameter, in a cubic inch of natural cork. These cells are separated by threadlike, strong membranes of a resinous material, which acts like a binder. More than 50% of the volume of cork is the air within these cells. This unusual cell structure accounts for the unique features of cork. These include its buoyancy, light weight, compressibility, resilience, resistance to liquid and moisture penetration, high coefficient of friction, low thermal conductivity, ability to absorb vibration/sound, and stability.

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RESILIENT: Cork can be compressed yet remain resilient. When pressure is applied, the air in the cork cells is compressed and once removed, the air expands to fill the volume previously occupied, returning it to its original volume. However, if too much pressure (i.e. high heels, spikes, or improper furniture footings) is exerted in too small an area, the cells will collapse and the volume will be reduced resulting in permanent indentations. The resilient quality of cork makes it a great option for areas where people stand for long periods of time. It is easier on the limbs than other hard surfaces.

IMPERVIOUS TO WATER AND OTHER LIQUIDS (including oil): Since the individual cells are closed cells, capillary action does not occur so cork does not easily absorb liquids. Cork is used for fishing bobbers since it floats and for bottle stoppers since it will expand to the shape of the bottle and keep the liquid in the bottle. It was Benedictine monk Dom Perignon, who first used cork stoppers in champagne bottles.

VIBRATION AND SOUND ABSORPTION: The air filled cells compress and soak up some of the energy being transmitted through them. Acoustically, cork flooring is better than other hard surfaces. Acoustical test results are available in the Technical Data Document MT203.

CORK FLOORING:

With all the unique physical qualities cork offers, it is an excellent material for durable, natural, quiet and comfortable flooring. Manufacturing of cork flooring dates back to the early 1900s, with many cork floors installed in Europe and North America in the 1920s and 1930s, still viable, beautiful floors today. It is a proven flooring option that has survived the test of time.

Cork flooring is available in homogeneous tiles (solid cork top to bottom) or veneer tiles (thin cork veneer is applied to homogeneous cork backer). The advantage of homogeneous cork is that it can be sanded and refinished; veneer cork cannot be sanded, but can be screened (which is done when finish is being applied). Veneer cork offers patterns that are not available in homogeneous construction. Veneer cork is suitable for residential and light commercial use. Homogeneous cork can be used in commercial applications as well as residential applications. Notable architects Frank Lloyd Wright and Mies Van der Rohe both used cork floors in residential applications. Many libraries, churches, university and government buildings have used cork in high traffic areas for decades. In recent years restaurants, spas, hotels and healthcare facilities have begun to use cork because of its resilience, durability, acoustical qualities and ease of maintenance.

The Mediterra Cork Collection is available in standard thickness of 3/16" and standard tile size of 12"x 12". Custom thicknesses and tile sizes (not to exceed 36" in length) are available. **The Mediterra Collection** is finished with 3 coats of factory applied water-based matte polyurethane. This polyurethane is extremely durable and suitable for commercial installations. Maintenance of cork is easy, requiring simple vacuuming/sweeping and washing with mild detergent and water. Cork floors which are well cared for will allow for years of use, and when showing signs of wear, the cork can be screened and re-coated with additional coats of polyurethane. This screening and re-coating procedure as well as complete sanding and refinishing of homogeneous cork, should be done only by professionals familiar with the process.

When specifying furniture to be placed on cork, proper casters or glides should be specified. Use of felt or carpet pads are recommended. High heels are not kind to any resilient flooring and will dent cork floors. Castors should be rubber and use of chair pads under desks/workstations or other areas with casters are recommended. The beauty of an aged cork floor has indentations that years of use have left behind. These blend well with the natural imperfections and small voids created by the cork granules. This "patina" should be expected and embraced.

Because cork is a product of nature, shade variations from tile to tile are an inherent quality. Cork tiles should be "shuffled" from more than one box when installing to blend these natural variations. The shades of cork, created by the baking process, are natural and when subjected to sunlight, cork will fade. A homogeneous floor that has faded may be sanded and refinished and the original color will come back. However if UV rays are not blocked, fading will occur again.

... natural, durable, renewable resource, acoustical and thermal, easy to walk on, easy to clean, long life cycles, versatile and beautiful... **the Mediterra Collection is nature on the floor.**



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