



CORK – A Natural Wonder

The unique natural qualities of cork make it a most effective material for the control of sound transmission in hard surface flooring applications. The physical structure of cork, with nearly 200 million completely sealed air filled cells per cubic inch, makes it a very effective acoustic insulator. This same physical structure also provides cork with the ability to be repeatedly compressed and yet recover nearly 100% of its original shape and size. These combined benefits make cork an ideal and time-tested choice for sound control underlayment applications. Millions of square feet of AcoustiCORK™ products have been successfully installed under a wide variety of finished flooring materials in projects all over the world.



CORK – A Truly Environmentally Superior Product

Cork is a truly renewable resource. Unlike solid wood, composite wood products, paper and other “renewable resources”; no trees are cut down to make cork products. In fact, Cork Oak trees in Portugal and most other producing countries are protected by law. The product that we know as Cork consists of the bark of the Cork Oak tree. The bark is stripped from about 1/3 of the tree every 9 to 12 years. This process enhances the life span of the tree. Without being periodically harvested, the life span of a Cork Oak would be considerably shorter than the 150 to 200 plus years seen in cultivated trees. The manufacturing process of cork products also produces a near zero waste stream and results in no toxic emissions.

AcoustiCORK™ – For LEED™ & Other Green Building Programs

AcoustiCORK™ products meet many of the key criteria of the organizations that promote and support green building initiatives. The use of AcoustiCORK™ products in your project can help it qualify for credit points under the LEED™ GREEN BUILDING RATING SYSTEM in the following areas:

- MR 4.1 5% Recycled Content of total building materials** (post consumer + ½ of post industrial)
- MR 4.2 10% Recycled Content of total building materials** (post consumer + ½ of post industrial)
(AcoustiCORK products are approx. 85% post industrial recycled content by weight)
- MR 6 - Specifying rapidly renewable building materials for 5% of total building materials.**
- MR 7 - The Use of a minimum of 50% of wood-based materials certified in accordance with Forest Stewardship Council guidelines.** (FSC Certified Content AcoustiCORK Available)
- EQ 4.1 Low Emitting Materials Adhesives & Sealants** (Adhesives Specified meet SCAQMD Rule 1168)
- EQ 4.4 Composite wood or agri-fiber products containing no added urea-formaldehyde resins.**

AcoustiCORK™ - Other Material & Quality Advantages

Contrary to popular belief in some circles, all “cork” products are not the same. Just as you would not choose the least expensive grade of plywood for an underlayment application, one should not select a “cork” product based solely on cost. At Amorim Cork Composites, we have very specific standards for the AcoustiCORK™ products. Particle size, particle density, weight per cubic foot and compression and recovery characteristics are very carefully controlled for the AcoustiCORK™ product. The result is a product that is consistent from one run to the next and that delivers consistent performance in the field. When you specify or install AcoustiCORK™ you get a product that is designed to deliver the maximum noise reduction benefit, retain its dimensional stability and last through decades of service, in both residential and commercial applications. AcoustiCORK™ is the only cork underlayment product with an ICC-ES Evaluation Report to verify its acoustical and structural testing data.



Common misconceptions about Cork:

Cork will absorb water like a “sponge” if it gets wet.

Incorrect: Think of the most common use for cork, wine stoppers. Cork has been used for wine stoppers for hundreds of year primarily because it does not absorb water or liquids. Cork has also been used for years in buoys, lifejackets and other floatation devices, again because it does not absorb water and can remain buoyant for years. A cubic inch of solid cork immersed in water for 48 hours will gain less than 3% in weight due to water absorption. A cubic inch of solid wood or unglazed clay-bodied ceramic tile would gain many more times this percentage of weight in water if immersed for 48 hours.

Composition Cork material will fall apart if it gets wet after it has been installed.

Incorrect: That may have been possible over 20 years ago when animal protein binders were used, but not anymore. Since the early 1980’s non-water-soluble polyurethane binders have been used to adhere the granules together to make Amorim composition cork products. These polyurethane binders also produce no post installation off gassing and do not leech into ground water supplies. AcoustiCORK™ products can be totally immersed in water for 30 days or more and show no signs of structural deterioration. The natural wax like content of cork, which is a substance called suberin, protects it from rotting or decomposition, even if it is submerged in water for long periods of time.

Cork will “swell” with exposure to moisture and cause finish floor coverings to fail.

Incorrect: Because cork absorbs so little water, it is very dimensionally stable. When exposed to 100% Relative Humidity conditions for 30 days the dimensional change in the grade of materials used to manufacture AcoustiCORK™ products would be less than 3%. In a 6mm (0.236”) thick piece of material this would represent an increase in thickness of less than 1/120 of an inch.

Cork underlayment will compress and crumble under heavy loads and traffic.

Incorrect: Unlike open or even close-celled synthetic foam materials, cork consists of an interlocking structure of 14-sided polygons called tetracadehedrons. These totally sealed gas filled cells have a very tough membrane that is almost impossible to break. Because of this unique natural attribute, cork has a compression/recovery rating of close to 100%. Unlike many foam and fiber based products, it will not collapse over time with traffic. The binders used to adhere the granules of AcoustiCORK™ products together are designed to create a permanent structural bond between the particles.

Cork will support the growth of mold and mildew if used in a moist environment.

*Incorrect: Going back to the traditional use of Cork in wine stoppers, solid Cork is used for sealing fine vintage wines precisely because it does not readily support the growth of mold and other biological agents, which can cause spoiling of the wine. About 45% of the mass of cork is a waxy compound known as suberin. Suberin is where the species name of the tree is derived from (*Quercus Suber L.*) and it makes cork naturally mold and mildew resistance, as well as resistant to termites and fire. Also, the granules of Cork used to make AcoustiCORK™ products are coated with a polyurethane binder, which enhances their natural microbial resistance.*

“Cork is Cork” and all Cork Underlayment products are the same.

Incorrect: Properties such as density, particle size and consistency of particle size are very important and vary widely from one manufacturer to another. Density affects the structural stability of the product and the sound attenuation quality. A product that lacks density will be too delicate to use as an underlayment and a product that is too dense will have poor sound attenuation characteristics. A product that has too large of particle size or a wide range of particle sizes in the mix will lack the structural integrity to be effectively used as an underlayment. The Mediterranean Cork Oak is a much different species of tree, with more resilient properties and Suberin content, than the Chinese species of cork tree. AcoustiCORK™ products are made with 100% Mediterranean Cork granules and high quality, non-toxic binders. The same cannot be said for generic imitations.