



## TRADITIONAL CORK FLOORING ACOUSTICAL PROPERTIES

### TECHNICAL SUPPORT 800.345.6202

Expanko Cork Flooring is well known for having excellent acoustical properties. For over 100 years, cork has been used throughout the world in churches, libraries, universities and homes due to its ability to reduce echo and sound transmission.

The acoustical properties of cork are derived from its unique cellular structure. Cork is composed of over 2.4 million cells per cubic inch of material. These closed cells, filled with air, provide excellent resistance to sound transmission and echo much like fiberglass or any other insulation material. This insulation level is further enhanced by the structure of the cells, since there are no gaps between them and the cells are closed. Unlike most synthetic insulating materials, cork does not break down quickly over time; therefore, it retains its acoustical properties even 90 years after installation.

Cork has a higher level of acoustical deadening than other resilient flooring materials. Its level of acoustical deadening is far greater than synthetic and wood products because of its closed cell structure. A simple drop test on a cork tile with a golf ball illustrates the acoustical superiority over other resilient flooring. When compared to carpet, acoustically cork will not perform as well, however; maintenance, performance and durability of carpeting is inferior to cork.

Expanko Traditional Cork and Vallarex Cork Floating floors have been tested in accordance with ASTM standards ASTM E 492-90/ASTM E 989-89 (STC rating) as well as ASTM E 90-02 (IIC rating). These tests indicate the Sound Transmission Class (STC) and Impact Insulation Class (IIC) of the flooring product.

While values of the tests indicate a sound value, these values are dependent upon the testing method used, which does change within the ASTM standard. In simplified terms, a test performed using a drop ceiling (in addition to the floor covering) will give a higher reduction rating, however, if the actual installation does not have a drop ceiling, this test data is meaningless. For that reason, Expanko has tested its material using only a concrete slab to give the true value of the product, without the "assistance" of other products to falsely indicate a higher value.

Expanko products were tested using an 8" concrete slab floor-ceiling assembly. For both products, the material was installed per specification. The test results are as follows:

#### Traditional Cork Flooring:

IIC Rating - 51 dB  
STC Rating - 54 dB

#### Vallarex Floating Cork Flooring:

IIC Rating - 53 dB  
STC Rating - 52 dB

These tests signify that both Traditional Cork and Vallarex contribute significantly to the reduction of sound transmission. Therefore both products are an excellent choice for use where sound reduction is required. Areas particularly suited for these products would include office and apartment complexes. For those areas that require additional sound transmission reduction, floor underlayment and/or acoustical ceiling materials can be used.

For more information about Expanko visit our website at [www.expanko.com](http://www.expanko.com) or contact Expanko at 800.345.6202.