ACOUSTICALLY NEUTRAL FABRICS

KnollTextiles offers a range of fabric options appropriate for wrapped acoustical panel applications. We test all panel fabrics in our line, as well as several of our wallcovering and upholstery fabrics to determine their acoustical properties.

ASTM C423 is the industry recognized test for evaluating the sound absorption of a building material. The test uses a reverberation chamber and measures the rate of decay of sound waves. We use this test to assess which fabrics in our line are appropriate for acoustical panel use.

The test report lists the Noise Reduction Coefficient (NRC), which is calculated from the absorption data of 4 frequencies (18 or more are collected during the span of the test). The NRC number is always between “1” and “0”. If the material achieves a “1”, it is said to have perfect absorption. If the material receives a “0”, it is said to be perfectly reflective. At KnollTextiles, we ensure that our panel fabrics do not interfere with the panel’s ability to absorb sound, so we report the NRC difference.

In order to find the NRC difference, the ASTM C423 test is conducted twice—once with the panel alone and secondly with a fabric covered panel. The Noise Reduction Coefficient is then calculated by averaging those 4 frequencies. By subtracting the NRC result of the fabric covered panel from the NRC result of the panel alone, we are able to define the NRC difference. In other words, we report the change in absorbency that was detected between these specific frequencies. The closer this number is to “0”—whether positive or negative—the less interference the fabric caused in the panel’s ability to absorb. Depending on the level of noise control that the acoustician is looking to attain, it may be necessary to review the full report showing the absorption at all frequencies tested. Please contact your KnollTextiles Customer Service Representative for the full test report.

The fabrics listed below have been tested and, based on the NRC, are considered to be acoustically neutral. The range deemed acoustically neutral is between -0.25 and 0.25.

KnollTextiles Acoustically Neutral Fabrics

Acme	Boundary	Foundation	Mystique	Skylark
Akita	Broadcloth II	Gem II	Nematic II	Slumber
Alias II	Cable Twist	Glam	North Star	Soliloquy
Alibi	Capital	Grand Boulevard	Overture	Symbolic Details
Alloy	Cats Cradle	Growth Spurt	Palladium	Tailor Made II
Amplify	Chance	Guild	Petra	Tranquil
Annex	Circle Line	Hard Rock	Pivot	Transfer
Antares	Circuit	Heavy Metal	Pivot Stitch	Trophy
Apollo	Counterpoint	Hourglass	Photon II	Tryst
Arena	Crossroad	Illume	Plus One	Twilight
Asterisk II	Cross Tech	Improv	Ponder	Twister
Bandwidth	Delite	Infinite	Prague	Ultrasuede
Bauhaus Block	Dottie	Knoll Felt	Ransom	Utmost II
Beacon	Edo	Latitude	Reflect	Utopia
Bistro	Element	Mainframe	Relay	Versa
Block Party	Express	Mantilla	Repertoire	Versatility
Bocce	Firenze	Messa	Script	Vertical Velvet
Bollywood (unbacked)	Flow	Mezzo	Shadow Play	Viewpoint
Bond	Foil Rap	Micro	Silhouette	Wrap Up

For additional information,
please contact Customer Service at
textiles_orders@knoll.com or 866.565.5858.
knolltextiles.com

SOUND ABSORBING FABRICS

ASTM C423 is the industry recognized test for evaluating the sound absorption of a building material. Sound absorption is the ability of a material to reduce sound reflections, reverberation and echo within an enclosed place. The test uses a reverberation chamber and measures the rate of decay of sound waves.

The test report lists the Noise Reduction Coefficient (NRC), which is calculated from the sound absorption coefficients of 4 specified frequency bands, then rounded to the nearest 0.5. The test reports show results obtained with the fabric hanging in a drapery configuration at 5 inches from a wall. The NRC rating is typically between a range of “1” and “0”. If the material achieves a “1 “, it is said to have 100% absorption (like an open window). If the material receives a “0”, it is said to be perfectly reflective. If a fabric has an NRC rating of 0.65, it means that 65% of the sound energy that contacts the fabric is absorbed, rather than reflected.

Depending on the level of noise control that the acoustician is looking to attain, it may be necessary to review the full report showing the absorption at all frequencies tested. Please contact your KnollTextiles Customer Service Representative for the full test report.

KnollTextiles Sound Absorbing Drapery Fabrics

Bewitched (0.65)
Bon Nuit (0.35)
Chill (0.60)
Double Eclipse (0.45)
Equation (0.45)
Hint (0.75)
In Tune (0.35)
Irving (0.80)
Knoll Velvet (0.60)
Noren (0.65)
Phantom (0.60)
Signal (0.65)
Slumber (0.75)
Utmost II (0.90)
Vertical Velvet (0.95)
Zone (0.40)

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