

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

For additional information,
please contact Customer Service at
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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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