

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 difference, are considered to be acoustically neutral. The range deemed acoustically neutral is between -0.25 and 0.25.

KnollTextiles Acoustically Neutral Fabrics

Acme	Broadcloth II	Giza Poly	Messa	Skylark
Akita	Cable Twist	Glam	Mezzo	Slumber
Alias II	Candela	Glaze	Micro	Spellbound
Alibi	Capital	Glisten	Nematic II	Symbolic Details
Alloy	Cats Cradle	Grand Boulevard	North Star	Tailor Made II
Amalfi	Chance	Growth Spurt	Overture	Tranquil
Amplify	Circle Line	Guild	Palladium	Transfer
Annex	Circuit	Hard Rock	Perception	Trophy
Antares	Cosma	Heavy Metal	Petra	Tryst
Apollo	Counterpoint	Hideaway	Pivot	Twilight
Arena	Crossroad	Hourglass	Pivot Stitch	Twister
Asterisk II	Cross Tech	Illume	Photon II	Ultrasuede
Bandwidth	Delite	Improv	Ponder	Utmost II
Bauhaus Block	Dottie	Infinite	Prague	Utmost QK
Beacon	Edo	Innuendo	Ransom	Utopia
Bistro	Element	Intermission	Reflect	Versatility
Block Party	Film Reel	Unbacked	Relay	Zenith
Bocce	Flow	Knoll Felt	Repertoire	
Bollywood	Foil Rap	Logic	Ricochet	
(unbacked)	Foundation	Mainframe	Script	
Boundary	Gem II	Match Point	Silhouette	

For additional information,
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knolltextiles.com

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.

The fabrics listed below have been tested and, based on the NRC difference, are considered to be acoustically sound absorbing.

KnollTextiles Sound Absorbing Drapery Fabrics

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