

## Sealed and Covered Mullions: Sensible Alternative

The **STC Mullion Seal** closes the gap between the end of a partition and a curtainwall mullion, a major sound flanking path. Unlike double-sided tapes of foam or rubber, the patented offset adhesive allows the seal to move with thermal expansion, wind deflection and interstory drift, maintaining the seal.

The Mullion Seal is designed to effectively seal the joint and maintain balance in the acoustical design at minimal cost. Typical offices have background noise at NC-30 to NC-35<sup>1</sup>, and have sound absorbing carpet and acoustic ceilings that assist in attaining acoustical comfort. As a result, an *effective* STC for the overall separation needs to be no more than STC-43<sup>2</sup>, considered after sound flanking paths are sealed in the partition. Normal speech sound level is 66 dB; loud speech is 72 dB. These sounds are fully blocked from passing through at STC-43; disruptive sound is more likely to come through the office door or recessed electrical outlets than through the mullion.

A typical office, 10' wide x 15' long by 9' high, with 160 sabins and a 9' x 15' partition joining a mullion 6" deep and 8' high shows a common condition. The mullion is less than 3% of the wall area, limiting the amount of sound transmitted.

The chart at right shows the *effective* STC of this separation for various STC values of the partition. The sealed mullion has an STC-28; the unsealed partition has an STC-20 due to a small gap between the mullion and the partition end.

Even so, an STC-47 partition achieves an effective STC-43 for the overall separation. Unsealed, the effective value drops to STC-36.

A covered mullion system, such as the Mull-It-Over, performs very well. However, it is much more than is needed under typical conditions. They also have an added-on appearance and **cost 20 times as much**, making the STC Mullion Seal the **sensible alternative** to covered mullions.

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<sup>1</sup> Egan, M. David, "Architectural Acoustics," J. Ross Publishing (2007)

<sup>2</sup> Ibid.

