

STC57 Rated Acoustiblok® Staggered Stud Wall: Acoustical Test Overview



Riverbank Acoustical Laboratories rated this wall assembly with an STC (Sound Transmission Class) of 57. See report graph below. Note the high performance sound blocking at the lowest measured frequencies, a unique feature of Acoustiblok. Note the high performance of this assembly in blocking the lowest noise frequencies, otherwise difficult or impossible to control.

The tested assembly: 5/8" gypsum screwed 24" on center, wood 2x4 stud 16" on center staggered 8" on center, 16 oz. Acoustiblok stapled 24" on center; 2" x 6" plates top/bottom; insulation 3½" batts.

SOUND TRANSMISSION CLASS is a single number that represents the sound blocking capacity of a partition such as a wall or ceiling.

STC numbers are often called out in architectural specifications, to assure that partitions will reduce noise levels. For performance similar to laboratory test numbers, it is necessary to adhere closely to the construction materials and techniques used in the tested partition.

STC calculations emphasize sound frequencies that match the human voice. A high STC partition will block the sound of human speech, and block noise that interferes with human speech. A high STC number may not indicate a partition that is effective in blocking very low or very high pitched sound. STC measures sound blocking for airborne noise source only; it does not indicate how well a partition can block impact noise (objects striking the far side of the wall), or directly transmitted noise such as machinery mounted on the far side of the wall.

STC is calculated by comparing the actual sound loss measured when 18 test frequencies pass through a partition, with fixed values for each STC level. The highest STC curve that the measured sound loss numbers fit under, determines the STC rating of the tested partition.

