

## Sound Transmission

PorterSIPs can be used for designs requiring control of sound transmission.

Sound Transmission Class (or STC) is an integer rating of how well a building partition attenuates airborne sound. The STC-ASTM E90 of an assembly or component is derived from Transmission Loss (TL) values tested at 16 standard frequencies over the range of 125 Hz to 4000 Hz. These transmission-loss values are then plotted on a sound pressure level graph and the resulting curve is compared to a standard reference contour.

Sound transmission loss (STL) and STC tests were conducted by an ISO / IEC 17025 accredited independent laboratory on four different PorterCorp SIPs. A description of the panel assemblies is listed below.

<b>Sample Description</b>	<b>STC Rating</b>
Basic SIP Panel. (7/16" OSB, 3-5/8" EPS, 7/16" OSB)	STC-22
Basic Panel with 5/8" gypsum board facing screw applied (screws 12" o.c.) to one face. (7/16" OSB, 3-5/8" EPS, 7/16" OSB, 5/8" gypsum board)	STC-29
Basic Panel with 5/8" gypsum board facing screw applied (screws 12" o.c.) to each face. (5/8" gypsum board, 7/16" OSB, 3-5/8" EPS, 7/16" OSB, 5/8" gypsum board)	STC-34
Basic Panel with 5/8" gypsum board facing screw applied (screws 12" o.c.) to each face, with USG RC-1+ resilient channel (24" o.c.) and 5/8" gypsum board facing added to one face.	STC-39

It should be noted that sound attenuation is dependent on installation practices. Poor assembly, electrical penetrations, plumbing and imperfectly sealed penetrations all can affect the sound transmission performance of a wall assembly.