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Sound Transmission Class (STC)

In practice, the Sound Transmission Class (STC) of laboratory samples represents optimum conditions, and it is rarely achieved in actual construction. The difference between the Field Sound Transmission Class (FSTC) and STC results from sound leaks and “flanking” paths. Flanking is sound that travels between two rooms along paths other than through the demising partition. FSTC is a function of background noise levels, room volumes, surface areas, sound absorption values, and spectral content of the sound source. Partitions composed of multiple elements such as doors, windows will tend to have an overall FSTC close to the lowest FSTC value of any component.

The behavior of two partitions with similar FSTC can be considerably different. Unfortunately, in field situations, test ratings of the same wall/floor section vary from test to test and walls/floors do not perform as well as under laboratory conditions. It is the responsibility of the builder to bring up the performance of the wall/floor if the tenants would obtain field test results from dwelling units that confirm a reduced STC.

ASTC (Apparent Sound Transmission Class) is when these tests are NOT conducted in laboratory and in optimum conditions and it is not considered to be a FIELD TEST since it does not include for flanking paths. The reported ASTC ratings of Amvic’s ICF wall and AmDeck floor system is equivalent to FSTC without flanking paths as mentioned above.

With the above assumptions, the following table can be used to correlate ASTC ratings to STC ratings:

amvic ICF wall & AmDeck floor system STC ratings				
amvic specimen	Test Method Standard	Classification Standard	*ASTC	STC
6" am vic ICF wall, GWB both sides	ASTM E336-07	ASTM E413-04	46	54
6" am vic ICF wall, GWB/Stucco	ASTM E336-07	ASTM E413-04	47	55
Am Deck floor, un finished/GWB	ASTM E336-07	ASTM E413-04	47	55
Am Deck floor, Carpet/GWB	ASTM E336-07	ASTM E413-04	48	56

* Apparent Sound Transmission Class

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