

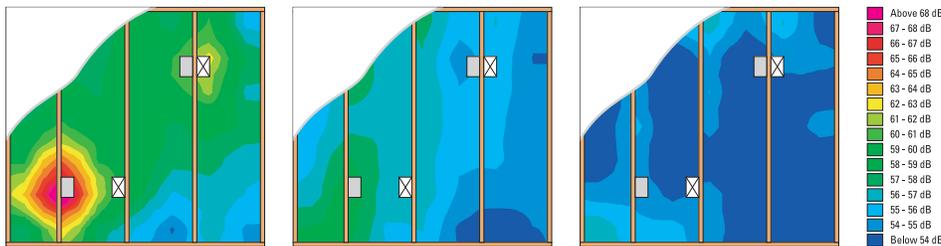


Acoustical Performance Advantages

Johns Manville Spider® insulation sprays in to completely fill all gaps and voids, offering superior coverage. Because of this coverage, it achieves superior sound control, reducing transmission of sound through walls and floor/ceiling assemblies.

SOUND-INTENSITY MAPS OF WALL ASSEMBLIES

A gypsum-board wall with electrical boxes on both sides was tested for leaks of speech-frequency noise. The sound intensity was converted to color images, which show the superior sound control of JM Spider insulation.



1. Empty cavities

2. Cavities with R-13 batts

3. Cavities filled with JM Spider

SOUND TRANSMISSION MEASUREMENTS

- **Decibels** – Decibels (dB) describe how loud a sound is.

dB	Sound
20	Whisper
50	Conversation
80	Vacuum cleaner
90	Loud stereo
110	Police siren

- **STC Rating** – A Sound Transmission Class (STC) rating indicates how well a wall assembly blocks airborne sound. The higher the STC rating, the more the assembly reduces sound transmission. One STC point is approximately the same as a decibel point. For example, if a vacuum cleaner at 80 decibels is on one side of a wall with an STC 52 rating, the decibel level on the other side of the wall will be about 28. An STC rating is an average rating across the entire wall assembly in a controlled ASTM E90 test. In a real building there may be “hot spots” where sound comes through the wall more easily than in other areas (see sound-intensity maps).

STC Speech Heard Through Wall or Floor

30	Loud speech can be understood fairly well
35	Loud speech audible but not intelligible
42	Loud speech audible as a murmur
45	Some loud speech barely audible
48	Hearing strained to hear loud speech
50	Loud speech not audible



Spray-in Custom Fiber Glass Insulation and Delivery System



PRODUCT DESCRIPTION

JM Spider insulation is lightweight fiber glass insulation bound together with a non-toxic, water-soluble adhesive that also binds to wall cavity surfaces for gap-free coverage.

APPLICATIONS

Interior and exterior walls and floor/ceiling assemblies with wood or steel framing for superior thermal and acoustic performance.

INSTALLATION

Equipment for JM Spider insulation installation is engineered for professional use. The JM Spider Insulation and Delivery System is compatible with most fiber glass blowing machines. JM Spider insulation fills a regular (2x4) cavity in 10-20 seconds.

HIGH R-VALUES

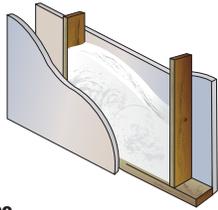
JM Spider insulation can fill 2x4 cavities up to an R-15 thermal rating, and 2x6 cavities up to R-23.

MOLD-RESISTANT

JM Spider insulation is mostly fiber glass, an inorganic material that is naturally mold-resistant. In addition, JM Spider adhesive contains a U.S. EPA-registered mold inhibitor, giving the insulation an extra layer of protection.

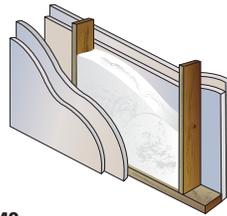
Formaldehyde-free™ Spray-in Fiber Glass Insulation

STC RATINGS OF TYPICAL WALL ASSEMBLIES



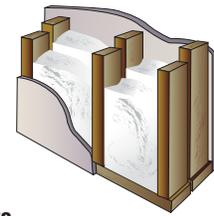
STC 39

Interior 2x4 wood stud wall, 16" on center, 1/2" gypsum board each side, JM Spider insulation



STC 49

Interior 2x4 wood stud wall, 16" on center, 2 layers 5/8" gypsum board each side, JM Spider insulation



STC 58

Interior double 2x4 wood stud wall, 16" on center, 5/8" gypsum board each side, JM Spider insulation

NRC RATING

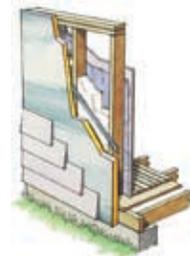
The Noise Reduction Coefficient (NRC) rating is a single number used for comparing sound-absorbing materials. The higher the NRC, the more effective the material is at absorbing sound. The following NRC values were measured using the ASTM C 423 test method with E795 Type A mounting.

NRC 1.15

3 1/2"-thick JM Spider insulation without framing and with one face exposed.

NRC 1.15

3 1/2"-thick JM Spider insulation installed in wood stud framing, 16" on center, with one face exposed.



STC 43

Exterior 2x4 wood stud wall, 16" on center, lap siding, foil-faced sheathing, 1/2" gypsum board interior side, JM Spider insulation

Frequently Asked Questions

Does JM Spider insulation control sound better than fiber glass batts?

Yes. Although in lab tests JM Spider insulation and batts get similar sound-control ratings, JM Spider insulation controls sound better than batts in a real wall in a real building. Batts provide good sound control if they are installed properly to fill every gap, including spaces behind and around electrical boxes and other utilities. When JM Spider insulation is installed as recommended, it completely fills all gaps and voids and controls sound better than batts.

Does JM Spider insulation control sound better than cellulose or foam?

Yes. In the limited comparative tests to date, JM Spider- and cellulose-insulated walls achieve similar ratings. However, JM Spider insulation will not settle over time, so its long-term performance will be better. Compared with low-density spray foam, the JM Spider-insulated wall outperformed the foam-insulated wall by two STC points.

For interior-wall sound control, do I install JM Spider insulation the same way I would in an exterior wall?

Yes—with one difference. Staple JM fabric to one side of the wall so you'll have something to spray JM Spider insulation against.

What are some other ways to improve the sound control of a wall or ceiling/floor assembly?

For the best sound control, caulk and seal all joints and cracks in walls, ceilings and floors. Additional measures you can take:

- Don't place air registers, electrical outlet boxes or other wall penetrations back-to-back between rooms
- Install resilient channels between drywall and studs to lessen vibrations
- Install a double layer of drywall
- If you need even more sound isolation, install a double row of studs, offset from one another, to interrupt vibration through the wall, and fill both rows of framing with JM Spider insulation



Contact your local JM sales representative for a JM Spider certified contractor. Visit specJM.com for additional information on the JM Spider Custom Insulation System.

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