

GREEN GLUE VS. RESILIENT CHANNEL

The Green Glue Company is pleased to present 3rd party, same-lab data for Green Glue (a viscoelastic damping material) and Resilient Channel, the oldest and most commonly used sound isolation product in the world. Resilient channel is less expensive than Green Glue, so for Green Glue to be a viable competitor, considerable advantages would have to be shown.

RESILIENT CHANNELS: COMPETITOR & SYNERGIST

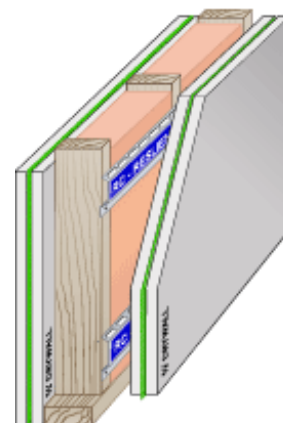
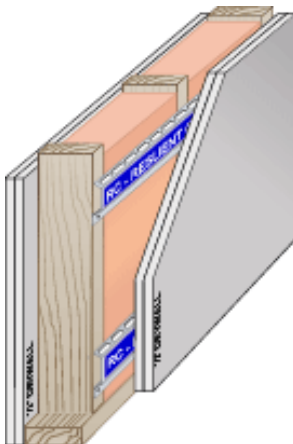
We will demonstrate herein that Green Glue is not only a superior product for many applications, but also a powerful synergist with resilient channel in other applications. Green Glue eliminates the loss of STC due to short circuits in resilient channel walls. Audio Alloy tested the effects of a short circuited wall built from resilient channel and Green Glue. Even with 16 short circuits on a 64 square foot test specimen, the STC remained 3 points higher than an identical wall without Green Glue and ideally installed.

The data was collected at Orfield Laboratories, an independent NVLAP accredited lab in Minneapolis, MN, in May and August of 2005.

1. TEST DESCRIPTION

To evaluate the value of Green Glue in conjunction with resilient channel, we ran the following tests.

Wall configurations, from source room to receive room:



Resilient Channel Assembly
Double 1/2" drywall 25 gauge resilient channel, perpendicular to the studs and 24" on center
2x4 single wood studs, 16" on center
R13 fiberglass insulation
Double 1/2" drywall
OL 05 1011

Green Glue Assembly II
Double 1/2" drywall with 58 fluid ounces of Green Glue per 4' x 8' sheet in between the layers + 25 gauge resilient channel, perpendicular to the studs and 24" on center
2x4 single wood studs, 24" on center
R13 fiberglass insulation
1/2" drywall + Green Glue @ 58 fluid ounces per 4' x 8' sheet + 1/2" drywall
OL 05 0825 – Proper installation OL 05 0826 – 1 short circuit OL 05 0827 – 2 short circuits OL 05 0828 – 4 short circuits OL 05 0829 – 8 short circuits OL 05 0830 – 16 short circuits

GREEN GLUE IN CONJUNCTION WITH RESILIENT CHANNEL

There are many applications where certain STC figures must be met by law. Failure to meet the required performance can result in extremely costly rebuilds and/or litigation. In some locations STC's of 45 must be met in the field, in other locations STC's of 50 must be met. It is possible that in the future, even stricter regulations shall be put in place. The cost of each of the assemblies that feature product on both sides.

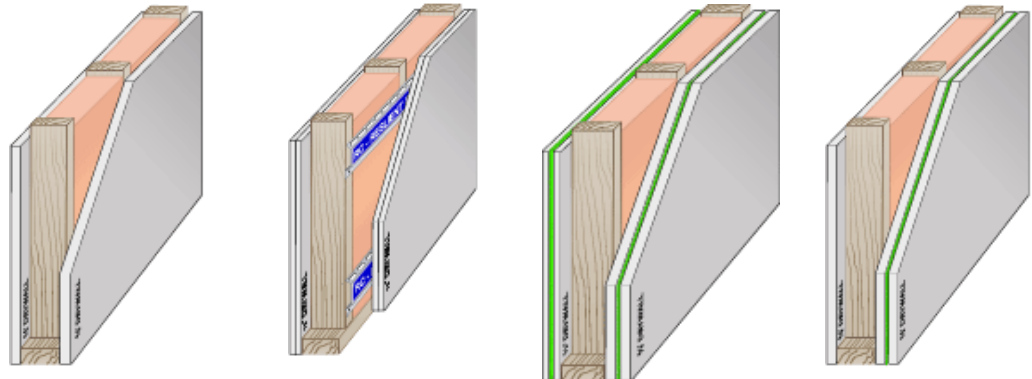
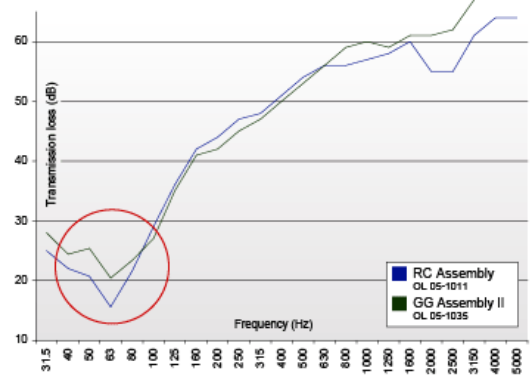
CHART 2 - GREEN GLUE -VS- RESILIENT CHANNEL

A comparison of resilient channel and Green Glue assemblies with 3 total layers of 5/8" drywall, taken in the same lab.

The RC was verified by the lab to be 25 gauge (which is appropriate), and it was properly installed.

Note that while the RC, like GG, yields a very good STC, its low frequency performance is far worse. Remember that, in theory, doubling the mass of the wall would cause a 6dB low frequency performance increase, all other things equal.

If the channel was not properly installed, this difference is likely to be even larger.

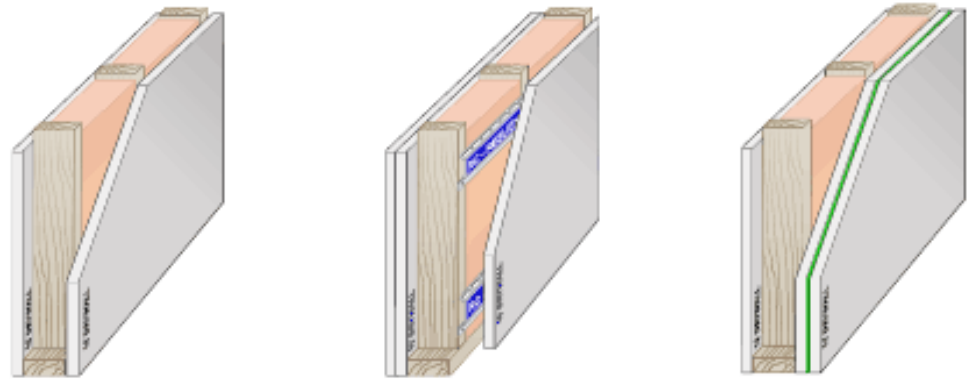


	Reference 5/8" on both sides	Resilient Channel Assembly	Green Glue I 1 layer on source side	Green Glue II 2 layer on either side
STC	40	55	52	56
OITC	29	37	36	40
Flat Noise Reduction, dBA ^a	38	49	47	50.4
Test Number:	OL 05-1003	OL 05-1011	OL 05-0416	OL 05-1035

^a An assessment of wall performance that is not an official standard, but is utilized by The Green Glue Company as a superior method to STC or OITC for music and theater applications where low-frequency content is high. It calculates using the ISO 226 equal loudness standard, and using a bandwidth of 31.5-5000Hz. Equal Loudness attempts to correlate to how people actually hear.

^b The A-weighted sound reduction for a noise source having flat response from 31.5 to 5000Hz. For additional information about how these ratings are calculated, and for spreadsheets that will allow you to calculate them, visit our website at www.greengluecompany.com

^c Based on MLV sale price of \$2.20 per square foot including shipping/delivery. Green Glue costs consider additional drywall that has to be utilized plus cost of GG. Sandwich MLV configuration considers extra drywall as well.



	Reference 1 Single 5/8" on Both Sided	Resilient Channel Assembly	Green Glue I 1 layer on source side
Drywall, materials	\$0.68	\$1.36	\$1.02
Drywall, labor	\$1.20	\$2.40	\$1.80
Resilient Channel, materials	-	\$0.33	-
Resilient Channel, labor	-	\$0.65	-
Green Glue, materials	0	0	\$0.78
Green Glue, labor	0	0	\$0.18
Framework, materials	\$0.40	\$0.40	\$0.40
Framework, labor	\$0.60	\$0.60	\$0.60
Insulation, materials	\$0.33	\$0.33	\$0.33
Insulation, labor	\$0.40	\$0.40	\$0.40
Sealant, materials & labor	\$0.65	\$0.95*	\$0.65
Mudding/taping, materials & labor	\$0.56	\$0.56	\$0.56
Total Cost, materials	\$1.61	\$2.08	\$2.73
Total Cost, materials + labor	\$4.76	\$7.04	\$6.67
Depth of wall	4.75"	5.875"	5.375"
Total cost including floor space adjustment	-	\$8.49	\$7.88
Test Number	OL 05-1057	OL 05-1011	OL 05-0416

* - Resilient channel calls for floating drywall with thicker beads of sealant. The Green Glue wall was tested with Drywall resting on the concrete of Orfield's lab, requiring far less sealant application.

** - In some situations it is necessary to compensate for floor space consumed by the wall, as the consumed floor space represents lost saleable value. In this calculation we assume a 9-foot high demising wall, and floor space valued at \$200 per square foot. We normalize to a 4.75" deep wall.

Despite the now very large performance advantages, the GG wall remains considerably less expensive.

Results will vary. All costs based on national average material and labor rates taken from the National Construction Estimator, a Craftsman product. Rates will vary considerably depending on location, time of year, and other factors. Labor will vary the most. Reference wall would offer STC of 44-46, OITC of 30-33, Flat noise reduction of 40-43

SUMMARY

Green Glue outperforms older technologies like resilient channel. And while all sound isolation installations can fail due to poor sealing practices, poor quality doors, poorly designed ventilation systems and so forth, Green Glue cannot be short-circuited the way resilient channel usually is. Also, Green Glue grants RC assemblies tremendous resistance to failure by short-circuiting.