

Resilient Channel Acoustical Performance Comparison Table

Studs	Wall Board	Resilient Channel	Insulation	1/3 Octave Band Center Frequency																	STC	MTC	Source				
				50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000				2500	3150	4000	
1	2x4W	1/2" GB, both sides	None	None				17	17	15	20	31	28	27	33	37	33	40	38	41	38	34	34	36	33	28	USG
2	2x4W	1/2" GB, both sides	RC-1, one side	None				17	21	19	24	33	33	35	37	42	47	48	53	54	53	48	40	43	40	32	USG
3	2x4W	1/2" GB, both sides	RC-1, one side	3" Mineral Fiber				20	25	26	34	40	43	45	48	52	54	57	59	61	59	52	48	50	47	39	USG
4	2x4W	5/8" GB, both sides	None	3" Mineral Fiber				19	18	18	29	39	31	31	39	42	42	46	47	46	38	35	40	43	37	31	USG
5	2x4W	5/8" GB, both sides	RC-1, one side	3" Mineral Fiber				27	33	38	45	49	52	55	58	59	60	61	63	57	53	56	60	51	43	USG	
6	3.5"M	2 layers 5/8" GB, both sides	None	None				35	30	35	44	45	47	49	51	52	54	55	54	46	44	49	52	48	43	USG	
7	3.5"M	2 layers 5/8" GB, both sides	None	3" Mineral Fiber				38	36	37	47	50	52	53	54	55	57	56	56	48	47	52	55	51	49	USG	
8	3.5"M	2 layers 5/8" GB, both sides	RC-1, one side	None				26	29	30	38	43	45	52	55	55	57	56	58	60	52	48	52	56	50	43	USG
9	3.5"M	2 layers 5/8" GB, both sides	RC-1, one side	3" Mineral Fiber	18	14	21	33	41	45	50	52	57	60	62	62	64	64	66	66	62	59	63	68	61	57	USG
10	2x4W	2 layers 1/2" GB, one side; 1/2" GB other side	None	None				16	17	25	26	29	31	36	37	40	42	42	43	45	44	44	48	37	N/A	NRCC	
11	2x4W	2 layers 1/2" GB, both sides	RC-1, one side	None				38	31	38	45	49	53	52	54	56	57	58	59	53	55	58	62	52	N/A	USG	
12	2x4W	2 layers 1/2" GB, both sides	RC-1, one side	3" Mineral Fiber				35	41	47	53	56	57	59	60	61	63	64	65	65	64	59	61	59	N/A	RAL	
13	3.5"M	2 layers 1/2" GB, both sides	None	5/8" Mineral Fiber				31	34	36	46	47	51	55	56	56	60	61	60	63	59	52	54	57	55	N/A	USG
14	3.5"M	2 layers 1/2" GB, both sides	RC-1, one side	3" Mineral Fiber	20	27	33	38	42	48	53	54	59	61	61	60	60	62	64	65	62	59	63	60	N/A	RAL	

Notes:

2x4W = 2"x4" wood studs, 16" o.c.

3.5"M = 3.5" metal studs, 24" o.c.

STC = Sound Transmission Class

MTC = Music/Mechanical Transmission Class

Sources:

NRCC = National Research Council Canada

RAL = Riverbank Acoustical Laboratories

USG = United States Gypsum Company Literature