

Acoustically-Tested Mass Timber Assemblies

Following is a list of mass timber assemblies that have been acoustically tested as of January 23, 2019. Sources are noted at the end of this document. For free technical assistance on any questions related to the acoustical design of mass timber assemblies, or free technical assistance related to any aspect of the design, engineering or construction of a commercial or multi-family wood building in the U.S., email <u>help@woodworks.org</u> or contact the WoodWorks Regional Director nearest you: <u>http://www.woodworks.org/project-assistance</u>

Contents:

Table 1: CLT Floor Assemblies with Concrete/Gypsum Topping, Ceiling Side Exposed	2
Table 2: CLT Floor Assemblies without Concrete/Gypsum Topping, Ceiling Side Exposed	7
Table 3: CLT Floor Assemblies without Concrete/Gypsum Topping, with Wood Sleepers, Ceiling Side Exposed	9
Table 4: NLT, GLT & T&G Decking Floor Assemblies, Ceiling Side Exposed	11
Table 5: Mass Timber Floor Assemblies with Ceiling Side Concealed	14
Table 6: Single CLT Wall	21
Table 7: Single NLT Wall	26
Table 8: Double CLT Wall	29
Sources	32
Disclaimer	34

Table 1: CLT Floor Assemblies with Concrete/Gypsum Topping, Ceiling Side Exposed



	Finish Floor if Applicable Concrete/Gypsum Topping Acoustical Mat Product Image: CLT Panel No direct applied or hung ceiling					
CLT Panel	Concrete/Gypsum Topping	Acoustical Mat Product Between CLT and Topping	Finish Floor	STC1	IIC ¹	Source
			None	47 ² ASTC	47 ² AIIC	
			LVT	-	49 ² AIIC	
			Carpet + Pad	-	75 ² AIIC	
1-		Maxxon Acousti-Mat® 3/4	LVT on Acousti-Top®	-	52 ² AIIC	
	1-1/2" Gyp-Crete [®]		Eng Wood on Acousti- Top®	-	51 ² AIIC	
			None	49 ² ASTC	45 ² AIIC	
		Maxxon Acousti-Mat [®] ¾ Premium	LVT	-	47 ² AIIC	
			LVT on Acousti-Top®	-	49 ² AIIC	
				r		
			None	45 ⁶	39 ⁶	15
			LVT	48 ⁶	47 ⁶	16
CLT 5-ply		LISG SAM N25 Liltra	LVT Plus	48 ⁶	49 ⁶	IC 1 IC 1 IC 1 IC 15 IC 16 58 59 60 61 15 15 16
(6.875")			Eng Wood	47 ⁶	47 ⁶	
			Carpet + Pad	45 ⁶	67 ⁶	60
			Ceramic Tile	50 ⁶	46 ⁶	61
			None	45 ⁶	42 ⁶	15
	1-1/2" Levelrock [®]		LVT	486	44 ⁶	45² AIIC 47² AIIC 49² AIIC 396 15 476 496 58 476 676 600 466 61 426 15 446 16 426 15 446 58 456 59 716 60
	Brand 2500	Soprema [®] Insonomat	LVT Plus	486	47 ⁶	58
			Eng Wood	47 ⁶	45 ⁶	59
			Carpet + Pad	45 ⁶	71 ⁶	60
			Ceramic Tile	50 ⁶	46 ⁶	61
			None	45 ⁶	38 ⁶	15
		USG SAM N75 Ultra	LVT	48 ⁶	47 ⁶	16
			LVT Plus	48 ⁶	49 ⁶	58
			Eng Wood	47 ⁶	49 ⁶	59

Table 1 Continued: CLT Floor Assemblies with Concrete/Gypsum Topping, Ceiling Side Exposed



CLT Panel	Concrete/Gypsum	Acoustical Mat Product Between CLT and Topping	Finish Floor	STC ¹	IIC ¹	Source
	lopping		Carpat Dad	456	с г 6	60
		USG SAM N75 Ultra	Carpet + Pau	45°	406	60
			Ceramic Tile	50°	49*	61
	1-1/2" Levelrock [®]		None	45	40°	15
	Brand 2500			48	45	10
		USG SAM N40 Ultra		48	475	50
			47-	47°	59	
			45 ⁻	476	60	
			Ceramic The	50°	47°	61
	1.1/2" autoum	0.25" (0mm) closed cell feam	None	FO	41	20
	1-1/2 gypsum		None	50	41	20
		Nono		10	20	1
		0.25" (0mm) closed cell feam		49 52	20	
		0.53 (Sillin) closed-cell toalli		53	25	20
		0.75" recycled fabric felt	None	50	42	
CLT 5-ply		0.75 recycled fablic feit	None	53	42	
		0.315" (8 mm) shredded rubber mat		52	29	
		0.515 (8 mm) shredded rubber mat		5/	38	
(6.875")			Nono	54	26	
	1-1/2" concrete	0.29" (10 mm) Tar Boards	Eng Wood on 2 mm	54	50	-
			53	47		
			None	56	/18	-
		1/1" Insonomat	Eng Wood on 2 mm	50	40	68
			closed cell foam	55	51	00
			None	54	39	-
		0.35" (9 mm) Owens Corning OuietZone closed cell foam	Eng Wood on 2 mm	54		
			closed cell foam	52	48	
				<u> </u>		
			None	52	38	
			Carpet	50	66	-
	2" Gyp-Crete®	Maxxon Acousti-Mat [®] 3/8 Premium	LVT	52	44	
	= 0,0 0.000		Linoleum sheet flooring	51	48	22
				51	53	
		11 mm Maxxon Enkasonic HP	LVT	52	51	

Table 1 Continued: CLT Floor Assemblies with Concrete/Gypsum Topping, Ceiling Side Exposed



CLT Panel	Concrete/Gypsum	Acoustical Mat Product Between CLT and Topping	Finish Floor	STC ¹	IIC ¹	Source
	Topping					
			LVT on GenieMat RST05	53	STC1 IIC1 Source 53 51 2 53 49 31 516 426 62 516 476 63 516 476 63 516 516 14 506 486 64 506 666 65 526 486 66 516 406 62 516 406 62 516 406 62 516 406 63 516 496 64 506 656 65 526 496 66 516 446 62 516 496 63 516 496 63 516 496 64 506 646 65 526 496 66 516 426 62 516 426 62 516 426 63 516 426 63	
		Pliteq GenieMat™ FF25	Eng Wood on GenieMat RST02	53	49	31
			None	51 ⁶	42 ⁶	62
			LVT	51 ⁶	47 ⁶	63
		LISG SPR on LISG SAM N25 Liltra	LVT Plus	51 ⁶	51 ⁶	14
			Eng Wood	50 ⁶	48 ⁶	64
			Carpet + Pad	50 ⁶	66 ⁶	65
			Ceramic Tile	52 ⁶	48 ⁶	66
			None	51 ⁶	40 ⁶	62
			LVT	51 ⁶	47 ⁶	63
		LISG SAM N25 Liltra on LISG SAM N25	LVT Plus	51 ⁶	52 40^6 62 51^6 40^6 62 51^6 47^6 63 51^6 48^6 14 50^6 49^6 64 50^6 65^6 65 52^6 49^6 66 51^6 44^6 62 51^6 49^6 66 51^6 49^6 63	
	2" Lovalrock®	USU SAMINZS UITIA UITUSU SAMINZS	Eng Wood	50 ⁶	49 ⁶	64
	Z LevellOCK [®]		Carpet + Pad	50 ⁶	65 ⁶	65
	Branu 2500		Ceramic Tile	52 ⁶	49 ⁶	66
			None	51 ⁶	44 ⁶	62
(6 975")			LVT	51 ⁶	49 ⁶	63
(0.875)			LVT Plus	51 ⁶	50 ⁶	14
		USG SAIVI NZS ON USG SAIVI NZS UILTA	Eng Wood	50 ⁶	49 ⁶	64
			Carpet + Pad	50 ⁶	64 ⁶	65
			Ceramic Tile	52 ⁶	49 ⁶	66
			None	51 ⁶	42 ⁶	62
			LVT	51 ⁶	46 ⁶	63
			LVT Plus	51 ⁶	48 ⁶	14
		USU SAIVI NZS UILIA	Eng Wood	50 ⁶	47 ⁶	64
			Carpet + Pad	50 ⁶	64 ⁶	65
			Ceramic Tile	52 ⁶	47 ⁶	66
	2" concrete	Rothoblaas Silent Floor EVO + 1.57" mineral wool + 4.7" EPS lightened screed + Rothoblaas Barrier 100	None	57 ⁹	60 ⁹	12
	2-3/8" concrete	Rothoblaas Barrier 100 + 1.18" mineral wool + 3.15" compact gravel fill w/cement + Rothoblaas Slient Floor ⁷	None	53 ⁹	48 ⁹	12



CLT Panel	Concrete/Gypsum Topping	Acoustical Mat Product Between CLT and Topping	Finish Floor	STC ¹	IIC ¹	Source
			None	51 ² ASTC	48 ² AIIC	
			LVT	-	53 ² AIIC	
			LVT on Acousti-Top®	-	58 ² AIIC	Source C C C C C C C C C C C C C C C C C C
	2-1/2" Gyp-Crete®	Maxxon Acousti-Mat [®] ¾ Premium + Acousti-Mat [®] SBR (3/8")	Eng Wood	-	- 53 ² AIIC 1	1
			Eng Wood on Acousti- Top®	-	56 ² AIIC	
			Carpet + Pad	-	82 ² AIIC	
			•		•	
	3" concrete	2" Kinetics [®] Noise Control Roll-out Isolation Material	None	58	55	22
CLT 5-ply						
(6.875")		Pliteq GenieMat™ FF16 (FF10 + FF06)		56	50	32
		Pliteq GenieMat™ FF20 (FF10 + FF10)	Nono	57	51	30
		Pliteq GenieMat™ FF23 (FF17 + FF06)	None	56	52 33	
				57	50	IIC1 Source 482 AIIC 482 AIIC 532 AIIC 1 532 AIIC 1 532 AIIC 1 562 AIIC 1 562 AIIC 1 562 AIIC 1 55 22 55 22 50 32 51 30 52 33 50 2 55 29 53 34 54 2 59 5 49 3 47 68 493 4 633 4 603 4 40 68 41 68 46 68
	4" concrete	Pliteq GenieMat™ FF25	Eng Wood on GenieMat™ RST02	56	55	
		Pliteq GenieMat™ FF31 (FF25 + FF06)	News	58	53	
			None	59	48² AIIC 53² AIIC 58² AIIC 58² AIIC 53² AIIC 56² AIIC 82² AIIC 82² AIIC 55 55 55 50 51 52 50 52 50 51 52 55 55 55 55 53 53 53 53 53 53 53 53 53 53 53 53 53 53 53 53 49 47 493 533 583 603 633 40 41	2
		Pliteq GenieMat™ FF50 (FF25 + FF25)	Eng Wood on GenieMat™ RST02	58		5
	•		•	•		
		1" Regupol SonusWave	Nono	56	49	3
		1/2" Insonomat	None	53	47	68
		AcoustiTECH Soprema Insonomat (under concrete) + Soprema Insonofloor (on topping)		-	49 ³	
		Regupol SonusWave (under concrete) + AcoustiTECH Soprema Insonofloor (on topping)	Eng Wood	-	53 ³	
CLT 5-ply		AcoustiTECH LEAD 6 + AcoustiTECH Sofix + 5/8" plywood + 1/2" plywood + Soprema Insonofloor		-	58 ³	4
(5.1875")	1-1/2" concrete	AcoustiTECH Sofix + 2 layers 5/8" OSB + AcoustiTECH Ceramic		-	60 ³	
		AcoustiTECH LEAD 6 + AcoustiTECH Sofix + 2 layers 5/8" OSB + AcoustiTECH Ceramic	Ceramic Tile	-	63 ³	
		0.35" (9 mm) Owens Corning QuietZone closed cell foam		52	40	
			None	52	41	68
		0.39" (10 mm) Tar Boards	Eng Wood on 2 mm closed cell foam	50	46	



CLT Panel	Concrete/Gypsum	Acoustical Mat Product Between CLT and Topping	Finish Floor	STC ¹	IIC ¹	Source
	Topping					
	2" concrete		None	47	35	
		0.1 mm polyethylene sheeting on 10 mm Tar Boards	Laminate floor on 3 mm			68
			AcoustiTECH Premium	42	45	
			Felt Membrane			
				1		
CLT 5-ply (5.1875″)	2-3/4" concrete	1" Regupol SonusWave		56	46	
		1" Regupol SonusWave (under concrete) + Fermacell 2E31 (on topping)	None	-	52	- 3
		1.25" Roxul ComfortBoard IS		57	45	
(5120707)		1.25" Roxul ComfortBoard IS (under concrete) + AcoustiTECH Premium (on topping)	LVT	-	51	
	2-3/4" cement	½" Insonomat		56	45	60
	mortar	½" Insonomat on 10 mm Tar Boards	None	58	47	68
	2-3/4" concrete	Roxul ComfortBoard IS, 1.25" (under concrete) + Roberts Soft Stride (on topping)	LVT	-	51	3
CLT 7-ply (9.875")	1-1/2" concrete	0.35" (9 mm) closed-cell foam	None	56	44	20

Table 1 Notes:

- 1. All STC tests performed in accordance with ASTM E 90 unless otherwise noted below. All IIC tests performed in accordance with ASTM E 492 unless otherwise noted below. See end of document for sources and referenced test reports.
- 2. ASTC field tests performed in accordance with ASTM E 336. AIIC field tests performed in accordance with ASTM E 1007.
- 3. IIC tests not performed in accordance with a singular test standard. Test measurement method used a combination of ASTM E492 and ASTM 1007 per acoustical mat product manufacturer.
- 4. FSTC field test performed in accordance with ASTM E 336. AIIC field test not performed in accordance with ASTM E 1007 (inadequate number of measurements).
- 5. STC and IIC noted is a prediction based on the ISO 15712-1 prediction method as noted in the referenced test report.
- 6. STC and IIC noted is based on floor zone testing procedures that are modifications of ASTM E90 and E492 test and do not fully conform with these test standards per acoustical mat product manufacturer and as noted in the referenced test report.
- 7. Actual thickness of CLT in this test was 6.3" (160 mm)
- 8. Assemblies included in the 1st edition of the CLT Handbook are included herein due to their legacy use. However, the testing standards used for these assemblies are European and direct correlation to IBC-referenced ASTM standards is not currently available.
- 9. STC and IIC noted is a based on the ISO 12354 model as noted in the referenced manufacturer's literature

Table 2: CLT Floor Assemblies without Concrete/Gypsum Topping, Ceiling Side Exposed



	Finish Floor if Applicable				
CLT Panel	Acoustical Product on CLT Panel	Finish Floor	STC ¹	IIC ¹	Source
	None		41	25	20
	2 layers 23/32" AdvanTech [®] on Pliteq GenieMat™ FF10	None	45	42	35
	2 layers 23/32" AdvanTech [®] on Pliteq GenieMat™ FF25		48	44	36
CLT 5-ply (6.875")	23/32" AdvanTech [®] on ½" cement board on Pliteq GenieMat™ RST02 on ½" cement board on Pliteq GenieMat™ FF25	LVT	53	51	37
	2x12 mm cement board on ½" wood fiberboard	None	48	46	20
		Eng Wood	-	55 ² AIIC	
	5/8" plywood on ½" plywood on AcoustiTECH Sofix on AcoustiTECH 6 mm membrane	Ceramic Tile on AcoustiTECH 3 mm membrane	-	- 55 ² AIIC 6	
		LVT	-	56 ² AIIC	
	5/8" plywood on ½" plywood on AcoustiTECH Sofix	Eng Wood on InsonoFloor	55 ² ASTC	-	
	Fermacell E-32 on Honeycomb Fermacell filled with New granule	Eng Wood on AcoustiTECH VP	58 ² ASTC	58 ² AIIC	10
	None	4	39	22	
	Regupol SonoDeck	None	44	38	3
	Fermacell 2E31		48	41	
	Fermacell 2E32 + AcoustiTECH Soprema Insonofloor		-	43 ³	
CLT 5-ply (5 1875")	Fermacell 2E32 + Fermacell 12.5 + AcoustiTECH Soprema Insonofloor	4	-	44 ³	
CLT 5-pty (5.1875°)	Fermacell Honeycomb w/filling + Fermacell 2E32 + AcoustiTECH Soprema Insonofloor	Eng Wood	-	49 ³	4
	Fermacell Honeycomb w/filling + Fermacell 2E32 + Fermacell 12.5 + AcoustiTECH Soprema Insonofloor		-	50 ³	
	AcoustiTECH Sofix + 5/8" plywood + ½" plywood + Soprema Insonofloor	1	-	51 ³	

Table 2 Continued: CLT Floor Assemblies without Concrete/Gypsum Topping, Ceiling Side Exposed



CLT Panel	Acoustical Product on CLT Panel	Finish Floor	STC ¹	IIC ¹	Source
	AcoustiTECH Sofix + 2 layers 5/8" OSB + AcoustiTECH Ceramic		-	54 ³	
CLT 5-ply (5.1875")	AcoustiTECH LEAD 6 + AcoustiTECH Sofix + 2 layers 5/8" OSB + AcoustiTECH Ceramic	Ceramic Tile	-	58 ³	4
CLT 7-ply (9.875")	None	None	44	30	20

Table 2 Notes:

- 1. All STC tests performed in accordance with ASTM E 90 unless otherwise noted below. All IIC tests performed in accordance with ASTM E 492unless otherwise noted below. See end of document for sources and referenced test reports.
- 2. ASTC field tests performed in accordance with ASTM E 336. AIIC field tests performed in accordance with ASTM E 1007.
- 3. IIC tests not performed in accordance with a singular test standard. Test measurement method used a combination of ASTM E492 and ASTM 1007 per acoustical mat product manufacturer.
- 4. FSTC field test performed in accordance with ASTM E 336. AIIC field test not performed in accordance with ASTM E 1007 (inadequate number of measurements).
- 5. STC and IIC noted is a prediction based on the ISO 15712-1 prediction method as noted in the referenced test report.

Table 3: CLT Floor Assemblies without Concrete/Gypsum Topping, with Wood Sleepers, Ceiling Side Exposed



F	Sileepers + Acoustical Product				
CLT Panel	Sleeper + Acoustical Product on CLT Panel	Finish Floor	STC ¹	IIC ¹	Source
	AcoustiTECH Soprema Acoustiboard Strips + wood rafts w/batts + 5/8" OSB + Soprema Insonomat + 1-1/2" concrete	None	-	56 ³	
	AcoustiTECH Soprema Acoustiboard Strips + wood rafts w/batts + 5/8" OSB + Soprema Insonomat + 1-1/2" concrete + Soprema Insonofloor	Eng Wood	-	61 ³	
	AcoustiTECH Soprema Acoustiboard Strips + wood rafts w/batts + 5/8" OSB + Regupol SonusWave + 1-1/2" concrete	None	-	57 ³	
	AcoustiTECH Soprema Acoustiboard Strips + wood rafts w/batts + 5/8" OSB + Regupol SonusWave + 1-1/2" concrete + Soprema Insonofloor	Eng Wood	-	63 ³	1
	AcoustiTECH Soprema Acoustiboard Strips + wood rafts w/sand + 5/8" OSB + Soprema Insonomat + 1-1/2" concrete	None	-	57 ³	4
	AcoustiTECH Soprema Acoustiboard Strips + wood rafts w/sand + 5/8" OSB + Soprema Insonomat + 1-1/2" concrete + Soprema Insonofloor	Eng Wood	-	61 ³	
CLT 5-ply (5.1875")	AcoustiTECH Soprema Acoustiboard Strips + wood rafts w/sand + 5/8" OSB + Regupol SonusWave + 1-1/2" concrete	None	-	58 ³	
	AcoustiTECH Soprema Acoustiboard Strips + wood rafts w/sand + 5/8" OSB + Regupol SonusWave + 1-1/2" concrete + Soprema Insonofloor	Eng Wood	-	64 ³	
	Wood rafts w/batts + OSB + Regupol SonusWave (0.67") + 1-1/2" concrete + Roberts Soft Stride	LVT	-	58	
	Wood rafts w/sand + OSB		52	47	
	Wood rafts w/sand + OSB + Fermacell 2E31]	59	53	
	Wood rafts w/sand + OSB + regupol SonoDeck]	56	50	3
	Wood rafts w/sand + OSB + 1-1/2" concrete	None	64	53	
	Wood rafts (no sand or batts) + OSB + Regupol SonuWave (0.67") + 1-1/2" concrete		59	54	
	Wood rafts w/batts + OSB + Regupol SonuWave (0.67") + 1-1/2" concrete		60	54	
-	Wood rafts w/sand + OSB + Regupol SonusWave (0.67") + 1-1/2" concrete		66	60	

Table 3: CLT Floor Assemblies without Concrete/Gypsum Topping, with Wood Sleepers, Ceiling Side Exposed



Table 3 Notes:

- 1. All STC tests performed in accordance with ASTM E 90 unless otherwise noted below. All IIC tests performed in accordance with ASTM E 492unless otherwise noted below. See end of document for sources and referenced test reports.
- 2. ASTC field tests performed in accordance with ASTM E 336. AIIC field tests performed in accordance with ASTM E 1007.
- 3. IIC tests not performed in accordance with a singular test standard. Test measurement method used a combination of ASTM E492 and ASTM 1007 per acoustical mat product manufacturer.
- 4. FSTC field test performed in accordance with ASTM E 336. AIIC field test not performed in accordance with ASTM E 1007 (inadequate number of measurements).
- 5. STC and IIC noted is a prediction based on the ISO 15712-1 prediction method as noted in the referenced test report



Finish F	loor if Applicable					
Concret	Concrete/Gypsum Topping					
Acousti						
Mass Tii No Dire	mber Floor Panel ct Applied or Hung Ceil	ling				
Mass Timber Floor	Concrete/Gypsum	Acoustical Product Between CLT and Topping	Finish Floor	STC1	IIC ¹	Source
Pallel	robbing					
2x4 NLT + ¾″ plywood	None	None	None	29	-	21
			1			
		None	-	34	33	55
	None	¾" USG concrete structural panels on 362S137 steel studs @ 16"	None	54	45	27
		o.c. on Kinetics [®] RIM-L-2-16 System				
			News	47 ² ACTC		0
	2" Gun Croto®	Maxyan Acousti Mat [®] 3/ Promium	None	47-ASIC	-	9
	2 Gyp-crete		Top [®]	-	47 ² AIIC	28
2. C NUT + 1/"			None	56	48	23
plywood	2-1/2" concrete	Kinetics [®] Ultra Quiet SR	Engineered Hardwood	56	52	24
			LVT	55	57	25
		None	None	51	36	8
		Plitea GenieMat™ FF06	None	51	44	7
	4" concrete		Carpet	51	58	49
		Pliteq GenieMat™ FF25	None	54	50	50
		Pliteq GenieMat [™] FF50		56	52	51
		Pliteq GenieMat™ FF75		56	53	52
plywood	None	None	None	31	-	21



Mass Timber Floor Panel	Concrete/Gypsum Topping	Acoustical Product Between CLT and Topping	Finish Floor	STC ¹	IIC ¹	Source
2x10 NLT + ¾" plywood	None	None	None	36	-	21
	1					
		None		53	-	
2x12 NLT	1-1/2" concrete	0.35" (9mm) closed-cell foam	None	56	-	21
		$\frac{1}{2}$ wood fiberboard		58	-	
	None	None	None	41	-	21
2v12 NI T + 3/″			-	•		
		Pliteq GenieMat™ FF06		56	45	17
piywoou	1-1/2" concrete	Pliteq GenieMat™ FF10	None	57	47	18
		Pliteq GenieMat™ FF25		60	51	19
		None		35	20	
	None	Fermacell 2E31	None	47	37	3
		Wood rafts w/sand + OSB		51	47	
		Wood rafts w/sand + OSB + Regupol SonusWave (0.67") +	LVT	_	62	
	1-1/2" concrete	concrete + Roberts Soft Stride			02	3
GLT 3.5"		Wood rafts w/sand + OSB + Regupol SonusWave (0.67") +	None 65	65	59	
		concrete		05	33	
			T	1		
	2-3/4" concrete	Regupol SonusWave (1.0")	None	54	45	3
	2-3/4" cement	½" Insonomat	None	51	42	68
	mortar		Carpet tiles	52	51	
	1	Γ.,	1		• •	
		None	None	29	24	2
	None	Wood flooring on 5/8" plywood on 1" Kinetics RIM Isolation	Hardwood	49 ² ASTC	48 ² FIIC	11
		Material				
		Mand flooring on 3/ ¹ cloopers on success 2 losses 1/ ¹ / ¹ CCD 4 ¹ / ¹	Llanduua c -!			
T&G Decking	1-1/2" gypsum	Kinetics [®] RIM L-1-16	Hardwood	50⁴ FSTC	45 ⁴ FIIC	57
			1			
			None	53	-	
	2" gypsum	Pliteg GenieMat™ FF42 (FF17 + FF25) on ½" cement board	LVT on Pliteq			46
	- 0,000		GenieMat™	-	52	.0
			RST05			



Mass Timber Floor	Concrete/Gypsum	Acoustical Product Between CLT and Topping	Finish Floor	STC ¹	IIC ¹	Source
Panel	Topping					
	3" LW concrete	Concrete on 6 mil poly vapor barrier on $\frac{1}{2}$ " plywood on 2" Kinetics [®] Model RIM Isolation Material on $\frac{1}{2}$ " plywood on 3" T&G	None	62 ² NNIC	54 ² FIIC	26
T&C Docking		None		40	34	2
Too Decking		Pliteq GenieMat™ FF42		54	51	2
	4" concrete	Pliteq GenieMat [™] FF42 on ½" cement board	None	54	52	47
		${\cal H}''$ plywood on Kinetics® RIM system		53	40	48
		-	•			
			Tile	47 ² FSTC	-	
		Maxxon Acousti-Mat® ¾	Eng Wood	-	52 ² FIIC	
	1-1/2" Gyp-Crete®		LVT	-	46 ² FIIC	1
Wood Subfloor		Maxxon Acousti-Mat [®] ¾ + Acousti-Mat [®] SBR	Cementitious Overlayment	52 ² FSTC	51 ² FIIC	
	2" concrete	Maxxon Acousti-Mat [®] ¾ Premium	None	-	47 ² AIIC	1

Table 4 Notes:

- 1. All STC tests performed in accordance with ASTM E 90 unless otherwise noted below. All IIC tests performed in accordance with ASTM E 492unless otherwise noted below. See end of document for sources and referenced test reports.
- 2. ASTC field tests performed in accordance with ASTM E 336. AIIC field tests performed in accordance with ASTM E 1007.
- 3. IIC tests not performed in accordance with a singular test standard. Test measurement method used a combination of ASTM E492 and ASTM 1007 per acoustical mat product manufacturer.
- 4. FSTC field test performed in accordance with ASTM E 336. AIIC field test not performed in accordance with ASTM E 1007 (inadequate number of measurements).
- 5. STC and IIC noted is a prediction based on the ISO 15712-1 prediction method as noted in the referenced test report.

Table 5: Mass Timber Floor Assemblies with Ceiling Side Concealed



	Top Side Products				
Timber Base	Top Side Products	Underside Products	STC ¹	IIC ¹	Source
CLT 5-ply (5.1875")	9 mm Laminate floor on 3 mm AxcoustiTECH Premium Felt Membrane on 1-1/2" concrete on 10 MM Tar Boards	2 layers 5/8" type C gypsum hung on 7/8" furring channels @ 16" o.c. hung on 1-1/2" channels @ 4'-0" o.c. 6" below CLT. 3-5/8" batt insulation in cavity	75	66	68
		A" tall cound isolation cline A" batt insulation in			
	None	cavity, metal hat channels at 16" o.c. attached to sound isolation clips, 2 layers of ½" gypsum board	64 ⁸	59 ⁸	
	None	8" tall sound isolation clips, 8" batt insulation in cavity, metal hat channels at 16" o.c. attached to sound isolation clips, 2 layers of ½" gypsum board	63 ⁸	62 ⁸	
	¼" laminated flooring, 5 mm Phaltex low-density wood fiberboard		62 ⁸	63 ⁸	
CLT 5-ply (5.75")	¼" laminated flooring, 10 mm Phaltex low-density wood fiberboard		63 ⁸	64 ⁸	6
	2 layers of 7/8" particle board, 1-5/8"x1-5/8" wood sleepers at 16" o.c., 1-5/8" mineral wool insulation between wood sleepers, Regupol underlayment	4" tall sound isolation clips, 4" batt insulation in cavity, metal hat channels at 16" o.c. attached to sound isolation clips, 2 layers of ½" gypsum board	67 ⁸	62 ⁸	
	2 layers ½" gypsum board, 20 mm dry topping (Fermacell or cement fiberboard)		63 ⁸	63 ⁸	
	Floorboard, 1-5/8"x1-5/8" wood sleepers at 16" o.c., 2 layers Thermisorel 20 mm low-density wood fiberboard between sleepers		64 ⁸	65 ⁸	

Table 5 Continued: Mass Timber Floor Assemblies with Ceiling Side Concealed



Timber Base	Top Side Products	Underside Products	STC ¹	IIC ¹	Source
CLT 5-ply (5.75")	5/8" OSB, Roberts flooring underlayment, 1-5/8"x1-5/8" wood sleepers at 16" o.c., 2 layers Thermisorel 20 mm low- density wood fiberboard between sleepers, Roberts flooring underlayment	8" tall sound isolation clips, 8" batt insulation in cavity, metal hat channels at 16" o.c. attached to sound isolation clips, 2 layers of ½" gypsum board	62 ⁸	62 ⁸	6
				r	
CLT 5-ply (6.3")	 2.36" (60mm) concrete, Rothoblaas Barrier 100, 1.18" (30mm) mineral wool insulation, 3.15" (80mm) compact gravel fill with cement, Rothoblaas Silent Floor 	Resilient plasterboard connectors, metal structure for plasterboard (channels), 0.4" (10mm) air space, 2" (50mm) low-density mineral insulation, 0.5" plasterboard panel	59	44	12
		r		r	
		2 layers ½" type X gypsum	42	25	
CLT 5-ply	None	2 layers ½" type X gypsum + 2x2 wood furring @ 24" o.c.	50	36	
		2 layers ½" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	68	56	20
		2 layers ½" type X gypsum directly attached to CLT and additional acoustic hung ceiling, 5/8" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	67	55	
		Pliteq GenieClip [™] LB on 48"x48" grid, 6" airspace, R- 13 fiberglass batt insulation, 1-1/2" light gauge steel channels, 5/8" furring channel, 5/8" type X gypsum board	58	45	39
(6.875")		Pliteq GenieClip™ RST on 24"x48" grid, 1-1/2" airspace, R-8 fiberglass batt insulation, 7/8" furring channel, 5/8" type C gypsum board	53	45	41
		3-1/2" z-channels @ 16" o.c. direct applied to CLT + 3-5/8" cavity batt insulation + 5/8" furring channels @ 16" o.c. + 1 layer 5/8" type X gypsum	62	48	68
	10 mm laminated or eng. Wood flooring, 3 mm resilient underlayment (Isonobois or sim.)	4" tall sound isolation clips, 4" batt insulation in cavity, metal hat channels at 16" o.c. attached to sound isolation clips, ½" type C gypsum board, ½"	50 ⁸ + FSTC	50 ⁸ + FIIC	
	Hardwood flooring, ¾" plywood, 10 mm underlayment (IsonoMat or sim.)		53 ⁸ + FSTC	53 ⁸ + FIIC	6
	Ceramic tile, ½" plywood, ¾" plywood, 10 mm underlayment (IsonoMat or sim.)	type x gypsum board	53 ⁸ + FSTC	53 ⁸ + FIIC	



Timber Base	Top Side Products	Underside Products	STC ¹	IIC ¹	Source
	LVT, 3/4" Gyp-Crete [®] , Maxxon Acousti-Mat [®] 1/8	½" resilient channel, 5/8" gypsum board, suspended ceiling (24" deep plenum) with 3-1/2" mineral wool	54 ² ASTC	56 ² FIIC	1
	Carpet & pad, 3/4" Gyp-Crete [®] , Maxxon Acousti-Mat [®] 1/8	batt insulation, 5/8" gypsum board	54 ² ASTC	74 ² FIIC	
	Vinyl plank on Pliteq GenieMat™ RST05	Pliteq GenieClip [™] LB on 48"x48" grid, 6" airspace, R- 13 fiberglass batt insulation, 1-1/2" light gauge steel channels, 5/8" furring channel, 5/8" type X gypsum board	58	58	40
	½" engineered wood on Pliteq GenieMat™ RST02	Pliteq GenieClip™ RST on 24"x48" grid, 1-1/2"	54	50	42
	Porcelain tile on Pliteq GenieMat™ RST12	channel, 5/8" type C gypsum board	55	51	43
		2 layers ½" type X gypsum	48 ⁵	385	
	2x12 mm cement board on ½" wood fiberboard	2 layers ½" type X gypsum + 2x2 wood furring @ 24" o.c.	54 ⁵	47 ⁵	-
		2 layers ½" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	69	63	
CLT 5-ply (6.875")		2 layers ½" type X gypsum direct applied to CLT + 1 later 5/8" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	68 ⁵	60 ⁵	-
	1-1/2" gypsum concrete on 0.35" (9 mm) closed-cell foam	2 layers ½" type X gypsum	50⁵	41 ⁵	20
		2 layers ½" type X gypsum + 2x2 wood furring @ 24" o.c.	58 ⁵	49 ⁵	
		2 layers ½" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	72	63	
		2 layers ½" type X gypsum direct applied to CLT + 1 later 5/8" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	73 ⁵	63 ⁵	
		2 layers ½" type X gypsum	49 ⁵	32 ⁵	
		2 layers ½" type X gypsum + 2x2 wood furring @ 24" o.c.	56 ⁵	41 ⁵	
	1-1/2" concrete	2 layers ½" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	75⁵	60 ⁵	
		2 layers ½" type X gypsum direct applied to CLT + 1 later 5/8" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	74 ⁵	60 ⁵	



Timber Base	Top Side Products	Underside Products	STC ¹	IIC ¹	Source
		2 layers ½" type X gypsum	53 ⁵	40 ⁵	
	1-1/2" concrete on 0.35" (9 mm) closed-cell foam	2 layers ½" type X gypsum + 2x2 wood furring @ 24" o.c.	59 ⁵	50 ⁵	
		2 layers ½" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	76 ⁵	66 ⁵	20
	1-1/2" concrete on 0.35" (9 mm) closed-cell foam	2 layers ½" type X gypsum direct applied to CLT + 1 later 5/8" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	74 ⁵	64 ⁵	
		3-1/2" z-channels @ 16" o.c. direct applied to CLT + 3-5/8" cavity batt insulation + 5/8" furring channels @ 16" o.c. + 1 layer 5/8" type X gypsum	70	56	
CLT 5-ply (6.875")	1-1/2" concrete on 0.35" (9 mm) Owens Corning QuietZone closed-cell foam	2 layers 5/8" type C gypsum hung on 7/8" furring channels @ 16" o.c. hung on 1-1/2" channels @ 4'-0" o.c. 2-1/2" below CLT. 3-5/8" batt insulation in cavity	72	65	68
		2 layers 5/8" type C gypsum hung on ½" resilient channels @ 16" o.c. on 7/8" furring channels @ 16" o.c. hung on 1-1/2" channels @ 4'-0" o.c. 2" below CLT. 3-5/8" batt insulation in cavity	73	66	
		1 layer 5/8" type C gypsum hung on ½" resilient channels @ 16" o.c. on 7/8" furring channels @ 16" o.c. hung on 1-1/2" channels @ 4'-0" o.c. 2" below CLT. 3-5/8" batt insulation in cavity	72	62	
		2 layers ½" type X gypsum	53 ⁵	38 ⁵	
		2 layers ½" type X gypsum + 2x2 wood furring @ 24" o.c.	59 ⁵	47 ⁵	
	1-1/2" concrete on $\frac{1}{2}$ " wood fiberboard	2 layers ½" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	76 ⁵	64 ⁵	20
		2 layers ½" type X gypsum direct applied to CLT + 1 later 5/8" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	73 ⁵	63 ⁵	
	Eng wood floor on AcoustiTECH VP on $1-1/2$ " concrete on $\%$ " wood fiberboard	2 layers $\frac{1}{2}$ " type X gypsum hung on metal grillage 3.9" (100 mm) below CLT. 3-1/2" cavity batt insulation	55 ² ASTC	57 ² AIIC	69
		2 layers ½" type X gypsum	59⁵	46 ⁵	
	1-1/2" concrete on 0.75" recycled fabric felt	2 layers ½" type X gypsum + 2x2 wood furring @ 24" o.c.	63 ⁵	45 ⁵	20

Table 5 Continued: Mass Timber Floor Assemblies with Ceiling Side Concealed



Timber Base	Top Side Products	Underside Products	STC ¹	IIC ¹	Source
	1-1/2" concrete on 0.75" recycled fabric felt	2 layers ½" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	77 ⁵	61 ⁵	
		2 layers ½" type X gypsum direct applied to CLT + 1 later 5/8" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	75⁵	60⁵	
		2 layers ½" type X gypsum	53 ⁵	44 ⁵	
		2 layers ½" type X gypsum + 2x2 wood furring @ 24" o.c.	59⁵	49 ⁵	
	1-1/2" concrete on ½" rubber nuggets on foil	2 layers ½" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	73 ⁵	65⁵	
CLT 5-ply		2 layers ½" type X gypsum direct applied to CLT + 1 later 5/8" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	70 ⁵	63 ⁵	
	1-1/2" concrete on 0.31" (8 mm) shredded rubber mat	2 layers ½" type X gypsum	52 ⁵	38 ⁵	- 20
		2 layers ½" type X gypsum + 2x2 wood furring @ 24" o.c.	58 ⁵	48 ⁵	
(0.873)	1-1/2" concrete on 0.31" (8 mm) shredded rubber mat	2 layers ½" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	76 ⁵	66 ⁵	
		2 layers ½" type X gypsum direct applied to CLT + 1 later 5/8" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	74 ⁵	64 ⁵	
		2 layers ½" type X gypsum	54 ⁵	43 ⁵	
		2 layers ½" type X gypsum + 2x2 wood furring @ 24" o.c.	60 ⁵	51 ⁵	
	1-1/2" concrete on 0.67" (17 mm) shredded rubber mat	2 layers ½" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	76 ⁵	67 ⁵	
		2 layers ½" type X gypsum direct applied to CLT + 1 later 5/8" type X gypsum hung on metal grillage 5.9" (150 mm) below CLT	73 ⁵	65⁵	
	Eng wood on acoustic membrane on 1-1/2" concrete on ½" wood fiber board	3-1/2" z-channels @ 24" o.c. direct applied to CLT + 3-1/2" cavity batt insulation + 7/8" furring channels @ 16" o.c. + 1 layer 5/8" type X gypsum	58 ² ASTC	54 ² AIIC	71



Timber Base	Top Side Products	Underside Products	STC ¹	IIC ¹	Source
	1-1/2" concrete on 0.39" (10 mm) Tar Boards	3-1/2" z-channels @ 16" o.c. direct applied to CLT +	69	54	60
CLT 5-ply	Eng Wood on 2 mm closed cell foam on 1-1/2" concrete on 0.39" (10 mm) Tar Boards	@ 16" o.c. + 1 layer 5/8" type X gypsum	69	58	68
	2 layers 23/32" AdvanTech® on Pliteq GenieMat™ FF25	Pliteq GenieClip™ LB on 48″x48″ grid, R-13 fiberglass batt insulation, 1-1/2″ light gauge steel channels, 5/8″ furring channel, 5/8″ type X gypsum board	61	55	38
(6.875")	½" engineered wood on Pliteq GenieMat™ RST02 on 2" gypsum on Pliteq GenieMat™ FF25	Pliteq GenieClip™ RST on 24"x48" grid, 1-1/2"	59	52	44
	2″ gypsum on Pliteq GenieMat™ FF25	channel, 5/8" type C gypsum board	60	52	45
	Carpet on 1.57" (40 mm) concrete	1 layer 5/8" type X gypsum direct applied to CLT + 1- 1/2" furring channels + ¾" resilient channels @ 16" o.c. + 2 layers 5/8" type X gypsum	55 ² ASTC	53 ² AIIC	70
CLT 7-ply	None		45	29	20
(9.875")	1-1/2" concrete on ½" wood fiberboard	2 layers ½ type X gypsum	56	44	20
T&G Decking	4" concrete on Pliteq GenieMat™ FF06	Pliteq GenieClip [™] RST, R-8 fiberglass batt insulation, 7/8″ furring channel, 2 layers of 5/8″ type C gypsum board	58	60	56
2x6 NLT + ½" plywood	4" concrete on Pliteq GenieMat™ FF06	Pliteq GenieClip™ RST on 24"x48" grid, 1-1/2" airspace, R-8 fiberglass batt insulation, 7/8" furring channel, 5/8" type C gypsum board	60	59	53
		Resilient channels, 5/8" type C gypsum board	55	49	54

Table 5 Continued: Mass Timber Floor Assemblies with Ceiling Side Concealed



Table 5 Notes:

- 1. All STC tests performed in accordance with ASTM E 90 unless otherwise noted below. All IIC tests performed in accordance with ASTM E 492unless otherwise noted below. See end of document for sources and referenced test reports.
- 2. ASTC field tests performed in accordance with ASTM E 336. AIIC field tests performed in accordance with ASTM E 1007.
- 3. IIC tests not performed in accordance with a singular test standard. Test measurement method used a combination of ASTM E492 and ASTM 1007 per acoustical mat product manufacturer.
- 4. FSTC field test performed in accordance with ASTM E 336. AIIC field test not performed in accordance with ASTM E 1007 (inadequate number of measurements).
- 5. STC and IIC noted is a prediction based on the ISO 15712-1 prediction method as noted in the referenced test report
- 6. STC and IIC noted is based on floor zone testing procedures that are modifications of ASTM E90 and E492 test and do not fully conform with these test standards per acoustical mat product manufacturer and as noted in the referenced test report.
- 7. Actual thickness of CLT in this test was 6.3" (160 mm)
- 8. Assemblies included in the 1st edition of the CLT Handbook are included herein due to their legacy use. However, the testing standards used for these assemblies are European and direct correlation to IBC-referenced ASTM standards is not currently available.



	Left Side Finish	CLT Wall Panel		
CLT Wall Panel	Left Side Finish	Right Side Finish	STC1	Source
	None	None	33	
	2 layers ½" type X gypsum	None	38	_
		2 layers ½" type X gypsum	38	
		None	40 ⁵	-
	2 layers ½" type X gypsum + 2x2 studs @ 16" o.c.	2 layers ½" type X gypsum	44 ⁵	
CLT 3-ply		2 layers ½" type X gypsum + 2x2 studs @ 16" o.c.	39 ⁵	
(3.07")		None	45	20
	2 lavers ½" type X gypsum + 2x2 studs @ 24" o.c.	2 layers ½" type X gypsum	47	-
		2 layers ½" type X gypsum + 2x2 studs @ 16" o.c.	50	
		2 layers ½" type X gypsum + 2x2 studs @ 24" o.c.	51	-
		None	43 ⁵	-
	2 layers ½" type X gypsum + 2x3 studs @ 24" o.c.	2 layers ½" type X gypsum	44 ⁵	-
		2 layers ½" type X gypsum + 2x2 studs @ 16" o.c.	49 ⁵	

Table 6 Continued: Single CLT Wall



CLT Wall Panel	Left Side Finish	Right Side Finish	STC1	Source
		2 layers ½" type X gypsum + 2x2 studs @ 24" o.c.	52 ⁵	
	2 layers ½" type X gypsum + 2x3 studs @ 24" o.c.	2 layers ½" type X gypsum + resilient channels @ 24" o.c. + 2x2 studs @ 16" o.c.	>605	-
		2 layers ½" type X gypsum + 2x3 studs @ 24" o.c.	50⁵	
		None	53⁵	-
		2 layers ½" type X gypsum	56⁵	-
	2 layers ½" type X gypsum + resilient channels @ 24" o.c. + 2x2	2 layers ½" type X gypsum + 2x2 studs @ 16" o.c.	53⁵	
	studs @ 16" o.c.	2 layers ½" type X gypsum + 2x2 studs @ 24" o.c.	60 ⁵	
CLT 3-ply (3.07")		2 layers ½" type X gypsum + resilient channels @ 24" o.c. + 2x2 studs @ 16" o.c.	>605	20
	2 layers ½" type X gypsum + 2x3 studs @ 24" o.c. + ½" air gap	None	53 ⁵	
		2 layers ½" type X gypsum	54 ⁵	
		2 layers ½" type X gypsum + 2x2 studs @ 16" o.c.	57 ⁵	
		2 layers ½" type X gypsum + 2x2 studs @ 24" o.c.	>605	
		2 layers ½" type X gypsum + resilient channels @ 24" o.c. + 2x2 studs @ 16" o.c.	>605	
		2 layers ½" type X gypsum + 2x3 studs @ 24" o.c.	60 ⁵	
		2 layers ½" type X gypsum + 2x3 studs @ 24" o.c. + ½" air gap	>605	
				1
CLT 3-ply (3.75-4.5")	5/8" gypsum board + 2x3 studs @ 16" o.c. + mineral wool in stud cavity	5/8" gypsum board + 2x3 studs @ 16" o.c. + mineral wool in stud cavity	58 ⁸	6
				T
CLT 3-ply	5/8" gypsum board + 2x3 studs @ 16" o.c. + mineral wool in stud	None	47 ⁸ FSTC	C
(4.125")	cavity + $\frac{1}{2}$ " air gap between CLT and stud wall	5/8" gypsum board + 2x3 studs @ 16" o.c. + mineral wool in stud cavity + ½" air gap between CLT and stud wall	50 ⁸ FSTC	D
		· · · · · · · · · · · · · · · · · · ·		-
CLT 5-ply (6.875")	None	None	38	20



CLT Wall	Left Side Finish	Right Side Finish	STC ¹	Source
Panel		5/8'' gypsum board + 2x4 + insulation	19	13
			43	15
		2 layers /2 type A gypsum	45	-
		$2 \text{ layers } \frac{1}{2} \text{ type X gypsum + 2x2 stude @ 10 0.c.}$	45	-
		2 layers ½ type X gypsum + 2x2 studs @ 24 o.c.	50	20
	None	2 layers $\frac{1}{2}$ " type X gypsum + 2x3 studs @ 24" o.c.	49	20
		2 layers ½ type x gypsum + resilient channels @ 24 o.c. + 2x2 studs @ 16" o.c.	58	
		2 layers ½" type X gypsum + 2x3 studs @ 24" o.c. + ½" air gap	59	
		2 layers 5/8" type X gypsum + 1-3/8" z-channels	53	
		2 layers 5/8" type X gypsum directly attached to CLT + air gap + steel studs + ½" type C gypsum	62	68
	5/8" gypsum board + resilient channels	5/8" gypsum board + resilient channels + 2x4 + insulation	48	13
CLT 5-ply	2 layers ½" type X gypsum	2 layers ½" type X gypsum	42	-
(6.875″)	2 layers ½" type X gypsum + 2x2 studs @ 16" o.c.	2 layers ½" type X gypsum	45	
		2 layers ½" type X gypsum + 2x2 studs @ 16" o.c.	39	
	2 layers ½" type X gypsum + 2x2 studs @ 24" o.c.	2 layers ½" type X gypsum	49 ⁵	
		2 layers ½" type X gypsum + 2x2 studs @ 16" o.c.	46 ⁵	
		2 layers ½" type X gypsum + 2x2 studs @ 24" o.c.	56	20
		2 layers ½" type X gypsum	60 ⁵	
	2 layers ½" type X gypsum + resilient channels @ 24" o.c. + 2x2	2 layers ½" type X gypsum + 2x2 studs @ 24" o.c.	>605	
	studs @ 16" o.c.	2 layers ½" type X gypsum + resilient channels @ 24" o.c. + 2x2 studs @ 16" o.c.	>605	
		2 layers ½" type X gypsum + 2x2 studs @ 16" o.c.	55	
	2 layers ½" type X gypsum + 2x3 studs @ 24" o.c.	2 layers ½" type X gypsum	48 ⁵	

Table 6 Continued: Single CLT Wall



CLT Wall Panel	Left Side Finish	Right Side Finish	STC1	Source
		2 layers ½" type X gypsum + 2x2 studs @ 16" o.c.	51 ⁵	-
	Z layers /2 type x gypsull + 2x5 studs @ 24 O.C.	2 layers ½" type X gypsum + 2x2 studs @ 24" o.c.	55	
		2 layers ½" type X gypsum + 2x3 studs @ 24" o.c.	54 ⁵	
	2 layers ½" type X gypsum + 2x3 studs @ 24" o.c.	2 layers ½" type X gypsum + resilient channels @ 24" o.c. + 2x2 studs @ 16" o.c.	>605	
		2 layers ½" type X gypsum	59 ⁵	20
		2 layers ½" type X gypsum + 2x2 studs @ 16" o.c.	59 ⁵	20
	2 layers ½" type X gypsum + 2x3 studs @ 24" o.c. + ½" air gap	2 layers ½" type X gypsum + 2x2 studs @ 24" o.c.	>605	68
CLT 5-ply (6.875")		2 layers ½" type X gypsum + 2x3 studs @ 24" o.c.	>605	
		2 layers ½" type X gypsum + resilient channels @ 24" o.c. + 2x2 studs @ 16" o.c.	>605	
		2 layers ½" type X gypsum + 2x3 studs @ 24" o.c. + ½" air gap	>605	
	2 layers 5/8" type X gypsum	2 layers 5/8" type X gypsum directly attached to CLT + air gap + steel studs + ½" type C gypsum	61	
		2 layers 5/8" type X gypsum + 3-5/8" steel studs + air gap	71	
		2 layers 5/8" type X gypsum + resilient channels + plywood strips	53	
	2 layers 5/8" type X gypsum + 1-3/8" z-channels	2 layers 5/8" type X gypsum	53	
		2 layers 5/8" type X gypsum directly attached to CLT + air gap + steel studs + ½" type C gypsum	65	
CLT 5-ply (7.25")	5/8" gypsum board + 25 gauge RC-1 resilient channels @ 24" o.c.	5/8" gypsum board + 25 gauge RC-1 resilient channels @ 24" o.c.	46 ⁸ FSTC	6
CLT 7-ply (9.625")	2 layers 5/8" type X gypsum + 7/8" hat channels @ 16" o.c.	2 layers 5/8" type X gypsum + 3-1/2" steel studs @ 16" o.c. + cavity batt insulation + ¾" air gap	65 ² ASTC	71

Table 6 Continued: Single CLT Wall

Table 6 Notes:



- 1. All STC tests performed in accordance with ASTM E 90 unless otherwise noted below. All IIC tests performed in accordance with ASTM E 492unless otherwise noted below. See end of document for sources and referenced test reports.
- 2. ASTC field tests performed in accordance with ASTM E 336. AIIC field tests performed in accordance with ASTM E 1007.
- 3. IIC tests not performed in accordance with a singular test standard. Test measurement method used a combination of ASTM E492 and ASTM 1007 per acoustical mat product manufacturer.
- 4. FSTC field test performed in accordance with ASTM E 336. AIIC field test not performed in accordance with ASTM E 1007 (inadequate number of measurements).
- 5. STC and IIC noted is a prediction based on the ISO 15712-1 prediction method as noted in the referenced test report
- 6. STC and IIC noted is based on floor zone testing procedures that are modifications of ASTM E90 and E492 test and do not fully conform with these test standards per acoustical mat product manufacturer and as noted in the referenced test report.
- 7. Actual thickness of CLT in this test was 6.3" (160 mm)
- 8. Assemblies included in the 1st edition of the CLT Handbook are included herein due to their legacy use. However, the testing standards used for these assemblies are European and direct correlation to IBC-referenced ASTM standards is not currently available.



	Left Side Finish	Right Side Finish				
NLT Wall Panel	Left Side Finish	Right Side Finish	STC ¹	Source		
	None	None	24	21		
		³₄″ plywood	29			
		∛4″ OSB	30			
		2x2 @ 16" o.c. wood furring + 1-1/2" fiberglass batts + 2- layers ½" type X gypsum	40			
2x4 NLT		1/2" air gap + 2x3 @ 24" o.c. wood studs + 2-1/2" fiberglass batts + 2-layers ½" type X gypsum	52			
		Plaster	34			
	¾″ plywood	¾″ plywood	33			
	Plaster	Plaster	34			
		None	22			
2x6 NI T	None	³₄″ plywood	31	21		
		¾″ OSB	32			
		Plaster	38			

Table 7 Continued: Single NLT Wall



NLT Wall	Left Side Finish	Right Side Finish	STC ¹	Source
Paner		½" air gap + 2x3 @ 24" o.c. wood studs + 2-1/2" fiberglass batts + 2-lavers ½" type X gypsum	60	
	None	¾" plywood + 2x2 @ 16" o.c. wood furring + 1-1/2" fiberglass batts + 2-layers ½" type X gypsum	44	
2x6 NLT	3/" nlvwood	2x2 @ 16" o.c. wood furring + 1-1/2" fiberglass batts + 2- layers ½" type X gypsum	45	21
	74 piywood	¾" plywood + ½" air gap + 2x3 @ 24" o.c. wood studs + 2- 1/2" fiberglass batts + 2-layers ½" type X gypsum	62	
	Plaster	Plaster	36	
				-
		None	24	_
	None	¾″ plywood	31	21
		¾″ OSB	32	
		2x2 @ 16" o.c. wood furring + 1-1/2" fiberglass batts + 2- layers ½" type X gypsum	41	
		½" air gap + 2x3 @ 24" o.c. wood studs + 2-1/2" fiberglass batts + 2-layers ½" type X gypsum	55	
2x8 NLT		¾" plywood + 2x2 @ 16" o.c. wood furring + 1-1/2" fiberglass batts + 2-layers ½" type X gypsum	43	
		¾" plywood + ½" air gap + 2x3 @ 24" o.c. wood studs + 2- 1/2" fiberglass batts + 2-layers ½" type X gypsum	59	
		Plaster	38	
		¾″ plywood	35	
	¾" plywood	2x2 @ 16" o.c. wood furring + 1-1/2" fiberglass batts + 2- layers ½" type X gypsum	45	
		½" air gap + 2x3 @ 24" o.c. wood studs + 2-1/2" fiberglass batts + 2-layers ½" type X gypsum	60	
		None	29	-
2x10 NLT	None	¾″ plywood	36	21
		¾″ OSB	37	

Table 7 Continued: Single NLT Wall



WOOD PRODUCTS COUNCIL

NLT Wall	Left Side Finish	Right Side Finish	STC ¹	Source
2x10 NLT		¾" plywood + ½" air gap + 2x3 @ 24" o.c. wood studs + 2- 1/2" fiberglass batts + 2-layers ½" type X gypsum	64	
	None	¾" plywood + 2x2 @ 16" o.c. wood furring + 1-1/2" fiberglass batts + 2-layers ½" type X gypsum	47	
		Plaster	39	21
	¾″ plγwood	2x2 @ 16" o.c. wood furring + 1-1/2" fiberglass batts + 2- layers ½" type X gypsum	46	
		1/2" air gap + 2x3 @ 24" o.c. wood studs + 2-1/2" fiberglass batts + 2-layers ½" type X gypsum	61	
		Plaster	41	
				-
2x12 NLT		None	39	21
		¾″ plywood	41	
		¾″ OSB	41	
	None	¾" plywood + ½" air gap + 2x3 @ 24" o.c. wood studs + 2- 1/2" fiberglass batts + 2-layers ½" type X gypsum	68	
		¾" plywood + 2x2 @ 16" o.c. wood furring + 1-1/2" fiberglass batts + 2-layers ½" type X gypsum	48	
		Plaster	42	
	%″ plywood	2x2 @ 16" o.c. wood furring + 1-1/2" fiberglass batts + 2- layers ½" type X gypsum	47	
		1/2" air gap + 2x3 @ 24" o.c. wood studs + 2-1/2" fiberglass batts + 2-layers ½" type X gypsum	63	

Table 7 Notes:

- 1. All STC tests performed in accordance with ASTM E 90 unless otherwise noted below. All IIC tests performed in accordance with ASTM E 492 unless otherwise noted below. See end of document for sources and referenced test reports.
- 2. ASTC field tests performed in accordance with ASTM E 336. AIIC field tests performed in accordance with ASTM E 1007.
- 3. IIC tests not performed in accordance with a singular test standard. Test measurement method used a combination of ASTM E492 and ASTM 1007 per acoustical mat product manufacturer.
- 4. FSTC field test performed in accordance with ASTM E 336. AllC field test not performed in accordance with ASTM E 1007 (inadequate number of measurements).
- 5. STC and IIC noted is a prediction based on the ISO 15712-1 prediction method as noted in the referenced test report

Table 8: Double CLT Wall



	Left Side CLT + Finish	Right Side CLT + Finish		
Left Side CLT + Finish	Between CLT Panels	Right Side CLT + Finish	STC ¹	Source
CLT 3-ply (3") + 25 gauge RC-1 resilient channels @ 24" o.c. + 5/8" gypsum board	1" mineral wool	CLT 3-ply (3") + 25 gauge RC-1 resilient channels @ 24" o.c. + 5/8" gypsum board	47 ⁸ FSTC	6
CLT 3-ply (3.07")	1" insulation	CLT 3-ply (3.07")	47	20
	1 modulon		17	20
	1" inculation	CLT 3-ply (3.07")	53	20
CLI 3-ply (3.07°) + 2 layers ½° type X gypsum	1 Insulation	CLT 3-ply (3.07") + 2 layers ½" type X gypsum	55	
		CLT 3-ply (3.07")	49 ⁵	20
CLT 3-ply (3.07") + 2x2 studs @ 16" o.c. + 2 layers ½" type X	1" insulation	CLT 3-ply (3.07") + 2 layers ½" type X gypsum	53⁵	
gypsum		CLT 3-ply (3.07") + 2x2 studs @ 16" o.c. + 2 layers ½" type X gypsum	43 ⁵	
		CLT 3-ply (3.07")	56	-
	1" insulation	CLT 3-ply (3.07") + 2 layers ½" type X gypsum	59 ⁵	
CLI 3-ply (3.07") + 2x2 studs @ 24" o.c. + 2 layers ½" type X		CLI 3-ply (3.07") + 2x2 studs @ 16" o.c. + 2	52 ⁵ 20	20
gypsum		layers ½" type X gypsum	>605	
		1 - 2 = 2 = 2 = 2 = 2 = 2 = 2 = 2 = 2 = 2		



Left Side CLT + Finish	Between CLT Panels	Right Side CLT + Finish	STC ¹	Source
	1" insulation	CLT 3-ply (3.07")	56⁵	20
		CLT 3-ply (3.07") + 2 layers ½" type X gypsum	59 ⁵	
		CLT 3-ply (3.07") + 2x2 studs @ 16" o.c. + 2	55 ⁵	
		layers ½" type X gypsum		
CLT 3-ply (3.07") + 2x3 studs @ 24" o.c. + 2 layers ½" type X gypsum		CLT 3-ply (3.07") + 2x2 studs @ 24" o.c. + 2	>60⁵	
		layers ½" type X gypsum		
		CLT 3-ply (3.07") + 2x2 studs @ 16" o.c. +		
		resilient channels @ 24" o.c. + 2 layers ½" type	>605	
		X gypsum		
		CLT 3-ply (3.07") + 2x3 studs @ 24" o.c. + 2	>605	
		layers ½" type X gypsum	L	
			× C05	[
		$\frac{\text{CLI 3-piy}(3.07^{\circ})}{\text{CLT 3-piy}(3.07^{\circ})}$	>60°	20
	' ^S 1" insulation	CLT 3-ply $(3.07'')$ + 2 layers $\frac{1}{2}$ type X gypsum	>60°	
		CLI 3-piy (3.07) + 2x2 studs @ 16 0.c. + 2	>605	
		$\frac{1}{1} \frac{1}{1} \frac{1}$		
		$\frac{1}{10000000000000000000000000000000000$	>605	
CLT 3-ply (3.07") + ½" air gap + 2x3 studs @ 24" o.c. + 2 layers		CIT 3-plv (3.07'') + 2x2 studs @ 16'' o.c. +	>60 ⁵	
1⁄2" type X gypsum		resilient channels @ 24" o.c. + 2 layers $\frac{1}{2}$ " type		
		X gypsum		
		CLT 3-ply (3.07") + 2x3 studs @ 24" o.c. + 2	>605	
		layers ½" type X gypsum		
		CLT 3-ply (3.07") + ½" air gap + 2x3 studs @ 24"	>605	
		o.c. + 2 layers ½" type X gypsum		
				r
		CLT 3-ply (3.07")	>605	20
	1" insulation	CLT 3-ply (3.07") + 2 layers ½" type X gypsum	>605	
		CLT 3-ply (3.07") + 2x2 studs @ 16" o.c. + 2	57 ⁵	
CLT 3-ply (3.07") + 2x2 studs @ 16" o.c. + resilient channels @		layers ½" type X gypsum	57	
$24^{\prime\prime}$ o.c. + 2 layers $\frac{12^{\prime\prime}}{2}$ type X gypsum		CLT 3-ply (3.07") + 2x2 studs @ 24" o.c. + 2	>605	
		layers ½" type X gypsum		
		CLT 3-ply (3.07") + 2x2 studs @ 16" o.c. +	>605	
		resilient channels @ 24" o.c. + 2 layers ½" type		
		x gypsum		
CLT 3-ply (3.75-4.5")	1.18" mineral wool	CLT 3-ply (3.75-4.5")	48-50 ⁸	6



Left Side CLT + Finish	Between CLT Panels	Right Side CLT + Finish	STC ¹	Source
CLT 3-ply (3.75-4.5") + 5/8" gypsum board	1.18" mineral wool	CLT 3-ply (3.75-4.5") + 5/8" gypsum board	55 ⁸	6
	2.36" mineral wool		60 ⁸	

Table 8 Notes:

- 1. All STC tests performed in accordance with ASTM E 90 unless otherwise noted below. All IIC tests performed in accordance with ASTM E 492 unless otherwise noted below. See end of document for sources and referenced test reports.
- 2. ASTC field tests performed in accordance with ASTM E 336. AIIC field tests performed in accordance with ASTM E 1007.
- 3. IIC tests not performed in accordance with a singular test standard. Test measurement method used a combination of ASTM E492 and ASTM 1007 per acoustical mat product manufacturer.
- 4. FSTC field test performed in accordance with ASTM E 336. AIIC field test not performed in accordance with ASTM E 1007 (inadequate number of measurements).
- 5. STC and IIC noted is a prediction based on the ISO 15712-1 prediction method as noted in the referenced test report.
- 6. STC and IIC noted is based on floor zone testing procedures that are modifications of ASTM E90 and E492 test and do not fully conform with these test standards per acoustical mat product manufacturer and as noted in the referenced test report.
- 7. Actual thickness of CLT in this test was 6.3" (160 mm)
- 8. Assemblies included in the 1st edition of the CLT Handbook are included herein due to their legacy use. However, the testing standards used for these assemblies are European and direct correlation to IBC-referenced ASTM standards is not currently available.

Sources



- <u>http://www.maxxon.com/brochures/Fire_Sound_Manual_9-18.pdf (Maxxon / Intertek Report #'s F1177.02-201-10, F1177.03-201-10, F1177.04-201-10, G9088.06-201-10-R0, G9088.01-201-10-R1, G9088.02-201-10-R1, G9088.03-201-10-R1, G9088.04-201-10-R1, G9088.05-201-10-R1, H6109.19-201-10-R0, H6109.15-201-10-R0, H6109.16-201-10-R0, D7299.01-201-10, Maxxon / Stork / Twin City Testing Corp Report #'s 3018 02 31573.6, 3018 02 31573.4, 3018 02 31573.3, 30160-04-62432, 30160-04-62665)
 </u>
- 2. <u>http://pliteq.com/downloads/geniemat-ff/GenieMat%20FF%20Brochure.pdf (Pliteq / Intertek Report #'s F5500.08-113-11-R0, # F5500.10-113-11-R0, # F6279.14-113-11-R1, Pliteq / NGC Report #'s NGC 5014049, 5014082, 7014060, 7014109)</u>
- 3. https://www.regupol.com/test-reports/pdfs/A1-008253.pdf
- 4. https://www.acousti-tech.com/Design/PDF/mass-timber-guide.pdf
- 5. Pliteq / Intertek Report # F5500.11-113-11-R0 (contact WoodWorks for additional information)
- 6. CLT Handbook, Chapter 9: https://www.thinkwood.com/products-and-systems/cross-laminated-timber-clt-handbook
- 7. Pliteq / Intertek Report #G6527.02-113-11-R0 (contact WoodWorks for additional information)
- 8. Pliteq / Intertek Report #G6527.01-113-11-R0 (contact WoodWorks for additional information)
- 9. Maxxon / WEAL Report # F17-2081 (contact WoodWorks for additional information)
- 10. FPInnovations Report # 301012153-Task 11.1 (contact WoodWorks for additional information)
- 11. http://kineticsnoise.com/arch/tests/wood-framed.html (Kinetics / Acentech Report # AT001108)
- 12. https://issuu.com/rothoblaas/docs/2018_05_soundproofing_solutions-en?e=18207635/61793322
- 13. http://www.maxxon.com/brochures/MXN_SmartLam_7-18.pdf
- 14. USG / Intertek Report # I5203.20-113-11-R0 (contact WoodWorks for additional information)
- 15. USG / Intertek Report # I1898.01-113-11-R0 (contact WoodWorks for additional information)
- 16. USG / Intertek Report # I1898.02-113-11-R0 (contact WoodWorks for additional information)
- 17. <u>Pliteq / Intertek Report # A1-013877.1 (contact WoodWorks for additional information)</u>
- 18. Pliteq / Intertek Report # A1-013877.2 (contact WoodWorks for additional information)
- 19. Pliteq / Intertek Report # A1-013877.3 (contact WoodWorks for additional information)
- 20. https://nparc.nrc-cnrc.gc.ca/eng/view/fulltext/?id=0dd15eec-b02e-4fb5-b8c6-aca331051d1d
- 21. https://nparc.nrc-cnrc.gc.ca/eng/view/fulltext/?id=9e3b39be-e0ed-415b-9649-3e7ec228f52c
- 22. https://www.thinkwood.com/wp-content/uploads/2018/10/19-Framework-Acoustic-Testing-and-Wood-Supply.pdf
- 23. Kinetics / Intertek Report # I8483.01-113-11-R0 (contact WoodWorks for additional information)
- 24. Kinetics / Intertek Report # I8483.03-113-11-R0 (contact WoodWorks for additional information)
- 25. Kinetics / Intertek Report # I8483.02-113-11-R0 (contact WoodWorks for additional information)
- 26. Kinetics / Cavanaugh Tocci Associates Report # AT001071 (contact WoodWorks for additional information)
- 27. Kinetics / Intertek Report # I8483.04-113-11-R1 (contact WoodWorks for additional information)
- 28. Maxxon / WEAL Report # F17-2084 (contact WoodWorks for additional information)
- 29. Pliteq / Intertek Report # F5500.09-113-11-R0 (contact WoodWorks for additional information)
- 30. Pliteq / Intertek Report # F5500.16-113-11-R0 (contact WoodWorks for additional information)
- 31. Pliteq / Intertek Report # F6279.11-113-11-R1 (contact WoodWorks for additional information)
- 32. Pliteq / Intertek Report # G1707.04-113-11-R0 (contact WoodWorks for additional information)

 Pliteg / Intertek Report # G1707.05-113-11-R0 (contact WoodWorks for additional information) Pliteg / Intertek Report # G1707.06-113-11-R0 (contact WoodWorks for additional information) 35. Pliteg / Intertek Report # E5958.03-113-11-R0 (contact WoodWorks for additional information) 36. Pliteg / Intertek Report # E5958.04-113-11-R0 (contact WoodWorks for additional information) 37. Pliteg / Intertek Report # H6150.61-113-11-R0 (contact WoodWorks for additional information) Pliteq / Intertek Report # E5958.05-113-11-R0 (contact WoodWorks for additional information) 39. Pliteg / Intertek Report # E5958.06-113-11-R0 (contact WoodWorks for additional information) 40. Pliteq / Intertek Report # E5958.07-113-11-R0 (contact WoodWorks for additional information) 41. Pliteg / Intertek Report # F2761.07-113-11-R0 (contact WoodWorks for additional information) 42. Pliteg / Intertek Report # F2761.08-113-11-R0 (contact WoodWorks for additional information) Pliteg / Intertek Report # F2761.09-113-11-R0 (contact WoodWorks for additional information) 44. Pliteg / Intertek Report # F6279.12-113-11-R2 (contact WoodWorks for additional information) 45. Pliteg / Intertek Report # F6279.13-113-11-R1 (contact WoodWorks for additional information) 46. Pliteg / NGC Report # 5014141 (STC test), 7014194 (IIC test) (contact WoodWorks for additional information) 47. Pliteq / NGC Report # 5014143 (STC test), 7014196 (IIC test) (contact WoodWorks for additional information) 48. Pliteq / NGC Report # 5014144 (STC test), 7014199 (IIC test) (contact WoodWorks for additional information) 49. Pliteg / Intertek Report #G6527.03-113-11-R0 (contact WoodWorks for additional information) 50. Pliteq / Intertek Report #G6527.04-113-11-R0 (contact WoodWorks for additional information) 51. Pliteg / Intertek Report #G6527.05-113-11-R0 (contact WoodWorks for additional information) 52. Pliteq / Intertek Report #G6527.06-113-11-R0 (contact WoodWorks for additional information) 53. Pliteg / Intertek Report #G6527.08-113-11-R0 (contact WoodWorks for additional information) 54. Pliteg / Intertek Report #G6527.09-113-11-R0 (contact WoodWorks for additional information) 55. Pliteg / Intertek Report #G6527.10-113-11-R0 (contact WoodWorks for additional information) 56. Pliteg / NGC Report # 5015105 (STC test), 7015157 (IIC test) (contact WoodWorks for additional information) 57. http://kineticsnoise.com/arch/tests/wood-framed.html (Kinetics / DLAA Report # AT001034) 58. USG / Intertek Report # 11898.03-113-11-R0 (contact WoodWorks for additional information) 59. USG / Intertek Report # I1898.04-113-11-R0 (contact WoodWorks for additional information) 60. USG / Intertek Report # I1898.05-113-11-R0 (contact WoodWorks for additional information) 61. USG / Intertek Report # I1898.06-113-11-R0 (contact WoodWorks for additional information) 62. USG / Intertek Report # I5203.18-113-11-R0 (contact WoodWorks for additional information) 63. USG / Intertek Report # I5203.19-113-11-R0 (contact WoodWorks for additional information) 64. USG / Intertek Report # I5203.21-113-11-R0 (contact WoodWorks for additional information) 65. USG / Intertek Report # 15203.22-113-11-R0 (contact WoodWorks for additional information) 66. USG / Intertek Report # I5203.23-113-11-R0 (contact WoodWorks for additional information) 67. FPInnovations Report # 301012153-Task 8.1 (contact WoodWorks for additional information) 68. https://nrc-publications.canada.ca/eng/view/fulltext/?id=e265c6cd-808a-4528-a6ba-0a95924431bb 69. https://fpinnovations.ca/Extranet/Pages/AssetDetails.aspx?item=/Extranet/Assets/ResearchReportsWP/16779.pdf#.XC9-Qy2ZMUu



<u>https://fpinnovations.ca/Extranet/Pages/AssetDetails.aspx?item=/Extranet/Assets/ResearchReportsWP/16780.pdf#.XC9-kC2ZMUv</u>
 <u>https://fpinnovations.ca/Extranet/Pages/AssetDetails.aspx?item=/Extranet/Assets/ResearchReportsWP/16795.pdf#.XC9-iy2ZMUu</u>

Disclaimer



The information in this inventory, including, without limitation, references to information contained in other publications, test reports or made available by other sources (collectively "information") should not be used or relied upon for any application without competent professional examination and verification of its accuracy, suitability, code compliance and applicability by a licensed engineer, architect or other professional. Neither the Wood Products Council nor its employees, consultants, nor any other individuals or entities who contributed to the information make any warranty, representative or guarantee, expressed or implied, that the information is suitable for any general or particular use, that it is compliant with applicable law, codes or ordinances, or that it is free from infringement of any patent(s), nor do they assume any legal liability or responsibility for the use, application of and/or reference to the information. Anyone making use of the information in any manner assumes all liability arising from such use.

This inventory is intended to be a design aid in the selection of materials used in mass timber wall or floor/ceiling assemblies for the purpose of achieving acoustical performance. This inventory is not a guarantee that a given assembly performs to a certain acoustical level. In some instances, this inventory references specific product names (i.e., Maxxon Acousti-Mat[®] ¾). In other instances, generic product names are used (i.e., 2" gypsum topping). Also, in some situations, the products used in a tested assembly have changed names even though the product itself has remained unchanged. The referenced test reports and manufacturer's information should be consulted as the final source for the specific conditions, materials and installation processes used for all components referenced herein.

The designer is responsible for confirming that all materials used in an assembly meet code requirements for acoustics as well as other performance criteria such as fire resistance, structural loadings, and durability.

Most tested assemblies referenced in this inventory were tested by a third-party testing agency in a laboratory or in the field (i.e., an agency not affiliated with a product manufacturer). However, some assemblies were tested by the manufacturer of a product in the assembly.

Mass of products used in an assembly can influence the acoustical performance. In most cases, the relative thickness of materials used in a tested assembly are noted in this inventory. However, it is up to the designer to verify that the density of those materials tested (CLT panel, concrete topping, etc.) match what is proposed for the assembly being designed and constructed.

Most tested assemblies referenced in this inventory were tested in a laboratory in accordance with ASTM E90 and ASTM E492. However, as noted in each table's footnotes, some tests were conducted in the field in accordance with ASTM E336 and ASTM E1007 or other noted testing protocols. Field tests are based on the specific conditions present in a given environment and take into account other influencing factors such as flanking paths (this is one of the reasons that IBC 2015 Sections 1207.2 and 1207.3 permit lower STC and IIC values if field tested). As noted in ASTM E336 and ASTM E1007, even when using an exact assembly from a field test in a different building or a different area in the same building, results can vary: *"The results stated in this report represent only the specific construction and acoustical conditions present at the time of the test. Measurements performed in accordance with this test method on nominally identical constructions and acoustical conditions may produce different results."*

For free project assistance or for any questions related to the assemblies referenced in this inventory, contact help@woodworks.org.

For questions related to a specific product referenced herein, contact the appropriate product manufacturer:

Maxxon Corporation Beth Lee 763-478-9600 <u>beth@maxxon.com</u> <u>www.maxxon.com</u>

Pliteq Inc Matt Golden 202-714-0600 <u>mgolden@pliteq.com</u> <u>www.pliteq.com</u>

Regupol America Bill Devin 800-537-8737 <u>bmd@regupol.com</u> www.regupol.com/acoustics

AcoustiTECH André Rioux 888-838-4449 arioux@acousti-tech.com www.acousti-tech.com/en/ Kinetics Noise Control Steve Manos 614-789-3232 <u>smanos@kineticsnoise.com</u> www.kineticsnoise.com

USG Corporation Brett Hall 602-577-3814 <u>bxhall@usg.com</u> <u>www.usg.com</u>

Rothoblaas Hannes Blaas 438-838-1681 Hannes.blaas@rothoblaas.com www.rothoblaas.com



