



# Acoustic Data

For guidance on acoustic attenuation using CMF's MetFloor product, the following tables are provided. Information regarding the mass of varying slab depths for each MetFloor profile may be used for acoustic calculations, and acoustic measurements are also provided taken from completed MetFloor installations.



## Composite Slab Masses:

The following figures provide the mass per square metre for varying slab depths, concrete weights and for each of CMF's MetFloor composite decking profiles.

Slab depth (mm)	Normal Weight Concrete NWC Dry Density = 24.5kN/m <sup>3</sup>			Light Weight Concrete LWC Dry Density = 19.5kN/m <sup>3</sup>		
	Dry concrete masses (kg/m <sup>2</sup> )			Dry concrete masses (kg/m <sup>2</sup> )		
	MetFloor 55	MetFloor 60	MetFloor 80	MetFloor 55	MetFloor 60	MetFloor 80
100	220.6	-	-	175.6	-	-
110	245.6	-	-	195.5	-	-
120	270.6	214.4	-	215.4	170.7	-
130	295.6	239.4	-	235.2	190.5	-
140	320.5	264.4	241.3	255.1	210.4	192.0
150	345.5	289.3	266.3	275.0	230.3	211.9
160	370.5	314.3	291.2	294.9	250.2	231.8
170	395.5	339.3	316.2	314.7	270.0	251.7
180	420.4	364.3	341.2	334.6	289.9	271.5
190	445.4	389.2	366.2	354.5	309.8	291.4
200	470.4	414.2	391.1	374.4	329.7	311.3
210	495.4	439.2	416.1	394.3	349.6	331.2
220	520.3	464.2	441.1	414.1	369.4	351.1
230	545.3	489.1	466.0	434.0	389.3	370.9
240	570.3	514.1	491.0	453.9	409.2	390.8
250	595.3	539.1	516.0	473.8	429.1	410.7

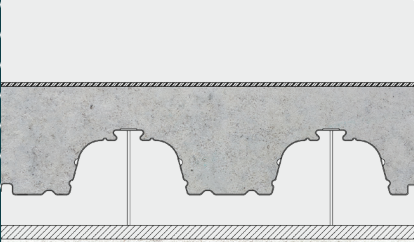
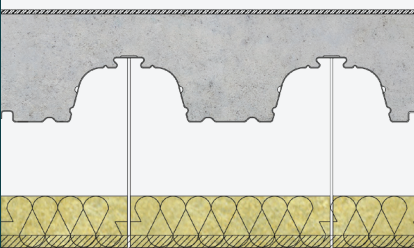
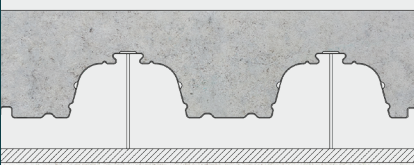
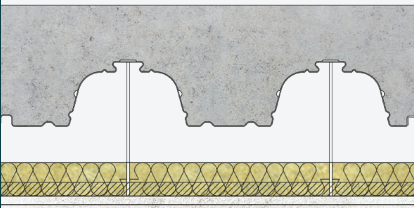
For further information please contact CMF:

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## On-site Test Results:

Values provided are for airborne (Dn) and impact (L'n) measurements taken between rooms separated by the floor construction described.

	Construction	Project Sector, Location	Requirement	Test Results
	Vinyl & latex finish 160mm MetFloor 80 MF ceiling grid 12.5mm plasterboard (LGSF primary frame)	Student Accommodation, Bournemouth  1701(MS)	<b>AIRBORNE</b>	
			$\geq 45\text{dB}$ (Airborne $D_{nT,w} + C_{tr}$ )	<b>PASS</b> Range: 50 to 60dB Mean: 54.5dB
	Vinyl & latex finish 4mm resilient layer 160mm MetFloor 80 200mm MF ceiling 80mm Earthwool 15mm wallboard (LGSF primary frame)	Student Accommodation, Stirling  18119(MS)	<b>AIRBORNE</b>	
			$\geq 56\text{dB}$ (Airborne $D_{nT,w}$ )	<b>PASS</b> Range: 58 to 61dB Mean: 59.7dB
	160mm MetFloor 80 MF ceiling grid 12.5mm plasterboard (LGSF primary frame)	Student Accommodation, Coventry  18129(MS)	<b>AIRBORNE</b>	
			$\geq 45\text{dB}$ (Airborne $D_{nT,w} + C_{tr}$ )	<b>PASS</b> Range: 53 to 61dB Mean: 56.6dB
	Carpet 180mm MetFloor 80 115mm MF ceiling 50mm insulation 2x 15mm plasterboard	Hotel, Portsmouth  18004(MS)	<b>AIRBORNE</b>	
			$\geq 45\text{dB}$ (Airborne $D_{nT,w}$ )	<b>PASS</b> Range: 50 to 56dB Mean: 52.1dB
			<b>IMPACT</b>	
			$\leq 62\text{dB}$ (Impact $L'_{nT,w}$ )	<b>PASS</b> Range: 34 to 48.9dB Mean: 48.9dB
			<b>AIRBORNE</b>	
			$\leq 56\text{dB}$ (Impact $L'_{nT,w}$ )	<b>PASS</b> Range: 49 to 50dB Mean: 49.3dB
			<b>AIRBORNE</b>	
			$\leq 62\text{dB}$ (Impact $L'_{nT,w}$ )	<b>PASS</b> Range: 49 to 57dB Mean: 53.9dB
			<b>AIRBORNE</b>	
			$\geq 45\text{dB}$ (Airborne $D_{nT,w}$ )	<b>PASS</b> Range: 50 to 56dB Mean: 52.1dB
			<b>IMPACT</b>	
			$\leq 62\text{dB}$ (Impact $L'_{nT,w}$ )	<b>PASS</b> Range: 40 to 45dB Mean: 42.5dB

In addition to the data provided acoustic predictions may also be obtained from CMF – please contact the Technical Department for more information. Further information is available from Steel Construction Institute (SCI), including publications P322 and P372.

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