

Predicted Weighted Sound Reduction Index (R_w) values of Celcon blockwork



Block Thickness (mm)	MASS (m) OF WALL CONSTRUCTION (Kg/m ²)									PREDICTED WEIGHTED SOUND REDUCTION INDEX (R_w) (dB)								
	Unfinished Surfaces			Finished both sides with 13mm						Unfinished Surfaces			Finished both sides with 13mm					
				Lightweight Plaster			Dense Plaster						Lightweight Plaster			Dense Plaster		
	Solar	Standard	Hi-7/10	Solar	Standard	Hi-7/10	Solar	Standard	Hi-7/10	Solar	Standard	Hi-7/10	Solar	Standard	Hi-7/10	Solar	Standard	Hi-7/10
75	42.4	52.5	63.3	62.4	72.5	83.3	90.4	100.5	111.3	33.5	36.0	38.3	38.1	39.9	41.6	42.6	43.9	45.1
90	50.9	63.0	75.9	70.9	83.0	95.9	98.9	111.0	123.9	35.7	38.2	40.5	39.7	41.6	43.3	43.7	45.1	46.4
100	56.6	70.0	84.3	76.6	90.0	104.3	104.6	118.0	132.3	36.9	39.5	41.8	40.6	42.5	44.3	44.3	45.8	47.2
115	65.0	80.5	97.0	85.0	100.5	117.0	113.0	128.5	145.0	38.6	41.2	43.4	41.9	43.9	45.7	45.3	46.8	48.3
125	70.7	87.5	105.4	90.7	107.5	125.4	118.7	135.5	153.4	39.6	42.2	44.4	42.6	44.7	46.5	45.9	47.5	48.9
140	79.2	98.0	120.0	99.2	118.0	140.0	127.2	146.0	168.0	41.0	43.6	46.0	43.7	45.8	47.8	46.7	48.3	50.0
150	84.8	105.0	126.5	104.8	125.0	146.5	132.8	153.0	174.5	41.8	44.4	46.6	44.4	46.5	48.4	47.2	48.9	50.5
190	107.5	133.0	160.3	127.5	153.0	180.3	155.5	181.0	208.3	44.7	47.2	49.5	46.7	48.9	50.9	49.1	50.9	52.6
200	113.1	139.9	168.7	133.1	159.9	188.7	161.1	187.9	216.7	45.3	47.8	50.1	47.2	49.5	51.4	49.5	51.4	53.1
215	121.6	150.4	181.3	141.6	170.4	201.3	169.6	198.4	229.3	46.2	48.7	51.0	48.0	50.2	52.2	50.2	52.0	53.8
230	130.1	160.9	194.0	150.1	180.9	214.0	178.1	208.9	242.0	47.0	49.5	51.8	48.7	50.9	53.0	50.7	52.7	54.4
250	141.4	174.9	210.9	161.4	194.9	230.9	189.4	222.9	258.9	48.0	50.5	52.8	49.6	51.8	53.9	51.5	53.4	55.2
255	144.2	178.4	215.1	164.2	198.4	235.1	192.2	226.4	263.1	48.2	50.8	53.0	49.8	52.0	54.1	51.7	53.6	55.4
265	149.9	185.4	223.5	169.9	205.4	243.5	197.9	233.4	271.5	48.7	51.2	53.5	50.2	52.5	54.5	52.0	54.0	55.8
275	155.5	192.4	231.9	175.5	212.4	251.9	203.5	240.4	279.9	49.1	51.7	53.9	50.6	52.9	54.9	52.4	54.4	56.2
300	169.7	209.9	253.0	189.7	229.9	273.0	217.7	257.9	301.0	50.2	52.7	55.0	51.5	53.8	55.9	53.2	55.2	57.1

AIRCRETE (AUTOCLAVED AERATED CONCRETE) MASS LAW : $R_w = 27.7 \text{ Log } (m) - 11.6$

Rilem Recommended Practice: Autoclaved Aerated Concrete - Properties Testing and Design.