

Decibel Ratings

Block Factsheet 2 - June 2023

The following table shows the single-figure predicted Airborne sound reduction R_w value of single-leaf masonry walls using each of our block types. These figures are solely based on wall mass and are intended for indicative purposes only. These figures are based on only one structural parameter (i.e. wall mass) and should therefore

be used only as an early estimate at the design stage. Actual tested performance may vary significantly and will be affected by multiple factors including workmanship, wall ties, finishes, floors, roofs & flanking junctions and the transmission of sound from other parts of the building and neighbouring structures.

Indicative, predicted airborne sound reduction values for our blocks based on calculation:

| Block Type | Thickness mm & Configuration | Approx. Block Wt (at 3% moisture) kg | Wall Mass (at 3% moisture) kg/m ² | Predicted Airborne Sound Reduction (Single Leaf) R_w , dB | | | Robust Details Available? |
|--------------------------|------------------------------|--|--|--|-----------|-----------|------------------------------|
| | | | | Unfinished | Plastered | Dry Lined | |
| Ultralite | 100 | 10.7 | 118 | 43 | 44 | 44 | |
| | 140 | 15.0 | 165 | 46 | 47 | 47 | |
| Insulite | 75 | 11.0 | 117 | 43 | 44 | 44 | |
| | 100 | 14.6 | 157 | 45 | 46 | 46 | Yes |
| | 140 | 20.5 | 219 | 48 | 49 | 49 | Yes |
| | 215 (block laid flat) | 14.6 | 340 | 52 | 53 | 53 | |
| Dense | 75 | 13.5 | 143 | 44 | 46 | 45 | |
| | 100 | 18.0 | 190 | 47 | 48 | 48 | Yes |
| | 100 Cellular | 15.5 | 165 | 46 | 47 | 47 | |
| | 140 | 25.2 | 266 | 50 | 51 | 51 | Yes |
| | 215 (block laid flat) | 18.0 | 409 | 54 | 55 | 55 | |
| | 140 MIDI | 16.6 | 266 | 50 | 51 | 51 | Yes |
| Airtec Standard | 100 | 7.3 | 62 | 38 | 41 | 41 | |
| | 140 | 10.2 | 87 | 42 | 45 | 44 | |
| | 190 | 13.8 | 119 | 46 | 48 | 47 | |
| | 215 | 15.6 | 134 | 47 | 49 | 49 | |
| Airtec Party Wall | 100 | 8.6 | 72 | 40 | 43 | 42 | Yes |
| Airtec Seven | 100 | 10.0 | 82 | 41 | 44 | 44 | Yes |
| | 140 | 14.0 | 115 | 45 | 47 | 47 | Yes |
| | 190 | 19.0 | 155 | 49 | 51 | 50 | |
| | 215 | 21.5 | 176 | 51 | 52 | 52 | |

NOTES:

- For Airtec blocks, the aerated concrete mass law calculation is used.
- For non-aerated blocks, the mass law calculation in BS 8233 is used.
- An equilibrium moisture content for internal walls of 3% is used when calculating the wall mass.