

## CALIBEL

### Party Wall Sound Insulation



## Life is better without noise

We live in a noisy world. We are exposed to sounds that affects the quality of our life - 24/7. MOY ISOVER, the leader in insulation solutions, can help you contribute to a planet, free from unwanted sound, and create a quiet, comfortable home environment.

### Introduction



Calibel is an insulating material made up of a thick base of glasswool assuring excellent thermal, acoustic and mechanical insulation, onto which is stuck a plaster slab.

#### Field of use.

Calibel is designed to acoustically insulate party wall constructions for both residential and commercial buildings. Very quickly installed by adhesion to walls, it is equally possible to apply using battens. Furthermore, Calibel adapts to all kinds of applications by just modifying the plaster slab.

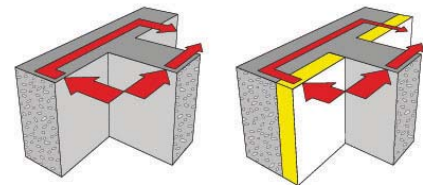


Characteristics					
Thickness	Length	Width	Sheets Per Pallet	SqMt Pr Pallet	Thermal Resistance m <sup>2</sup> K/W
42.5mm (12.5+30)	2500mm	1200mm	27	81	0.95
52.5mm (12.5+40)	2500mm	1200mm	22	66	1.25
62.5mm (12.5+50)	2500mm	1200mm	18	54	1.55
72.5mm (12.5+60)	2500mm	1200mm	16	48	1.85
82.5mm (12.5+70)	2500mm	1200mm	14	42	2.15
92.5mm (12.5+80)	2500mm	1200mm	12	36	2.45
102.5mm (12.5+90)	2500mm	1200mm	11	33	2.80
112.5mm (12.5+100)	2500mm	1200mm	10	30	3.10

## Sound proofing

### Types of Noise and Methods of Transmission:

In the home, there are three different types of noise, airborne noise (TV, Hi-Fi), impact noise (footsteps) and appliance noise (boilers, washing machines). These noises can be transmitted in two different ways, through partitions separating two rooms (this is direct transmission) or through lateral partitions bordering two rooms, this is indirect or lateral transmission. The level of soundproofing (and therefore of comfort) of an area depends directly on its insulation against direct and indirect transmissions.



**Calibel effectively combats direct or indirect transmissions; its use is therefore recommended for insulating walls separating two dwellings, staircases and liftshafts as well as facade walls.**

## Acoustic performance

To provide sound insulation from one area to another, two techniques exist. First, the application of the law of mass whereby performance is a function of surface mass of construction. Secondly, the use of "mass-spring-mass" which provides comparable results but with approximately five times lighter construction.

The best performances are obtained with Calibel, because glass wool is sufficiently flexible to be an excellent spring and sufficiently rigid to assume good mechanical holding capabilities.

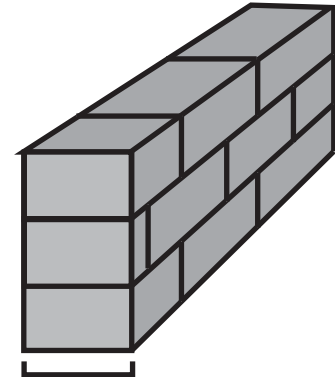
## Construction Details



- 1** Party wall constructed with 215mm dense concrete block 1950kg

Estimated  
**dB Reduction**

**45**



215mm Dense Block

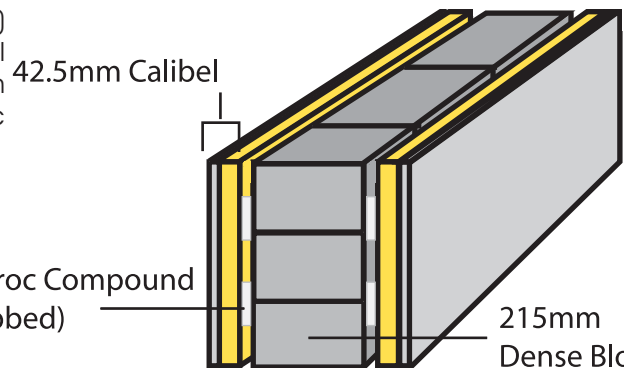
- 2** Semi Detached party wall constructed with 215 (thick) dense solid blockwork with 42.5mm thick Calibel (incorporating 30mm insulation) dot and dabbed on each side of the separating wall using Gyproc compound.

On site  
**dB Reduction**

**56**

TEST REPORTS:

13504BA, 13504CA, 13504DA, 13504EA, 13504FA (Dabbed)  
13503CA, 13503DA, 13503SA, 13503CA, 13504GA



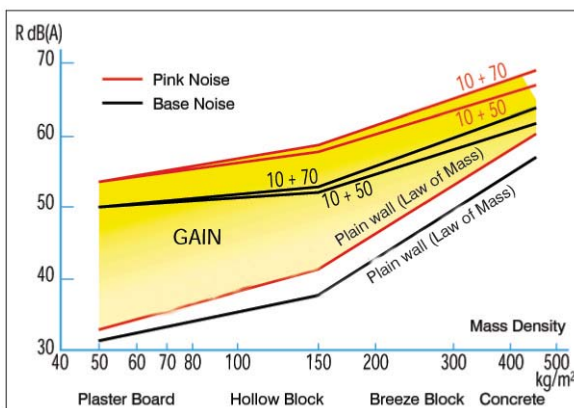
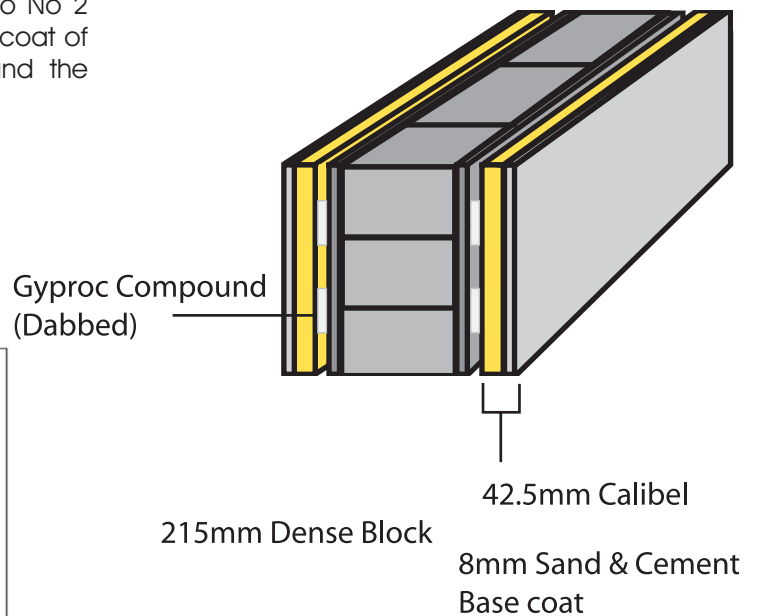
- 3** This separating wall has a similar construction to No 2 above with an additional 8mm to 12mm base coat of sand and cement between the blockwork and the Calibel.

On site  
**dB Reduction**

**59**

TEST REPORTS:

13503EA, 13503FA



\* These curves show the acoustic improvement following controlled measures carried out using Calibel.



## Acoustic Performance according to thickness of Calibel and supporting walls.

Base	Plaster Board		Blocks		Breeze Blocks				Concrete			
	50	70	Hollow	Solid	Hollow	Hollow	Solid	Solid	100	180		
Thickness mm	50	70	40	100	200	100	150	200	125	200	100	180
Surface Mass Kg/M <sup>2</sup>	42	70	60	115	238	155	230	250	290	400	240	406
Lowering Bare Wall	<b>28</b>	<b>35</b>	<b>34</b>	<b>36</b>	<b>48</b>	<b>45</b>	<b>51</b>	<b>55</b>	<b>52</b>	<b>61</b>	<b>49</b>	<b>59</b>
	23	<b>32</b>	29	32	<b>46</b>	41	46	<b>52</b>	48	<b>56</b>	45	54
+ Calibel 10 + 50	<b>51</b>	<b>55</b>	<b>50</b>	<b>54</b>	<b>64</b>	<b>62</b>	<b>63</b>	<b>66</b>	<b>63</b>	<b>69</b>	<b>57</b>	<b>67</b>
	44	<b>49</b>	44	48	<b>58</b>	56	56	<b>60</b>	57	64	<b>50</b>	62
+ Calibel 10 + 70	<b>53</b>	<b>56</b>	<b>53</b>	<b>56</b>	<b>65</b>	<b>62</b>	<b>64</b>	<b>67</b>	<b>65</b>	<b>70</b>	<b>61</b>	<b>69</b>
	47	50	47	50	60	57	59	61	60	65	55	64
+ Calibel 10 + 80	<b>53</b>	<b>57</b>	<b>54</b>	<b>57</b>	<b>68</b>	<b>63</b>	<b>65</b>	<b>69</b>	<b>66</b>	<b>72</b>	<b>63</b>	<b>70</b>
	48	<b>51</b>	48	51	<b>62</b>	58	59	<b>62</b>	61	<b>66</b>	<b>57</b>	65

 Pink Noise  Base Noise



\* Note: The figures in bold in indicate a measured value and the others show an estimate.



### How to Use

1. The base wall must be clean and dry, free from dust and plumb to within 20mm.
2. Cut the Calibel Panel to the height of the ceiling less 15mm.
3. Lie the panel flat, the plaster slab on a stable support.
4. Apply Gyproc Compound adhesive and distribute 8 or 9 blobs of 150mm diameter and 100mm to 150mm high (250g) per sq. mt.
5. Arrange a wedge of approx 15mm at the foot of the support to support the panel while the adhesive sets. Stand the panel upright and make the adhesive stick to the wall by pressing well.
6. Check the panel is plumb by modifying the thickness of the wedges. With the help of a large straight edge, tap down the whole surface of the panel.
7. To help retain the panel 3 Number 75mm EJOT Plastic Anchors can be fixed 200mm from the top of the panel and 200mm from the base of the panel. After drying remove the wedges.
8. The space left at the bottom must be filled in with glasswool before the skirting goes on.

### \* Note:

Calibel can be screwed onto a wooden framework:

- i) On a wall which is not suitable for adhesion
- ii) On roofing, directly onto the rafters

On wooden framework and roofing applications there is a limiting thickness of 80mm Calibel plus the plaster slab.



Moy Isover Ltd., Ardfinnan, Clonmel, Co. Tipperary Tel: 052-66100 Fax: 052-66372 Web: [www.moyisover.ie](http://www.moyisover.ie) Email: [info@moyisover.ie](mailto:info@moyisover.ie)  
Calibel is now iab approved.

