



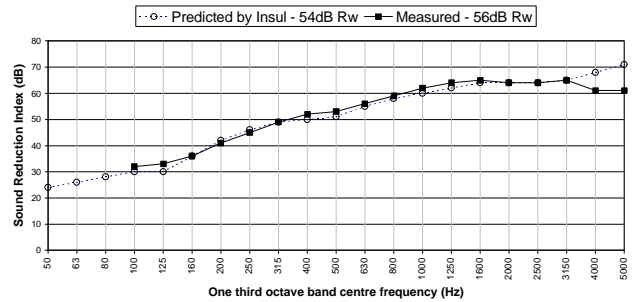
# INSUL

## Examples of Predicted vs Measured Sound Insulation Performance

### Example 5 Lined blockwork

Areated concrete block (Hebel) 100mm thick (500kg/m<sup>3</sup>) with 10mm plasterboard on 46mm airspace filled with rock-wool blanket

Sound insulation performance  
- Areated Concreteblock + drywall

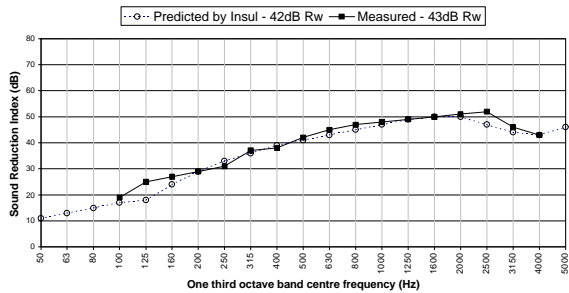


	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
Predicted by Insul - 54dB R <sub>w</sub>	24	26	28	30	30	36	42	46	49	50	51	55	58	60	62	64	64	64	65	68	71
Measured - 56dB R <sub>w</sub>	24	26	28	30	30	36	42	46	49	50	51	55	58	60	62	64	64	64	65	68	71

### Example 6 Timber stud partition

1 layer of 9.5mm plasterboard each side of 90mm timber studs. Fibreglass blanket in cavity

Sound insulation performance  
- plasterboard partition with timber studs -

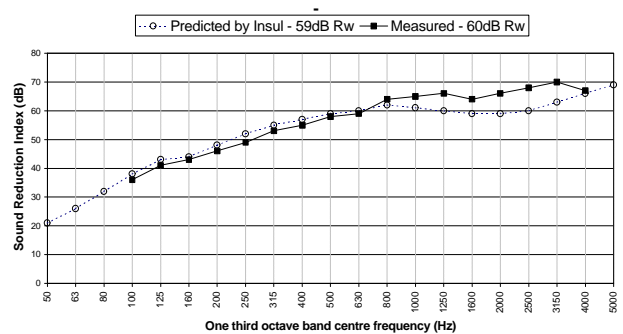


	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
Predicted by Insul - 42dB R <sub>w</sub>	11	13	15	17	18	24	29	33	36	39	41	43	45	47	49	50	50	47	44	43	46
Measured - 43dB R <sub>w</sub>	11	13	15	17	18	24	29	33	36	39	41	43	45	47	49	50	50	47	44	43	46

### Example 7 Timber floor

20mm Particleboard flooring on 300mm timber joists with 2 layers of 16mm Fire rated plasterboard hung on a light steel grid underneath, with a fibreglass blanket in the joist cavity

Sound insulation performance  
- timber floor

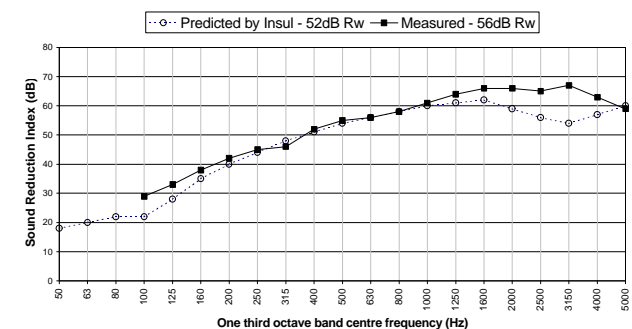


	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	
Predicted by Insul - 59dB R <sub>w</sub>	21	26	32	38	43	44	48	52	55	57	59	59	60	62	61	60	59	59	60	63	66	69
Measured - 60dB R <sub>w</sub>	21	26	32	38	43	44	48	52	55	57	59	59	60	62	61	60	59	59	60	63	66	69

### Example 8 Steel stud wall

13mm Firerated plasterboard and 9mm fibre cement sheet each side of 64mm steel studs with polyurethane plastic foam in the cavity

Sound insulation performance  
- Steel stud wall with plasterboard and cement board linings -



	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
Predicted by Insul - 52dB R <sub>w</sub>	18	20	22	22	28	35	40	44	48	51	54	56	58	60	61	62	59	56	54	57	60
Measured - 56dB R <sub>w</sub>	18	20	22	22	28	35	40	44	48	51	54	56	58	60	61	62	59	56	54	57	60