Akustik +   sylomer® by getzner

COMPARATIVE TESTS AT THE LABEIN TECHNOLOGY CENTRE

Concrete slab (100mm) — Double metal mesh (5mm diameter 30x20cm) — Air chamber (25cm) — FZH mount

Sylomer perimetral elastic band (12,5mm)

Double PVC Film

Normalized reinforced concrete slab of 15cm thickness

125 mm

60

ENAC ENSAYOS Nº 4 / LE 4 5 6

labein tecnalia
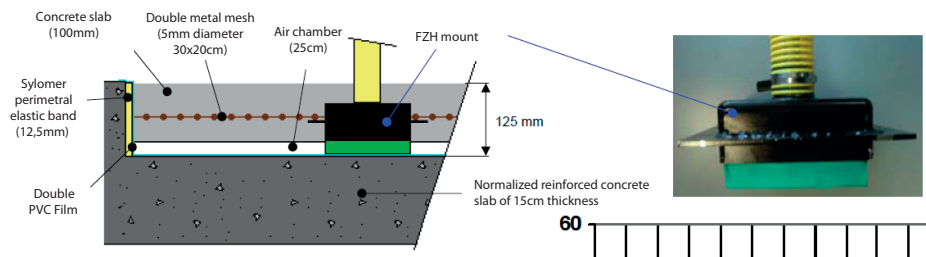
Reduction of impact noise on normalized slab according to UNE en ISO 140-8:1998

Laboratory measurements

Test specimen: Floating reinforced concrete slab of 100mm thickness, elevated at 25mm with a system of antivibration mounts as described on the above picture.

Employed supporting slab: Reinforced concrete slab of 15cm thickness, tested in 26/06/09 ($L_{n,0}$)

Volume of the receiving room: 64.7m^3
Volume of the source room: 53.6m^3
Surface of the test specimen: 13.86m^2 (3.3x4.2m)
Estimated specific mass: 250Kg/m^2
Chamber temperature:17.3 C°
Chamber Hygrometry: 77%

Weighted gain according to UNE-EN ISO 717-2:1997 ΔL_w ($C_{I,\Delta}$):   34 (-11) dB

These results rely on the realized tests under an artificial source under Laboratory conditions (engineering method)
* Ln ≤ indicated value and ΔL ≥ indicated value (measurement limits)
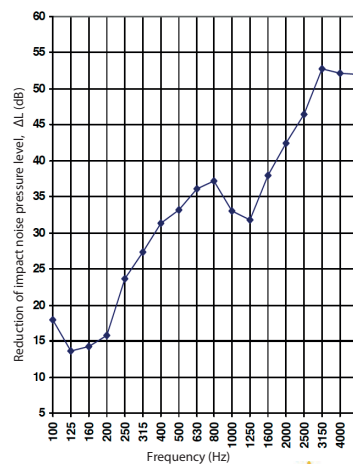
f (Hz)	L_n (dB)	$L_{n,0}$ (dB)	ΔL (dB)
100	47,2	65,1	17,9
125	46,9	60,5	13,6
160	53,2	67,5	14,3
200	49,5	65,3	15,8
250	41,8	65,4	23,6
315	37,3	64,7	27,4
400	34,5	65,9	31,4
500	34,3	67,5	33,2
630	31,9	68,0	36,1
800	32,9	70,1	37,2
1000	37,3	70,4	33,1
1250	38,9	70,7	31,8
1600	32,5	70,5	38,0
2000	27,8	70,3	42,5
2500	22,9	69,3	46,4
3150	15,3	68,1	52,8
4000	14,1	66,2	52,1
5000	11,6	63,6	52,0
$L_{n,w}$ / $L_{n,0,w}$	41	76	

Airborne insulation according to UNE EN ISO 140-16:2007

Laboratory measurements according to UNE ISO 140-3:1995

Test specimen: Floating reinforced concrete slab of 100mm thickness, elevated at 25mm with a system of antivibration mounts as described on the above picture.

Employed supporting slab: Reinforced concrete slab of 15cm thickness, tested in 26/06/09 ($R_{WITHOUT}$)

Volume of the receiving room: 64.7m^3
Volume of the source room: 53.6m^3
Surface of the test specimen: 13.86m^2 (3.3x4.2m)
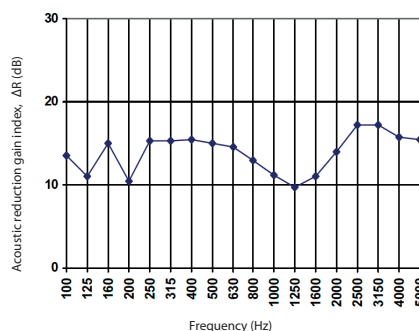Estimated specific mass: 250Kg/m^2
Chamber temperature:17.3 C°
Chamber Hygrometry: 77%

Isolation gain indexes: ΔR_A: 13 dBA
ΔR_w :   13 dB
$\Delta(R_w+C)$:   13 dBA
$\Delta(R_w+C_{tr})$:   13 dBA

Evaluation based in laboratory measurements according to engineering method.
* R with and ΔR ≥ indicated value (measurements limits).

f (Hz)	R_{with} (dB)	$R_{without}$ (dB)	ΔR (dB)
100	48,4	34,8	13,6
125	53,7	42,6	11,1
160	54,6	39,6	15,0
200	58,1	47,6	10,5
250	63,0	47,7	15,3
315	67,6	52,3	15,3
400	70,4	54,9	15,5
500	71,0	56,0	15,0
630	72,3	57,7	14,6
800	72,8	59,8	13,0
1000	72,0	60,8	11,2
1250	71,9	62,2	9,7
1600	74,9	63,8	11,1
2000	80,8	66,8	14,0
2500	87,5	70,3	17,2
3150	91,2	74,1	17,1
4000	91,9	76,1	15,8
5000	92,3	76,9	15,4
R_w (C; C_{tr})	72 (-2; -7)	58 (-2; -7)	
R_A	70,9	57,5	