



ACUSTICAL REPORT

Código

01PR-09-071

REV N°: 0

**SOUND INSULATION REPORT
PREMOSA SOLUTIONS**

**ACUSTIC INSULATION REPORT FOR DIFFERENT PARTITION SOLUTIONS OF PREMOSA
COMPANY**

The target of this report is to evaluate theoretically the sound insulation of different partition solutions (glazed and wooden partition) of company Premo. The calculation method uses empirical formulations according to the international regulations (UNE-EN ISO 12354-1 and UNE-EN ISO 717-1) and its made with the commercial software INSUL.

Pamplona, 22/05/15.

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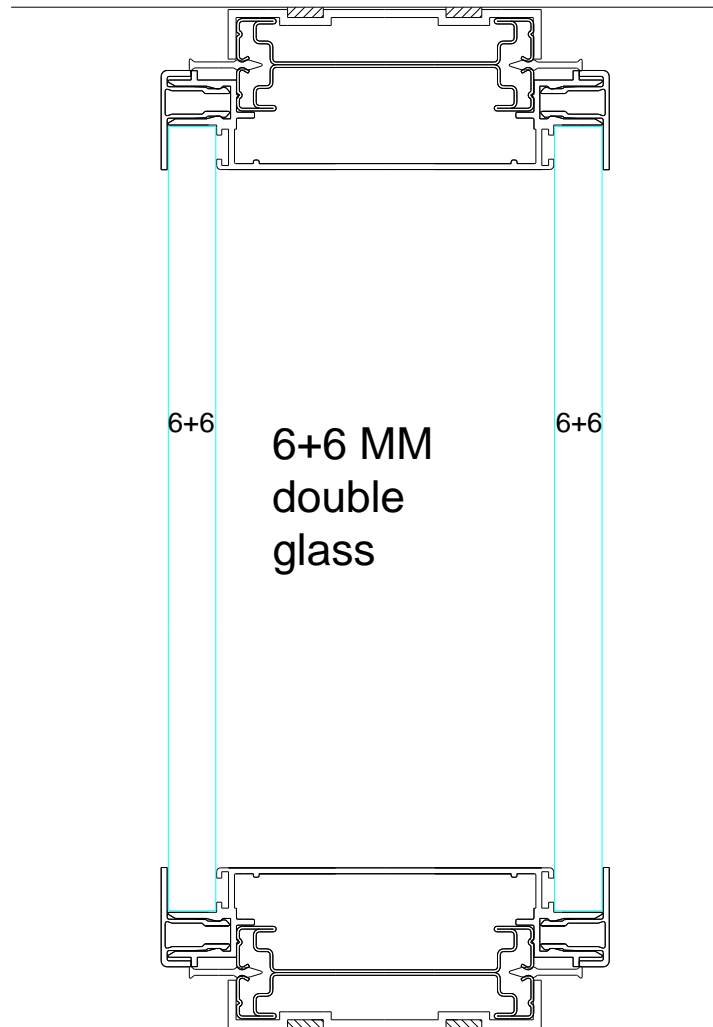
Código

SOUND INSULATION REPORT
PREMOSA SOLUTIONS

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1.- Glazed Solución



Glazed solution consists of two 6+6 mm laminated glass, an 89 mm air gap and other 6+6 mm laminated glass. The whole solution is joined by aluminum profiles as you can see in the image above.

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Drawn Up date

See pág. 1

Revision date

See pág. 1

Approbation date

See pág. 1



ACUSTICAL REPORT

Código

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01PR-09-071

REV N°: 0

Masa Superficial 30,0 kg/m²

Masa Superficial 30,0 kg/m²

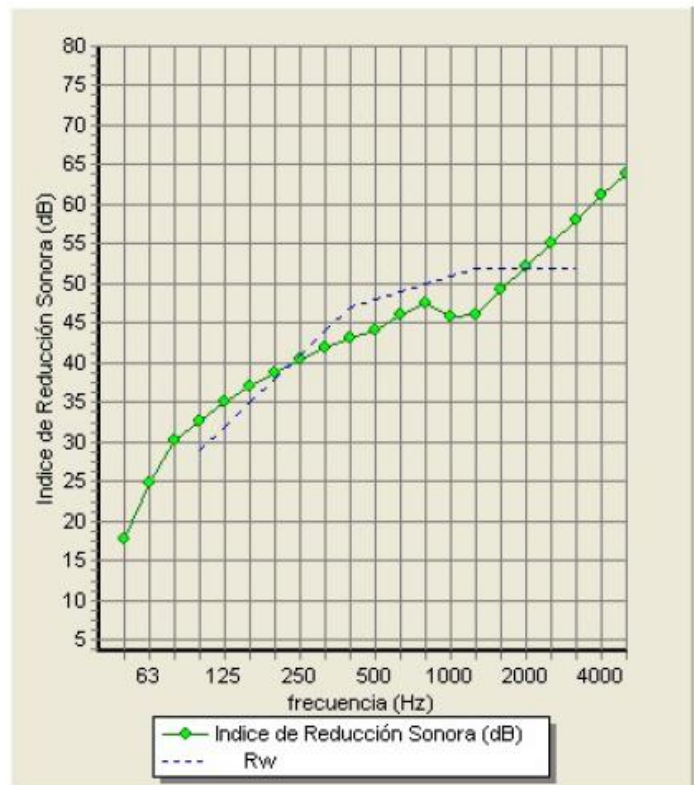
Frec. Crítica 1200 Hz

Frec. Crítica 1200 Hz

Amortiguamiento 0,06

Amortiguamiento 0,06

frecuencia (Hz)	TL(dB)	TL(dB)
50	18	
63	25	22
80	30	
100	33	
125	35	35
160	37	
200	39	
250	40	40
315	42	
400	43	
500	44	44
630	46	
800	48	
1000	46	46
1250	46	
1600	49	
2000	52	52
2500	55	
3150	58	
4000	61	60
5000	64	



With this insulation curve obtained by simulation, the global sound insulation is $R_w = 48$ dB. The comparable index for the CTE – Código Técnico de la Edificación (Technical Building code) is $R_A = 47$ dBA.

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Drawn Up date See pág. 1

Revision date See pág. 1

Approbation date See pág. 1



ACUSTICAL REPORT

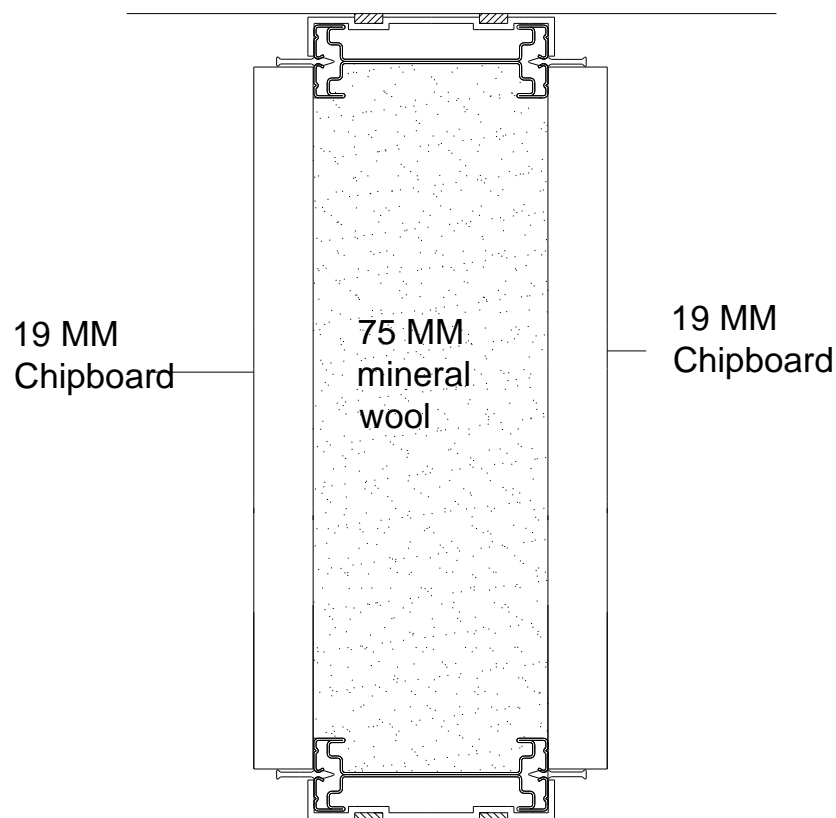
Código

**SOUND INSULATION REPORT
PREMOSA SOLUTIONS**

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REV N°: 0

2.- Wooden solution.



The wooden solution consists of a 19 mm chipboard, an 75 mm air gap with mineral wool inside and other 19 mm chipboard. The whole solution is joined by aluminum profiles as you can see in the image above.

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Drawn Up date

See pág. 1

Revision date

See pág. 1

Approbation date

See pág. 1

ACUSTICAL REPORT

Código

**SOUND INSULATION REPORT
PREMOSA SOLUTIONS**

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REV N°: 0

Masa Superficial 13,3 kg/m²

Masa Superficial 13,3 kg/m²

Frec. Crítica 1579 Hz

Frec. Crítica 1579 Hz

Amortiguamiento 0,03

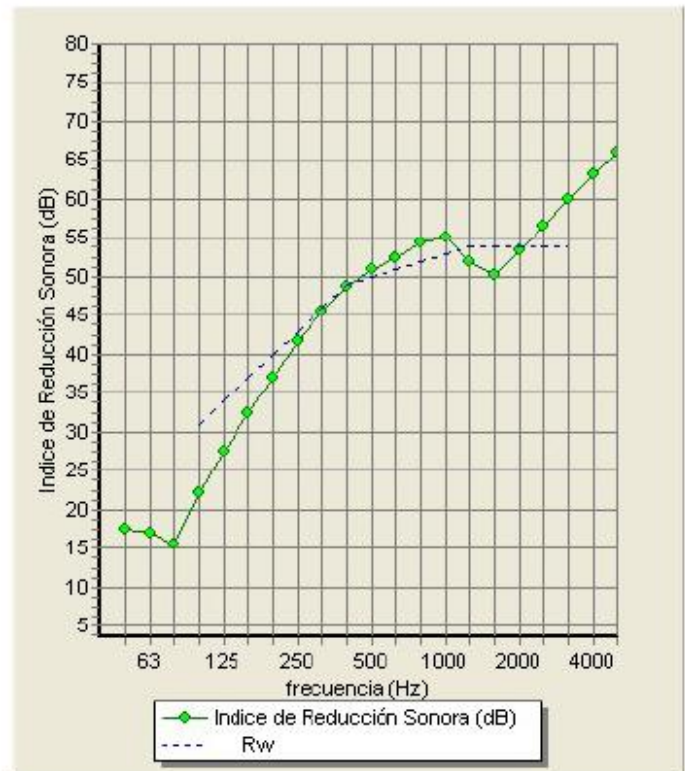
fo =85 Hz

Amortiguamiento 0,03


Tamaño del panel 2,7x4 m

Relleno Lana de Roca (60kg) Espesor 75 mm

frecuencia (Hz)	TL(dB)	TL(dB)
50	17	
63	17	17
80	15	
100	22	
125	28	26
160	32	
200	37	
250	42	40
315	46	
400	49	
500	51	50
630	52	
800	54	
1000	55	54
1250	52	
1600	50	
2000	53	53
2500	57	
3150	60	
4000	63	62
5000	66	



With this insulation curve obtained by simulation, the global sound insulation is $R_w = 50$ dB. The comparable index for the CTE – Código Técnico de la Edificación (Technical Building code) is $R_A = 46$ dBA.

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Código 01PR-09-071 REV N°: 0	SOUND INSULATION REPORT PREMOSA SOLUTIONS	

3. CONCLUSIONS.

1. This report shows the results for the simulation of the sound insulation for different partition solutions of PREMOSA COMPANY.
2. The solution of glazed enclosure formed by a laminated glass of 6+6 mm, 89 mm air gap and another 6+6 mm laminated glass, reaches an insulation of 48 dB $R_W = 48$ dB. The comparable index for the CTE – Código Técnico de la Edificación (Technical Building code) is $R_A = 47$ dBA.
3. The solution of the wooden partition, formed by a 19 mm Chipboard, 75 mm air gap with mineral wool inside and another 19 mm chipboard, reaches an insulation of $R_W = 50$ dB. The comparable index for the CTE – Código Técnico de la Edificación (Technical Building code) is $R_A = 46$ dBA.
4. It is necessary to remember that the acoustic software simulate the insulation produced by the solution of partition with indirect transmission equal to zero, i.e., the acoustic insulation that could be obtained in laboratory tests. To achieve these values, it is important to reduce possible losses of insulation that occur in the joints of different parts of the walls (special care in the sealing between profiles and chipboard or glass) and at the workplace, between the partition and the rest of the walls (floors and walls).

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