

# Acoustic Test Certificate

Wednesday March 10<sup>th</sup>, 2021

Supplier: Serfloor Australia Pty Ltd (Unit 1, 151-159 Princess Highway, Hallam, VIC, 3803, Australia)

Sample Description: SPC Hybrid with 2 mm IXPE foam underlay 1800 x 228 x 7.0mm Plank.

Test Method: AS/ISO 140:7-2006

Acoustic Test Data:

1/3 Octave Band Centre Frequency (Hz)	Impact Sound Pressure Level $L'_{nT}$ (dB)		$\Delta L$ (dB) SPC Hybrid IXPE foam underlay	Normalized Impact Sound Pressure Level of Test sample (dB)
	Base Floor	SPC Hybrid 1800x228x7mm IXPE foam underlay		
100	52.4	49.7	2.7	54.9
125	51.7	51.0	0.7	58.4
160	54.9	53.1	1.8	60.1
200	54.6	52.7	1.9	60.6
250	55.4	51.4	4.0	60.3
315	57.0	51.4	5.6	60.2
400	57.1	49.7	7.4	57.7
500	57.4	47.2	10.2	55.3
630	58.5	47.2	11.3	54.4
800	59.9	42.7	17.2	49.1
1000	60.6	38.8	21.8	44.6
1250	61.9	34.2	27.7	39.6
1600	62.7	29.3	33.4	34.4
2000	63.8	25.9	37.9	30.5
2500	64.4	22.8	41.6	26.8
3150	70.0	22.4	47.6	25.9
4000	72.0	22.8	49.2	26.2
5000	66.3	19.7	46.6	22.6
	<b><math>L'_{nT,w} = 71</math></b>	<b><math>L'_{nT,w} = 46</math></b>	<b><math>\Delta L_{w} = 25</math> dB</b>	<b>AIIC = 57</b>

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The impact sound insulation performance of a system is denoted by a single value descriptor, the weighted impact sound insulation  $L_{n,w}$  (for laboratory tested rating) or  $L'_{nT,w}$  (for field tested rating). The single value descriptor allows for easy comparisons between different systems. The lower the number, the better the impact sound insulation performance.

The rating of the system is determined by comparing the measured noise levels in the receiving room against a set of reference values between one-third-octave band centre frequency ranges of 100Hz to 3150Hz, as specified in AS/NZS ISO 717.2-2004.

The impact sound insulation performance can also be indicated by a single value of descriptor known as the Impact Insulation Class (IIC) rating. The IIC is derived from ASTM E1007-14 and ASTM E989-06 standard methods.

The tested floor/ceiling system consisted of a 7 mm thick hybrid plank with 2mm IXPE foam underlay floor covering (sample 139767 – SPC hybrid with 2 mm IXPE foam underlay 1800 x 228 x 7.0mm Plank), installed atop the base floor construction consisting of a 270mm thick concrete slab. This system achieved a weighted standardised impact sound insulation rating of  $L'_{nT,w}$  of 46 and a weighted impact sound improvement index of  $\Delta L_{w}$  25 dB. This is comparable to an Apparent Impact Insulation Class (AIIC) rating of 57.



**SPC Hybrid plank with 2mm IXPE foam underlay on top of the base floor**



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