

# WONDERWOOD PRO-INSUL UNDERLAY

INSPIRED BY NATURE, CRAFTED BY PASSION

Collection 2018/2019



WONDERWOOD

# TECHNICAL

The Building Code of Australia (BCA) provides minimum construction standards for various building classes, including acoustic privacy.

The BCA requirement is a weighted, standardised impact sound pressure level, with spectrum adaptation term Ci, of less than or equal to 62 Lnt, w+Ci. In response to the BCA, the Association of Australian Acoustic Consultants (AAAC) has developed the star rating system to rank the acoustical quality of apartments and provide guidance in the design and construction process.

Wonder Wood's Pro-Insul underlay has been tested to ensure acoustic privacy compliance.

AAAC Star Rating	FIIC	L'nTw
2 Star	45	65
3 Star	55	55
4 Star	60	50
5 Star	65	45
6 Star	70	40

## DEFINITIONS OF NOISE METRICS

Noise metrics are used to determine the effectiveness of sound insulation.

**FIIC** - Field Impact Insulation Class is a single number rating of how well a floor system attenuates impact type sounds such as footsteps. This is calculated from third-octave band normalised impact sound, pressure level data and referenced to 10 m<sup>2</sup> as described in ASTM E989. The higher the single-number rating of a product, the better its impact insulation performance.

**L'nTw** - This refers to the weighted standardised Impact Sound Pressure Level when measured in situ, referenced to a reverberation time (RT60) of 0.5 seconds. This sound insulation measurement is used by the AAAC to determine their respective Star Rating.

## MEASUREMENTS

Assessment and field measurement of impact sound transmission through floor and ceiling system are carried out in accordance with the following criteria and procedures:

### AS/NZS ISO 140.7-2006

(Acoustics – Rating of sound insulation in buildings and of building elements.)

### AS/NSZ ISO 717.2-2004

(Acoustics – Rating of sound insulation in building elements.)

## TEST CONDITIONS

The acoustic test shown on this sheet carried out on 22 Nov 2018 by KOIKAS ACOUSTIC PTY LTD occurred on a 200mm thick concrete slab, approximately 80mm deep, and a suspended ceiling cavity with 13mm thick plasterboard ceiling. To view our full testing report, please send a request by email with testing reference: 2754C20181119mfcWonderwoodFloors.

# PRO-INSUL 2mm Foam Underlay

## SPECIFICATION

Type	Foam	
Roll Size	50 m <sup>2</sup> and 20 m <sup>2</sup>	
Thickness	2 mm	
Width	1 meter	
Overlap Moisture Barrier	Yes	
Peel and Stick Tape	Yes	

## TEST RESULTS

System Tested	(L'nTw)	FIIC	AAAC Star Rating
12 mm Laminate Flooring	44	61	5
15 mm Engineered Flooring	42	63	5
20 mm Engineered Flooring	43	62	5

# PRO-INSUL 4mm Rubber Underlay

## SPECIFICATION

Type	Rubber	
Colour	Multicolour	
Surface	Granular Texture	
Roll Size	1 m x 1 m; 1 m <sup>2</sup> /Sheet	
Thickness	4 mm	
Weight	3.5 kg/Sheet	
Density	970 kg/m <sup>3</sup>	

## TEST RESULTS

System Tested	(L'nTw)	FIIC	AAAC Star Rating
12 mm Laminate	44	61	5
15 mm Engineered Flooring	42	61	5
20 mm Engineered Flooring	44	61	5



PRO-INSUL - 2MM Foam Sample



PRO-INSUL - 4MM Rubber Sample



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