acoustica®
the quiet Australian

IMPACT

AngelStep® 3D

convoluted acoustic underlay

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convoluted acoustic underlay

AngelStep® 3D can easily achieve the highest acoustic rating of 6 stars. This ultra high performance acoustic underlay is used when no other underlay can deliver the required result.

AngelStep® 3D greatly reduces impact noise below the floor, and enhances the floor performance, exceeding the standards set out in the Building Code of Australia. AngelStep® 3D is designed to reduce the transmission of impact sound generated by footfall noise.

AngelStep® 3D has been designed for use in apartments and townhouses, upmarket housing and professional office and consulting suites where residents require the best performance as mandated by strata management or executive committees.

AngelStep® 3D performs at it's highest when used on concrete slabs that exhibit very poor acoustic properties. The exceptional perfomance is achieved through a combination of dissipation and absorption of sound energy through the material. This is due to the molecular and physical properties of the AngelStep® 3D.

The outstanding performance of AngelStep® 3D is due to its unique convoluted construction.

- No glues or binding agent are present in this product.
- The composition fibres are held together by going through a double needling process.
- This manufacturing process guarantees uniform resilience throughout the material.
- The polyester will not degrade or breakdown over time, resulting in consistent acoustic performance for the lifetime of the floor.
- Due to the unique design, the convolutions in the face of the underlay, create the perfect structure to reduce the sound of footfall and other sources of impact noise, travelling through a concrete subfloor.
- AngelStep® 3D is supplied in tiles 1200x1200mm with a combination thickness of 17/8mm.

Key benefits

- Exceptional acoustic performance
- High impact sound absorption
- Water & most chemical resistant
- Will last the life of the flooring material
- Easy to install
- Zero VOC's, zero emissions, non toxic
- Australian designed & manufactured

Fire Ratings

AS ISO 9705-2003

- classification Group 1 ; (SMORGArc) <100m2/s2; as required by BCA C1.10; tested 16/05/2012 BRANZ FI 4871
- ISO 9705 1993
- classification Group 1-S; smoke production rate

VOC emissions tested by Cetec Pty Limited (CV080408) for chemical emission & is classified as low VOC.

VOC Concentration 0.01mg/m^3

Acoustic tapping test

Acoustica's product range of noise control solutions for flooring systems has been repeatedly independently tested to consistently achieve five and six stars in the Association of Australian Acoustic Consultants (AAAC) star rating system. However, results will vary depending on the construction, substrate and surface materials of each project.

Acoustica can refer you to a reputable acoustic consultant to conduct site specific testing* who will provide certification for each project site, prepared in accordance with the International Standard ISO 16283-1:2014 Acoustics -- Field measurement of sound insulation in buildings and of building elements -- Part 1: Airborne sound insulation (refer ISO 140-7:1998).

There is a charge for this service*.

Tapping machine

*each building is different, to achieve AAAC 6 star rating we recommend an onsite tapping test to tune the solution to suit your project.

Technical

The 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.

However, the reality is that this is in most cases unacceptable to occupants and can result in the need for costly reparation works.

In response 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.

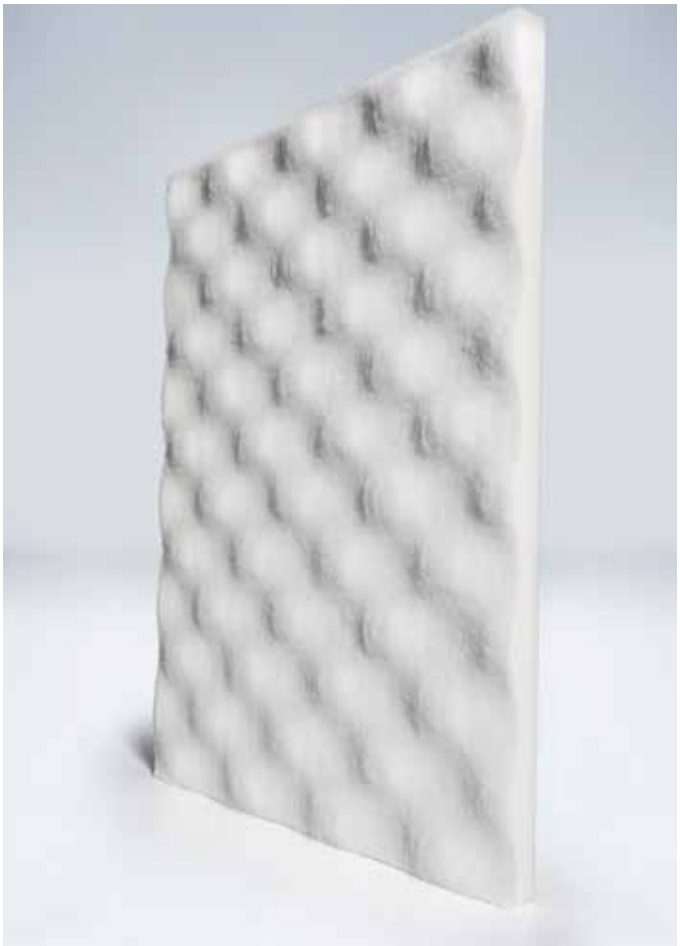
Custom & specialist solutions

Acoustica are specialists in refining solutions to tune your project to achieve an optimal outcome.

Please contact us for information and advice.

Features & Benefits

- Outstanding impact and sound attenuation
- Resistance to moisture absorption & rot
- Suitable for underfloor heating
- Environment friendly
- Will last the life of any floors



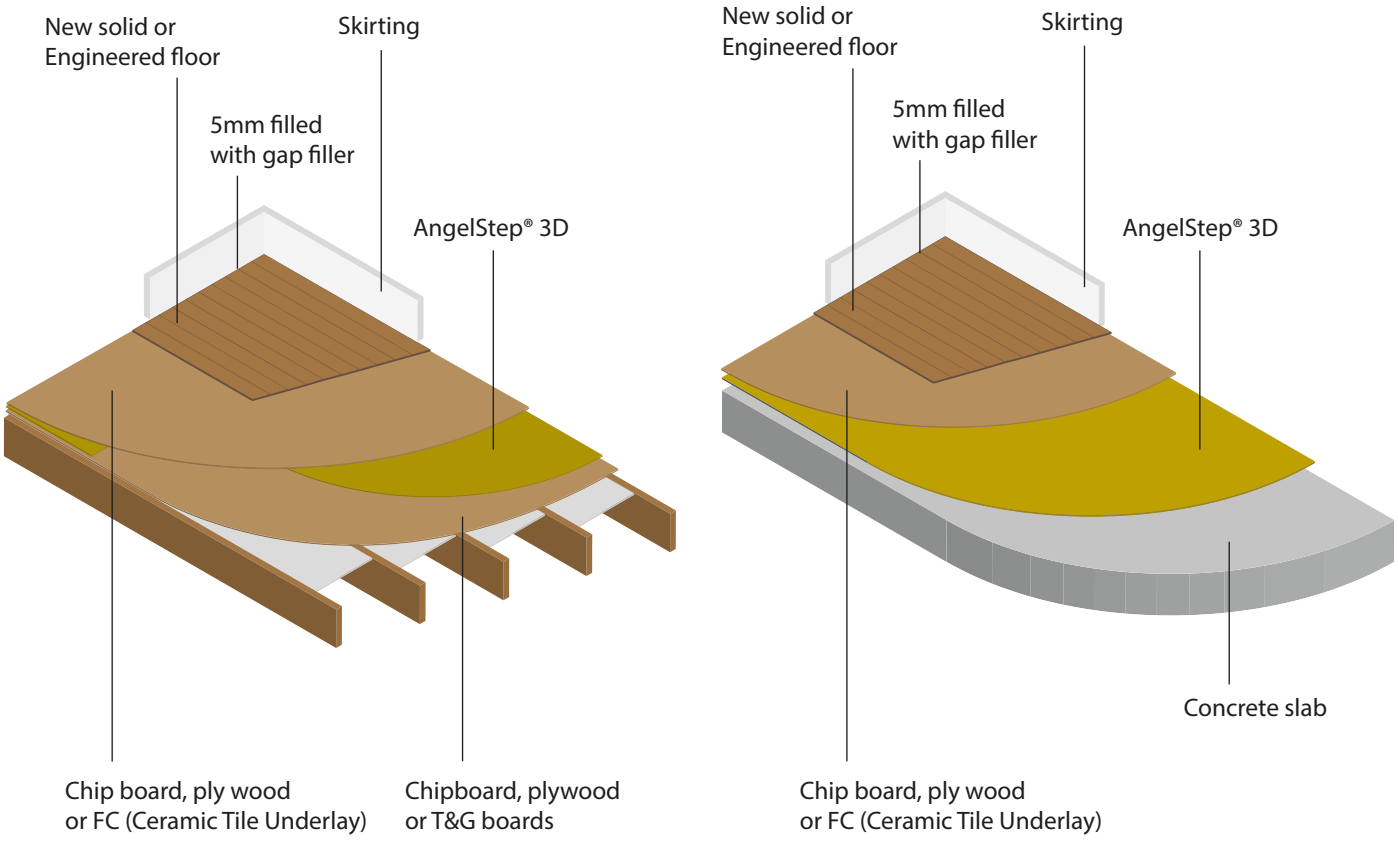
Application

AngelStep® 3D was primarily designed to reduce the transmission of impact sound generated by footfall noise in extremely poor performing concrete slabs.

AngelStep® 3D is commonly used under reinforced screed beds as a complete system with tiles, marble and stone or other selected floor coverings. AngelStep® 3D is also suitable as a system, under fibre cement sheets or plywood sheets, with selected floor coverings such as solid timber, laminate, hybrid or engineered timber floors.

	Impact Isolation of floors (Lnt'w)	AAAC Description
6 star	40	Just audible or not audible
5 star	45	Just audible
4 star	50	Audible
3 star	55	Clearly audible
2 star	65	Clearly audible
BCA	62	Clearly audible

Typical installation options on a timber floor & concrete slab

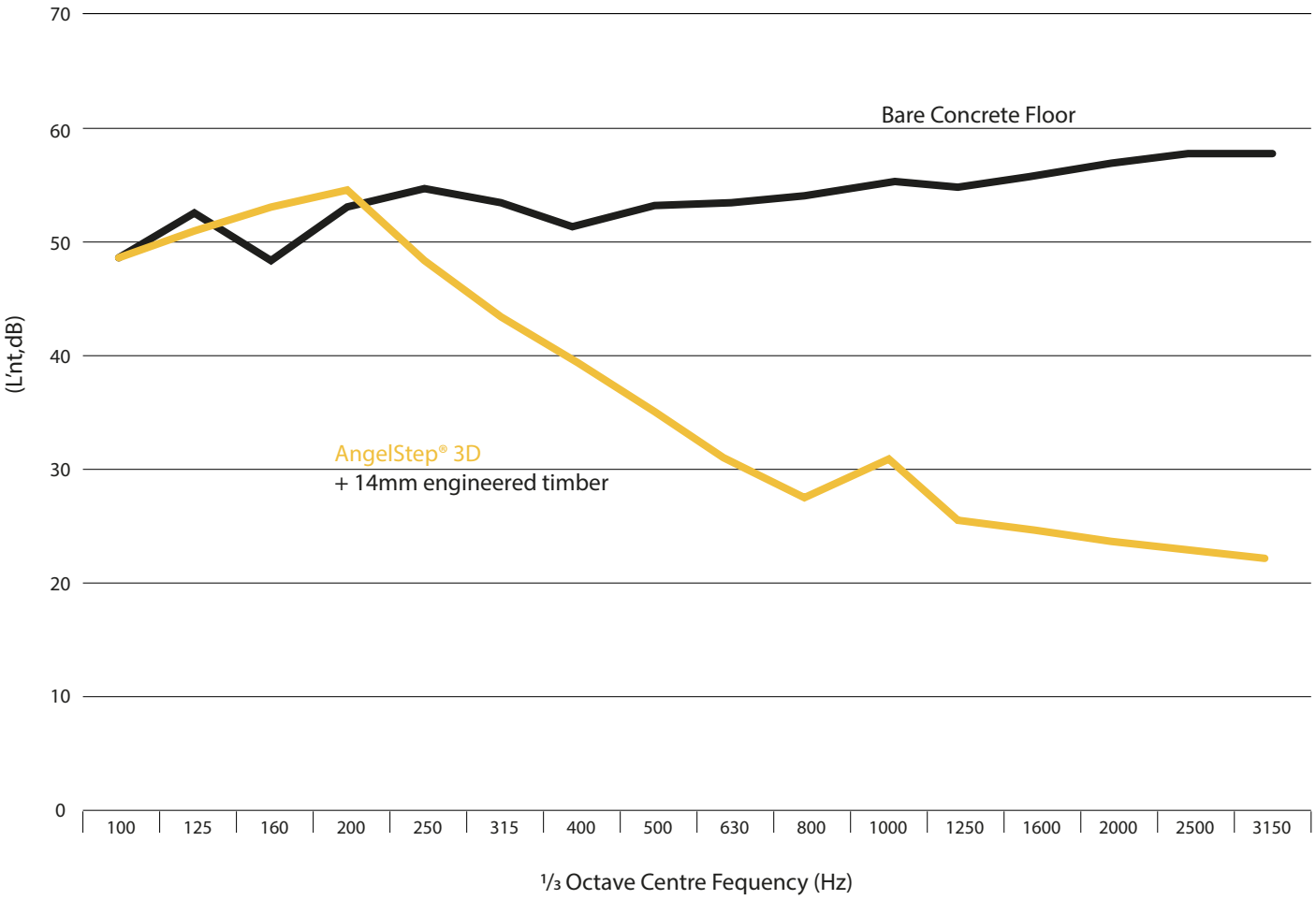


**For some floor finishes, an intermediate layer (eg light concrete screed, tongue & groove plywood or chipboard, FC sheeting) will have to be installed.

Our acoustic specialists will advise how to perform the installation.

Floor Impact Testing

Bourke St, Redfern - Wilkinson Murray, Ref: ACO270919 BJM



Test Results

Bare concrete: L'nT,w 63.
Second line; AngelStep® 3D + 14mm laminated timber: L'nT,w 44.

In the case above, AngelStep® 3D installed under a 14mm laminated timber, was one of the best performing system in terms of floor impact noise improvement compared to the base floor, with improvement of up to 19 points in the L'nT,w rating.

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