

AngelStep® 48P

acoustic underlay



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Apartment dwellers have long complained about impact noise intrusion due to footsteps and clatter of utensils and articles dropped on to the floor in apartments overhead.

In addition to this impact noise, many occupants have also endured excessive airborne noise transmitted from powerful TV and audio systems.

AngelStep® construction combines a highly effective support and cushion. It provides maximum performance for minimum thickness combining an impact and vibration damping and sound absorber with a decoupled noise barrier.

The resilient polyester core layer absorbs impact energy and residual airborne noise from above and below, transforming wave vibrations into heat energy. The 'decoupled flexible floating' top noise barrier greatly reduces airborne sound waves - noise above or below the floor - and complies with the Building Code of Australia in respect to separating floors between adjoining dwellings. When AngelStep® is installed, it delivers optimum performance and comfort for both resident and neighbours alike

Compared to products made by others, Acoustica's AngelStep® range of underlays have been shown in independent comparison tests to offer a more effective acoustic treatment, a thinner solution, that is also cost effective.



AngelStep® 48P acoustic underlay

The unrivaled performance of AngelStep® 48P was designed for use in apartments and townhouses, upmarket housing and professional office and consulting suites where discerning buyers expect performance beyond that mandated by the minimum requirements of the BCA.

AngelStep® 48P has been developed to suit construction over a concrete slab or light timber joists floor system.

It is 8mm thin & is supplied in tiles 1150x1150mm (1.3225m²)

AngelStep® 48P achieves this with its unique and patented polymer construction. No degradation of acoustic properties due to structural collapse under the weight of heavy furniture, castors and appliances.

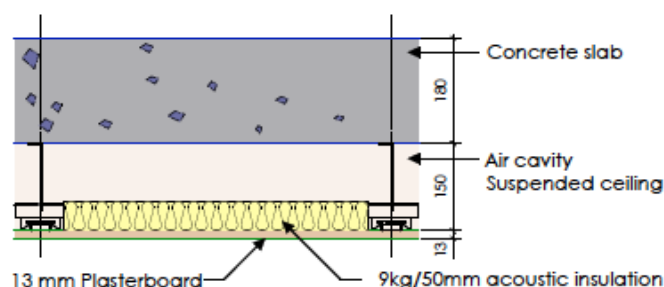
The product has been independently tested by Marshall Day Acoustics; document 002 2007125 10/12/2015 to achieve a result **L_nt,w 40** - equivalent to **AAAC rating 6 stars**. The base floor/ceiling construction, as shown in diagram 1,

AngelStep® 48P is designed for a maximum traffic load of 65KN/m² (approx. 6,500kg/m²)

Key benefits

- Outstanding acoustic performance (up to AAAC 6 stars*)
- High sound absorption
- High impact insulation & strength
- Water & most chemical resistant
- Will last the life of the flooring material
- Easy to install
- No VOCs, no smell
- 8mm thick
- Australian designed & manufactured
- Global Green Tag Certified

Tested concrete floor sketch



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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 provide site specific testing and 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.

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 C_i , of less than or equal to 62 Lnt,w+ C_i .

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.

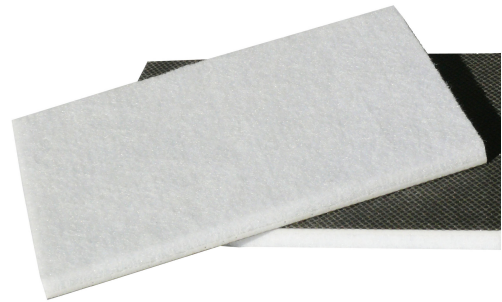
Custom & specialist solutions

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

You are most welcome to contact us for information and advice.

Features & Benefits

- * Outstanding impact and sound deadening
- * Resistance to moisture absorption & rot
- * Suitable for underfloor heating
- * Environment friendly
- * Help at reducing reverberated sound in the room
- * Will last the life of any floors



Application

AngelStep® 48P was primarily designed for carpet tiles & ceramic tiles

The combination of a noise barrier & sound absorbent resilient layers test both impact & airborne noise.

This material is suitable and can also be installed under** solid timber floor, vinyl "klip" planks and engineered timber floor,

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

Our engineers will advise how to perform the installation.

	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

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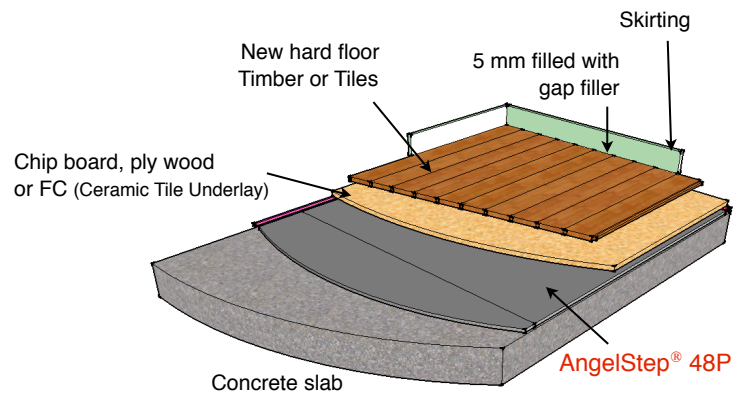
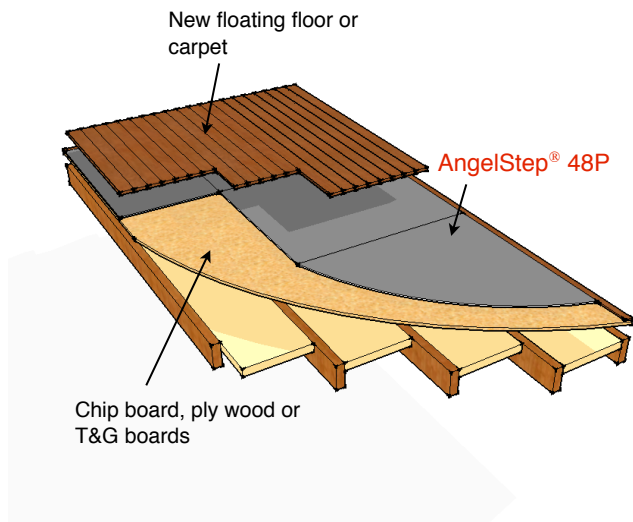
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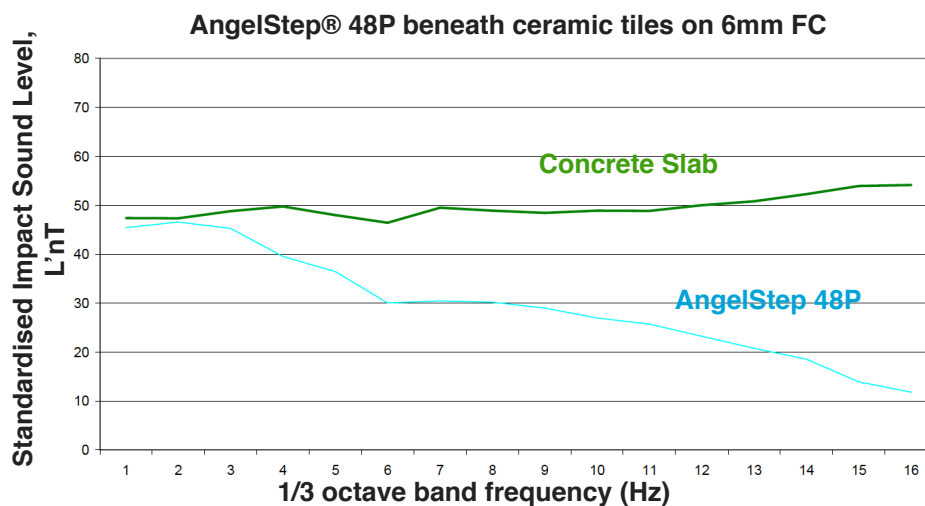
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Installation example on timber & concrete



Acoustic test: ceramic tiles on AngelStep® 48P



Various floor impact noise tests of the AngelStep® acoustic underlays have been conducted under field conditions on masonry / concrete floor system.

In the case above**, AngelStep® 48-10mm under ceramic tiles on a 6mm FC underlay was the best performing system in terms of floor impact noise improvement compared to the base floor installation, with improvements of up to 24 points in the $L'_{nT,w}$ rating**.

**Extracted acoustic test results performed by Marshall Day Acoustics - Report 002 2007125



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