



AngelStep[®] 48P & 484P

Acoustic Flooring Underlay

AAAC 6 Star acoustic performance for impact and airborne noise

AngelStep[®] flooring underlay combines premium acoustic performance with minimum added floor height.

AngelStep[®] achieves the highest possible AAAC (Association of Australian Acoustical Consultants) 6 Star rating for tile and timber flooring on a concrete substrate (test report No: 002 2007125).

✓ Features:

- ✓ Impact Isolation Absorber combined with airborne sound barrier
- ✓ Superior performance with minimum underlay height
- ✓ Water Repellent
- ✓ Indefinite life cycle. Will not rot or break down
- ✓ Ease of installation. Ideal for retrofit and new installations.
- ✓ Recycled materials. Textile material comprises up to 75% recycled material
- ✓ Continuous support between substrate and floor
- ✓ Cost Effective 6 star floor system
- ✓ Fire rated to Australian and International standards

The Building Code of Australia (BCA) regulates the minimum acceptable construction standard for buildings and in Clause F5.4 (a) stipulates the weighted normalised impact sound pressure level $L_{n,w}$ plus the spectrum adaption term C_i . The BCA minimum impact standard for a floor in a class 2 or 3 building is to be no more than $L_{n,w}+C_1 \leq 62$. AngelStep[®] with an impact sound pressure level on a concrete substrate of no more than $L_{n,w}+C_1$ of 40, exceeds the BCA requirements by 22 points.

Many apartment owners have become dissatisfied with the acoustic performance of buildings built to the BCA minimum impact standard of $L_{n,w}+C_1 \leq 62$, which some building industry members have interpreted as absolute rather than minimum requirements.

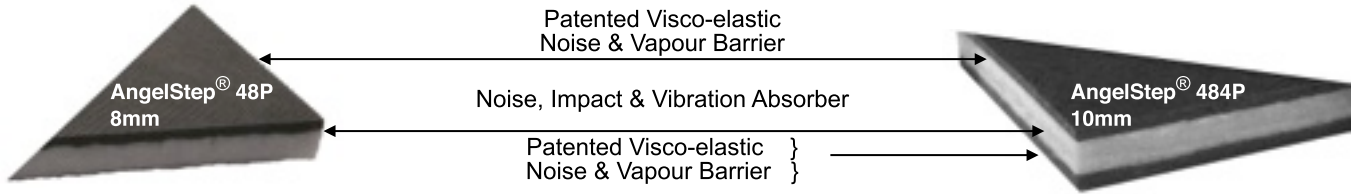
To address the concerns of the community and industry the AAAC introduced a star rating system to promote better standards of acoustic quality. AngelStep[®] acoustic underlay carries the maximum AAAC 6 Star rating compared to low end rating of $2^{1/2}$ for the BCA, $L_{n,w}+C_1 \leq 62$ minimum acceptable standard, a level of amenity which many owners, occupiers and developers will find unacceptable.

Acoustic Performance

| TYPE | AAAC Stars | L'n,w +Ci (Impact) | Indicative Sound Performance |
|----------------------------------|------------|--------------------|---------------------------------------|
| Acoustica AngelStep [®] | 5/6 | 36 | Generally just Audible or not Audible |
| 10mm Rubber Matting | 5 | 45 | Just Audible |
| 5mm Rubber Matting | 4 | 50 | Audible |
| 2mm Closed Cell Foam | 3 | 55 | Clearly Audible |
| BCA Compliance | | 62 | Clearly Audible |
| | 2 | 65 | Clearly Audible |

Construction

AngelStep® provides a highly effective support and cushion for timber, laminate and tiling flooring, is unaffected by water and will last the lifetime of the building.



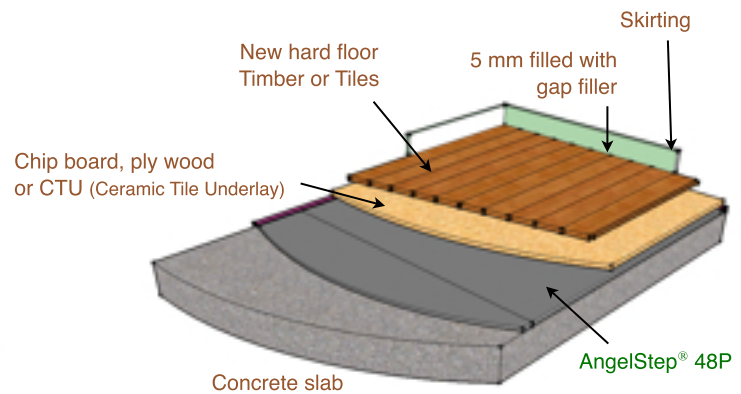
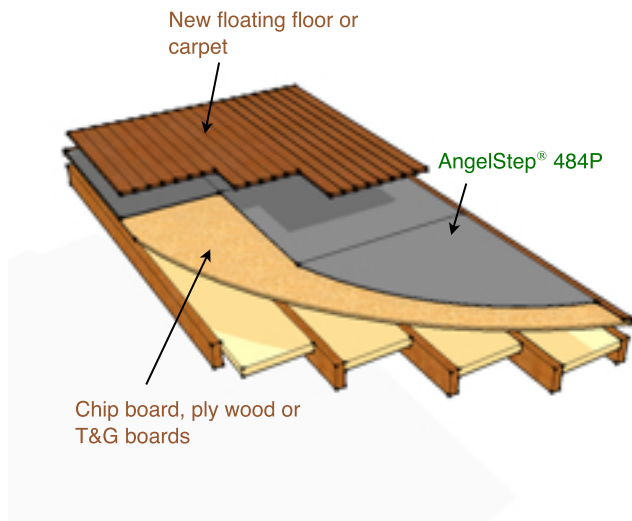
AngelStep® consists of an 8 mm thick impact, noise and vibration damping absorber made from 75% recycled materials combined with a decoupled 'visco-elastic' noise barrier. AngelStep® 48P with one noise barrier is used over a concrete substrate. AngelStep® 484P with the absorber sandwiched between 2 layers of 2mm thick noise and vapour barriers is for use over a timber substrate.

Supply Details

| AngelStep® | Barriers | Thickness | Size | Weight | Use Over |
|------------|----------|-----------|---------------|---------------------|-----------------|
| 484P | 2 | 10 mm | 1150 x 1150mm | 9 kg/m ² | Timber/Ply/MDF |
| 48P | 1 | 8 mm | 1150 x 1150mm | 5 kg/m ² | Concrete Floors |

| | |
|-----------------|-------|
| Flammability | = 0 |
| Spread of Flame | = 0 |
| Heat Evolved | = 0 |
| Smoke Developed | = 0-1 |

Installation



Test Results

AngelStep® test results are from Marshall Day Acoustics Report No: 002 2007125, 10 Dec 2007, with a base floor construction as follows:

The base floor/ ceiling construction, as shown in diagram, is considered to be representative of the performance of a typical masonry floor system that could be installed in an apartment that is required to achieve compliance with the impact sound insulation ratings detailed in the 2007 version of the Building Code of Australia; ie, $L_{n,w}+C_1 \leq 62$.

A timber or tiling floor installed with AngelStep® 48P achieves an $L_{n,w}+C_1$ 40 6 star performance with a floor/ceiling construction as per figure.

NOTE: The data listed in this document are based on tests conducted by independent Acoustic Engineers. Tests are indicative only and materials should be tested under actual service to determine their suitability for a particular purpose. Specifications are subject to change without notice.

