Distributor Cyprus: M. A. Total Build Ltd 149 Arch. Makarios III Avenue, 3021 Limassol, Cyprus

# AngelStep®]2 acoustic underlay



Tel: +357 99 121841

Fax: +357 25 381403

Email: info@totalbuild.com.cy



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.



The unrivalled performance of AngelStep® 12 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.

The AngelStep® 12 performance is due to its unique and patented construction - double needle punched high density sound absorbent polyester

It is 12mm thin & is supplied in tiles 1200x1200 (1.44m2)

Test results include

- Independently tested by Acoustic Dynamics 02/05/2016 to achieve AAAC 5 stars Lntw 41 FIIC 66 (test conditions 8mm thick ceramic tiles adhered to 2 layers 9mm FC sheet loose laid over AngelStep 12 loose laid over 240mm concrete slab & plasterboard ceiling (report 3681L001.JH.160502 test T025)
- In combination with AngelStep 630 Independently tested by Acoustic Dynamics 02/05/2016 to achieve AAAC 6 stars
  Lntw 36 FIIC 70 (test conditions 8mm thick ceramic tiles adhered to 2 layers 9mm FC sheet loose laid over 2 layers AngelStep 630 loose laid over 1 layer AngelStep 12 loose laid over 240mm concrete slab & plasterboard ceiling (report 3681L001.JH.160502 test T026)

## 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
- 12mm thin
- Global Green Tag Certified
- Australian designed & manufactured

## Fire Ratings

- AS ISO 9705 2003
- · Classification: Group 1
- (SMOGRArc): <100m2/s2
- As required by BCA C1.10

• Tested 16 May 2012, BRANZ (FI 4871) ISO 9705: 1993 Classification: Group 1-S

- Smoke Production Rate: <5.0m2/s
- As required by NZBC C/VM2
- EN13501-1:2007
- B s2, d0
- · Report 185157 22/07/2009

VOC Emissions tested by Cetec Pty Ltd (Report: CV080408) for chemical emission and is classified as low VOC. VOC concentration: 0.01mg/m<sup>3</sup>



### 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 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.



	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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Acoustica Pty Limited 6A Nelson Street Annandale NSW 2038 Australia +61 2 9550 2900 www.acoustica.com.au