quietlife™ SOLUTIONS

AcoustiWrap™

AAAC 6 Star Rated

Your answer to superior acoustic pipe wrap

www.ecolifesolutions.com.au

Low VOC
Zero ODP

ecolife™ SOLUTIONS

Building Code of Australia Provisions

The Australian Building Code Board as part of its regulatory responsibility to marry the competing views of the construction industry and the community, has introduced a series of mandatory changes to the acoustic construction requirements for multi-residential developments.

The ABCB observed increasing evidence that sound insulation requirements were not meeting changing community expectations.
Expectations were being influenced by :

1. Significant increases to property prices in multi-residential developments.
2. Increased low frequency noise levels within dwellings.
3. End users demanding a higher standard of living and working environment.
4. Open plan living and modern construction methodology has increased the need for improved acoustic treatments.

The BCA minimum level of performance has now been accepted by all states and territories of Australia and is summarised below.

Summary of Minimum Acoustic Requirements - Services, Soil Waste and Stormwater

Situation	Airborne Sound	Impact Sound
Walls/floors separating a duct, soil, waste or water supply pipe from a habitable room	Rw + Ctr = 40	N/A
Walls/ floors separating a duct, soil, waste or water supply pipe from a kitchen or non-habitable room	Rw + Ctr = 25	N/A

Summary of Minimum Acoustic Requirements - Partitions and Ceilings

Situation	Airborne Sound (Minimum)	Impact Sound
Walls between habitable rooms in adjoining units.	Rw + Ctr = 50	N/A
Walls between kitchens, toilets, bathrooms, laundries in adjoining units.	Rw + Ctr = 50	N/A
Walls between a bathroom, sanitary compartment, laundry or kitchen in one SOU from a habitable room (other than a kitchen) in an adjoining unit.	Rw + Ctr = 50	Walls to be discontinuous.
Walls separating a unit from a public corridor etc.	Rw = 50	N/A
Walls separating a unit from a plant room or lift shaft.	Rw = 50	Walls to be discontinuous.
Floors between adjoining units.	Rw + Ctr = 50	Max Ln, W + C = 62

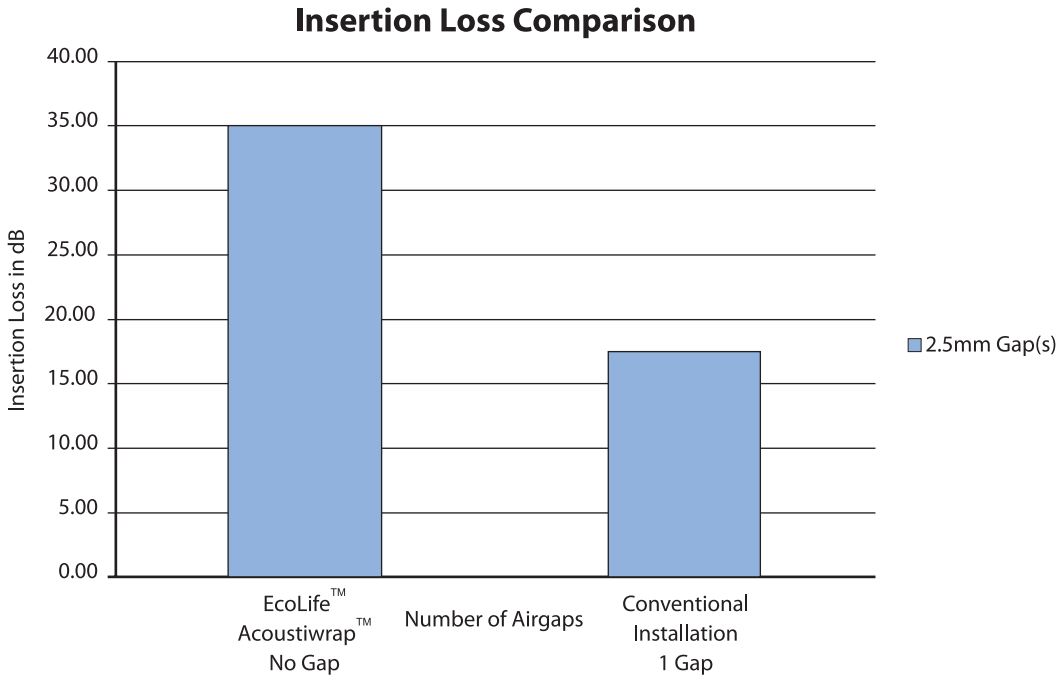
NOTE: Class 9c (Aged Care Units) Walls between SOUs, walls separating a unit from a kitchen, bathroom, sanitary compartment not being an associated ensuite), laundry, plant room or utilities room and floors separating SOUs are only required to be Rw45.

The only system tested for installation and material properties.

We tested a number of leading brands of acoustic pipe wrap including Acoustica, NuWave & Pyrotek and used real world installation issues to measure their real world performance.

Unlike a laboratory, a building site is not a perfect environment. Causing specific difficulty for pipe wrap installers is the challenge of accurately cutting and stripping standard rolls of acoustic pipe wrap insulation so that it fits perfectly and leaves no air gaps that will cause acoustic leakage.

Below is a graphical representation of the effects of improper installation of acoustic pipe wrap products and the air gaps that result from poor installation. The testing outcomes demonstrated graphically below show that an air gap as small as 2.5mm can result in a fall in acoustic performance by as much as 16dB.



Leading Edge Technology – Take the Guesswork out of Installation.

AcoustiWrap™ from Ecolife Solutions™ comprises preformed and precut acoustic pipe lagging sections, engineered, custom manufactured and delivered to your site:

- Preformed sections avoid the need to hand cut or manufacture pipe wrap sections on-site.
- Preformed sections improve installation times by at least 100% whilst offering acoustic assurity.
- Preformed joins for end joins and longitudinal joins, reducing the chances of acoustic leakage.
- Tested at the National Acoustic Laboratory for Superior Performance.
- A full range of sections to suit straight lengths, T's, stacks, bends and end caps to suit your individual project. (see page 7 for images of our preformed sections).

AcoustiWrap™ - Meeting the Building Code

AcoustiWrap™ offers a simple and reliable system to meet the building code in the treatment of services, soil waste and stormwater waste. It also offers a highly cost effective answer to design requirements in other building applications where superior acoustic performance is required.

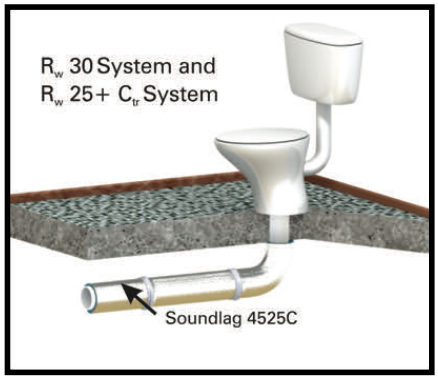
National Acoustic Laboratory - 6 Star Testing and Performance

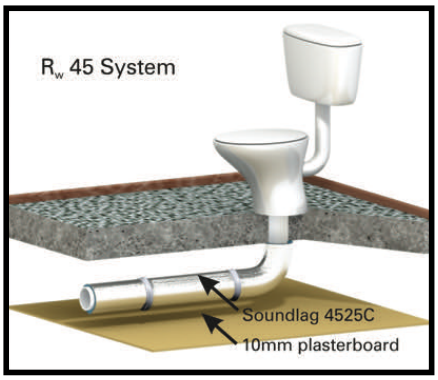
AcoustiWrapTM has been tested by Day Design at the National Acoustic Laboratory facility. Further assessment by PKA of Ecolife preformed sections which are manufactured from Pyrotek 4525C has borne that AcoustiWrap would qualify for a 6 Star Rating for Apartments and Townhouses on the basis of an intermittent noise and as defined by the Association of Australian Acoustic Consultants.

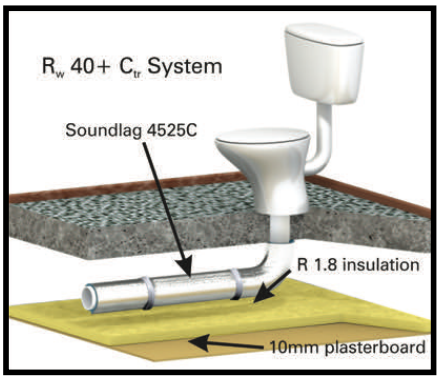
The acoustic treatment to waste soil pipes or the like is determined by the sound pressure level in the habitable space adjacent to where that soil pipe is located. The results of testing carried out by Day Design clearly demonstrated that a BCA compliant ceiling achieved 29 – 30 dB(A) in a well furnished apartment.

This noise level is more in line with the requirements set out in Australian Standard AS-NZS Recommended Noise Levels for Areas of Occupancy in Buildings.

As detailed below the treatment of PVC soil pipes using the Ecolife AcoustiWrap system when installed in accordance with the TICA specification and or Pyrotek Noise Control literature, together with at least a 10mm plasterboard ceiling and an appropriate insulation material will comply with with the BCA-NCC requirement of an airborne sound insulation of Rw+Ctr not less than 40. The lagging of the PVC pipe shall not be closer than 90mm from the upper surface of the plasterboard ceiling.







As shown above, AcoustiWrap™ which is manufactured using 4525C meets the requirements of Section 5.6 of the current Australian Building Code.

Insulation that is suitable will be 50mm glasswool at a minimum density of 10.8kg/m3 or alternatively an 80mm Tontine or Autex sound batt or blanket.

How Does it Work? - Superior Product + Easy Installation = Acoustic Integrity

Step 1.

Contact your local EcoLife Solutions™ representative to organise a take off from your hydraulic drawings.

Step 2.

Upon delivery of material, you will find each box labelled by section name and level number. Do not begin to apply insulation until pipe work pressure testing is complete.
Make sure the pipe work surface is clean and dry.
In instances where the AcoustiWrap™ product has been stored on site for a period of time, please ensure the material is clean, dry and free from oil and dirt or rips and tears.

Step 3 - Longitudinal Joins

Holding the preformed section in your hands, slice open the temporary forming to allow the relevant pipe sections to be opened.

Step 4 - Longitudinal Joins

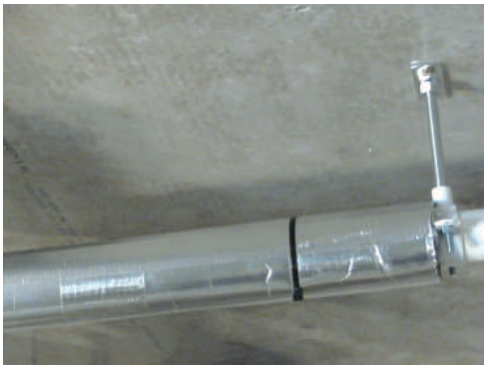
Snap the preformed section onto the relevant pipe section. Close the lap so the square edge is neatly tucked into the shaped longitudinal joint.

Step 5 - Securing Longitudinal Joins

Use small sections of pressure sensitive tape to secure the AcoustiWrap™ section around the pipe to provide initial positioning of the pipe section for fastening.

How Does it Work? - Superior Product + Easy Installation = Acoustic Integrity

Step 6



Once you are satisfied with the positioning and security of the AcoustiWrap™ section, the material should be taped with 48mm reinforced aluminium tape (wrapped around a minimum of 2 times at no greater than 600mm centres). A mechanical fastening should then be applied over any tape as shown. Where pipe sections are greater than 100mm in diameter, we recommend the use of 63mm reinforced aluminium tape.

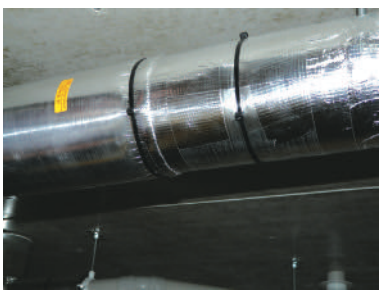
Step 7 - End Joins

The end joins offer a pre-routed male to female insertion joint. As you complete each longitudinal join simply position the male join of AcoustiWrap™ in such a way that it fits firmly inside the female insertion join. This joint system is available in both straights, bends, T's, branches and other preformed sections to suit standard plumbing fittings.

Step 8 - End Joins & Mechanical Fixings

Secure using Precision 493 pressure sensitive tape or approved equal and smooth out any air bubbles using the provided squeegee or blade.

Use mechanical fasteners such as zip ties at no more than 600 centres to safeguard against adhesive failure of pressure sensitive tape.

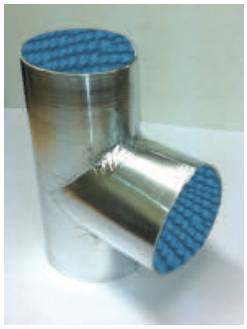


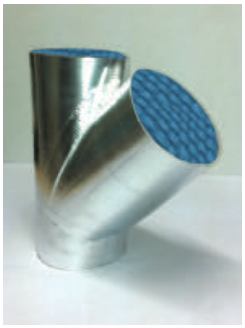
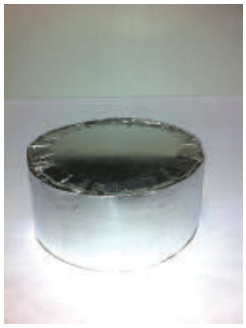
The Finished Product - How It Should Look

Installed properly AcoustiWrap™ will not only offer acoustic integrity, but visually is of a higher quality than many other products. Below is an example of AcoustiWrap™, demonstrating how acoustic pipe wrap should look. Note the product has no air gaps in between joins, consists of preformed sections and is secured using a mix of pressure sensitive tapes and mechanical fasteners.

Available Pre-Formed Sections

The following sections are examples of those available to suit a range of standard pipe dimensions and types. Also available are preformed sections to suit Sovent aerator pipe sections. We are also able to custom make sections to suit large pipe diameters and special projects.



Special Warning Regarding Pressure Sensitive Tapes

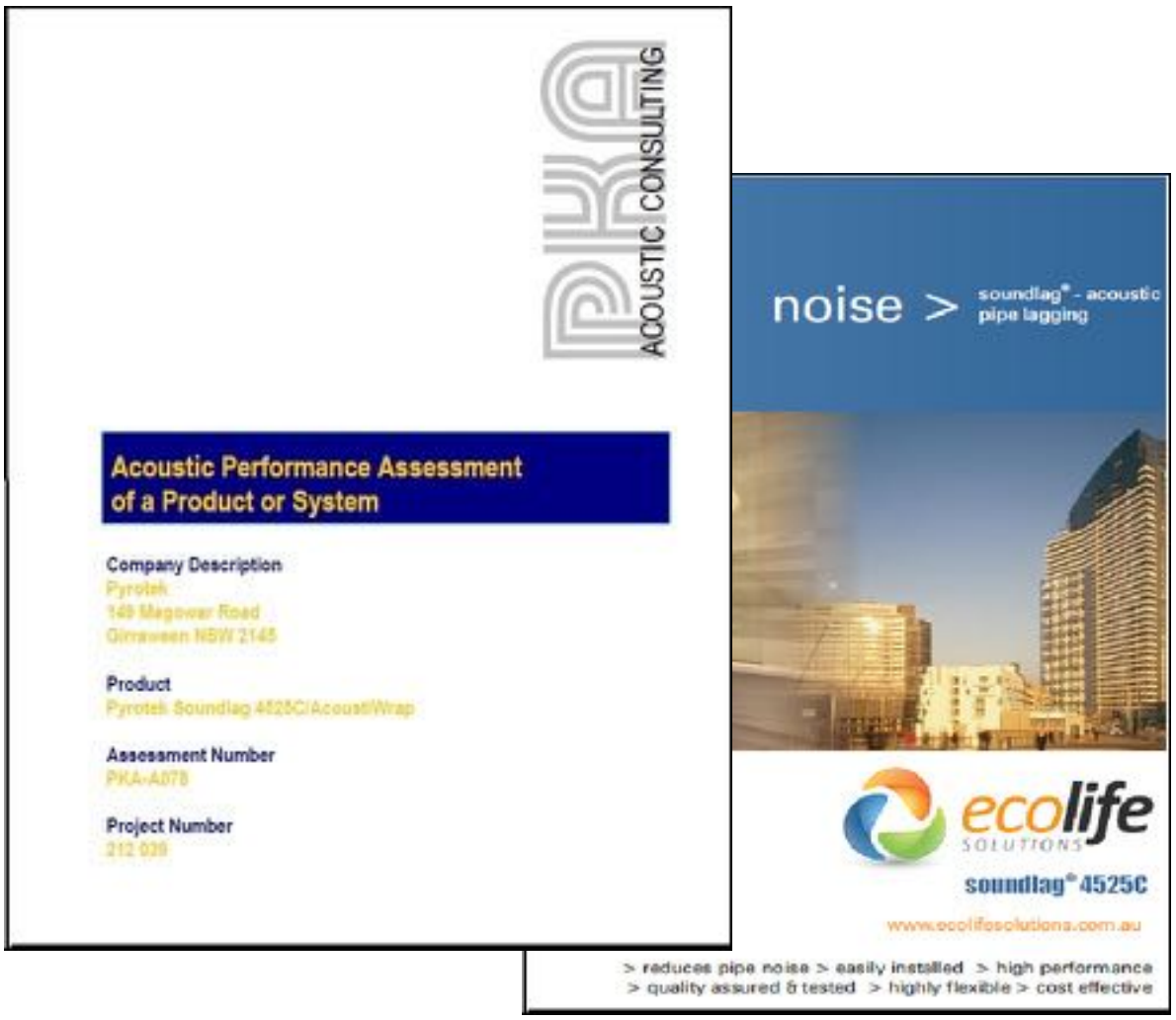
The industry body TICA (The Insulation Contractors Association of Australia Incorporated) now recommends the use of Mechanical Fastenings (zip ties or equal) to reinforce the fixing capacity of pressure sensitive tapes.

It should be noted that there is no longevity testing for the tapes traditionally used to secure pipe lagging products, thereby providing the risk of acoustic failure should the tape ever fail or let go.

It is in response to this and the industry recommendations that AcoustiWrap™ utilises mechanical fasteners.

For more details on the physical properties of pressure sensitive tapes and mechanical fastenings, please refer to our website www.ecolifesolutions.com.au or call your local EcoLife Solutions™ representative for a copy of this information.

AcoustiWrap the proven performer in acoustic lagging.



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THERMAL & ACOUSTIC INSULATION - DOMESTIC, COMMERCIAL & INDUSTRIAL

HEAD OFFICE: 23 Terrence Rd, Brendale
PO Box 5296 Brendale Qld 4500
P: (07) 3881 2300
F: (07) 3881 0388
info@ecolifesolutions.com.au
www.ecolifesolutions.com.au