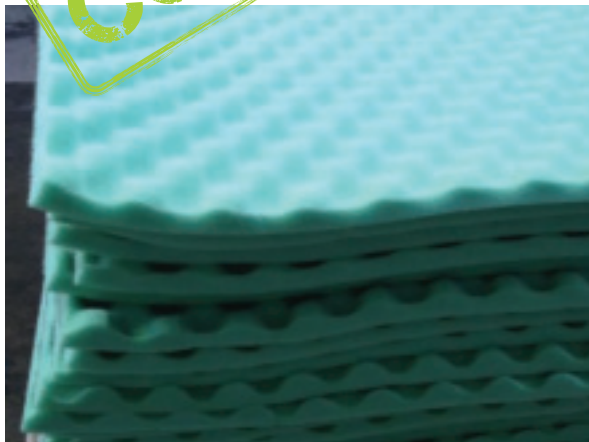
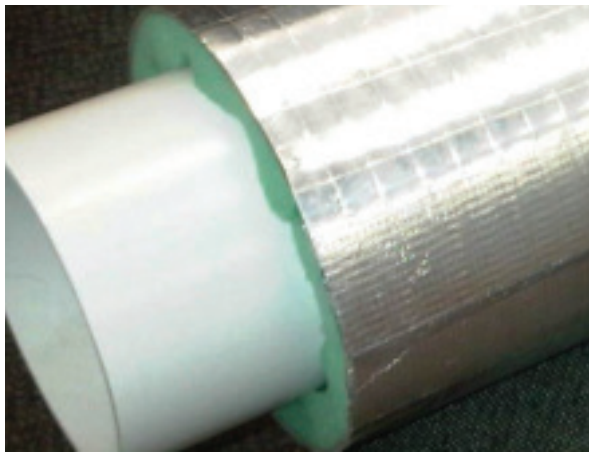
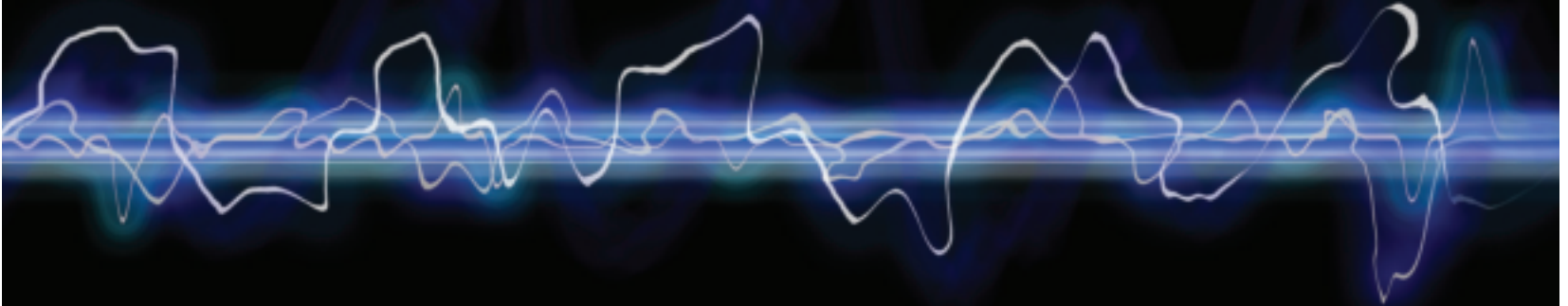


# ACOUSTIC PIPE INSULATION



High noise reduction  
Safe fibre free product  
Fire performance tested  
Zero - O.D.P.  
Meets low V.O.C.

MuWrap 5



## About Thermotec

*Thermotec Australia Pty Ltd has been manufacturing both thermal and acoustic products in Australia since 1987.*

*Producing and supplying a competitive World class range of products is the result of continual product development, manufacturing efficiencies, and a dedication to quality.*

*Thermotec products, such as NuWrap 5, are trusted to exceed performance expectations, and are designed to meet or exceed the Building Codes of the Countries, States, Provinces or industry categories where they are specified and installed.*



## Thermotec NuWrap 5 acoustic pipe lagging applications



- *Hospitals & Aged Care Facilities*
- *Hotel & Entertainment*
- *Commercial Buildings—Offices etc.*
- *Public Service Facilities & Buildings*
- *Shopping Centre Complex*
- *Multi Level Unit Housing*
- *Luxury Accommodation Buildings*

## Thermotec NuWrap 5 meets modern building requirements



*Construction materials of today are causing pipe and duct noise to be of more concern than in previous times. PVC pipe replaces cast iron and noise break out needs to be controlled by effective insulation of the pipe or ductwork. An effective acoustic lagging is a barium loaded limp polymer used with a decoupling material, of which open cell, hydrolysis resistant, polyether PU foam has proven to be highly efficient. This type of material combination is considered very safe and an alternative to fibre based products which may have varying amounts of formaldehyde content and fibres that can compress and come loose over time. NuWrap 5 ensures compliance with BCA and other Specifier and Building Codes' acoustic requirements.*

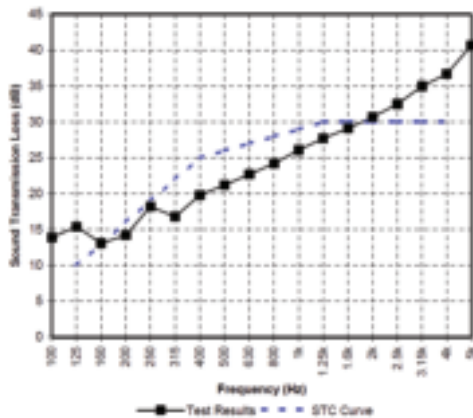
*“quality is not expensive, it's priceless”*

## Application

Thermotec NuWrap 5 acoustic pipe & duct lagging is classed as a “one solution” product that can be used either indoors or manufactured for use outdoors. NuWrap 5 uses a barium loaded limp polymer with a mass of 5kg per square metre. It is faced with a scrim reinforced fire resistant aluminium foil & bonded to a high performance polyether - polyurethane de-coupling open cell foam. NuWrap 5 is suitable for soil/waste pipes and all types of ductwork.



## Acoustic Performance



STC 29 - 6kg tested as a free hanging barrier

Table 5.1: Comparison of Measured Noise Levels - dBA

Construction	Average Noise Level	
	L Amax	SEL
Bare Pipe with a Rw+Ctr 40 wall	37.7	44.5
Pip Lagged with 5 kg/m <sup>2</sup> Nuwrap with 25 mm convoluted foam and a wall of 10 mm Plasterboard	36.0	42.8

Therefore, based on the comparative noise testing, the treatment of wastewater pipework with Nuwrap pipe lagging in combination at 10mm plasterboard ceiling will comply with the provisions of section F5.6 of the Building Code of Australia.

Frequency (Hz)	Sound Power Levels (dB re 1 pW)			
	Bare Pipe	Lagged Pipe	Insertion Loss*	
100	33.4	28.5	4.9	
125	34.8	26.3	8.4	
160	35.4	30.9	4.5	
200	32.6	30.9	1.7	
250	35.5	30.4	5.1	
315	37.6	29.4	8.2	
400	41.0	27.9	13.1	
500	42.2	27.9	14.4	
630	47.0	30.9	16.1	
800	48.6	32.8	15.7	
1000	52.3	34.8	17.5	
1250	54.5	35.1	19.4	
1600	53.7	32.7	21.0	
2000	54.7	32.1	22.7	
2500	54.1	29.2	24.9	
3150	54.9	27.7	27.2	
4000	54.9	25.7	29.2	
5000	51.7	22.4	29.3	
6300	47.0	17.6	29.3	
8000	43.6	12.3	31.3	
10000	41.3	8.6	32.7	
SUM (linear)	100 Hz - 10 kHz	63.6	43.4	20.2
	100 Hz - 5 kHz	63.4	43.3	20.2
SUM (A-weighted)	64.3 dBA	42.4 dBA	21.9 dBA	

### Thermotec NuWrap 5

5 kg/m<sup>2</sup> acoustic barrier bonded to 25mm thick convoluted foam

#### Australian Standards:

Measured according to ISO 3741-2010

#### Test Location:

Twin Reverberation Rooms  
National Acoustic Laboratories  
126 Greville Street, Chatswood NSW

#### Instrumentation:

- Brüel and Kjær “PULSE” Data Acquisition Unit Type 3560C
- Brüel and Kjær High Sensitivity Microphone Type 4179 x 2
- Brüel and Kjær Microphone Preamplifier Type 2660 x 2
- Brüel and Kjær Microphone Calibrator Type 4231

\*The Insertion loss was calculated for each pipe and then averaged, hence the (average) SWL of the bare pipe minus the (average) SWL of the lagged pipe does not exactly equal the (average) insertion loss.

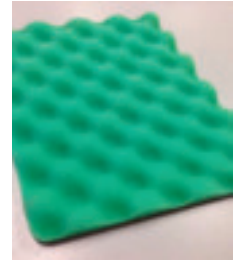
## Green Product

Complies with GreenStar, Green Building Council & Estidama, low VOC requirements. Also meets ODP-EMI-4 “avoids the use of ozone depleting substances used in both the manufacture and product composition”

## Product Construction

Thermotec NuWrap 5 is manufactured using the latest lamination technology to create a product that is a unique, integrated, multi-layer, high performance acoustic pipe and duct, noise reduction insulation.

Performance is the result of using a special density convoluted foam in conjunction with a barium loaded, high mass, (5kg/m<sup>2</sup>) limp polymer material that is faced with a reinforced aluminium foil that gives the product additional strength as well as outstanding fire resistance characteristics.



## What to Specify

The acoustic lagging for the soil, waste and stormwater pipes will be Thermotec "NuWrap 5". The Barrier shall be a barium loaded limp mass polymer with a density of 5kg/m<sup>2</sup>. The decoupling layer shall be an open cell Polyether-urethane convoluted foam of 25mm maximum thickness with a reinforced aluminium foil facing. The lagging must demonstrate to meet GreenStar, Green Building Council and Dubai Municipality low VOC requirements and be able to operate continuously at a maximum temperature of 100 degrees Celsius.

When installing. Material should be cut to size and fixed in place, with no gaps, using a self-adhesive aluminium foil faced tape of 72mm width. Straight lengths of pipe must incorporate a minimum 50mm overlap and again be sealed with a 72mm wide foil tape. All material surfaces to be cleaned prior to affixing tape.

## Installation

Leak test system. Ensure that surface of outer pipe is clean and free of dust etc. Cut insulation to suit either bends or straight lengths. Wrap insulation in place and ensure no gaps and that butt joints are well sealed. For straight lengths use a minimum 50mm overlap. Use 72mm wide foil face self-adhesive tape ensuring that surface to be taped is clean and dust free. On straight runs, foil tape, cable ties, or packaging strapping should be used as a band approximately every 400-500mm wrapped around the insulation. All longitudinal joints to be overlapped and taped. Joints should be facing downwards to avoid unnecessary weight and strain on the tape. Important to ensure there are absolutely no gaps.

Pipe Size	Strip Size
32mm ID	250mm
40mm ID	280mm
50mm ID	320mm
65mm ID	360mm
80mm ID	405mm
100mm ID	490mm
150mm ID	650mm

## Testing

Fire Performance	AS/NZS1530.3 - AWTA Australia	Acoustic Testing	VIPAC - Australia
Fire Performance	BS 476.6&7 - PSB Pty Ltd - Singapore	Acoustic Testing	Wilkinson Murray - Australia
Low VOC	CETEC - Australia		

## Properties

Standard Roll Size	1350mm x 5 metre / 1350 x 3 metre	Decoupling Foam	Polyether Polyurethane convoluted open cell
Weight - nominal	5.1kg per square metre	Foam Density - nominal	19kg/m <sup>3</sup>
Thickness - nominal	25mm	Barrier	Barium loaded limp mass polymer - foil faced
Operating Temperature	100 degrees Celsius - continuous	Country of Manufacture	Australia

### Distributed by

