NEW

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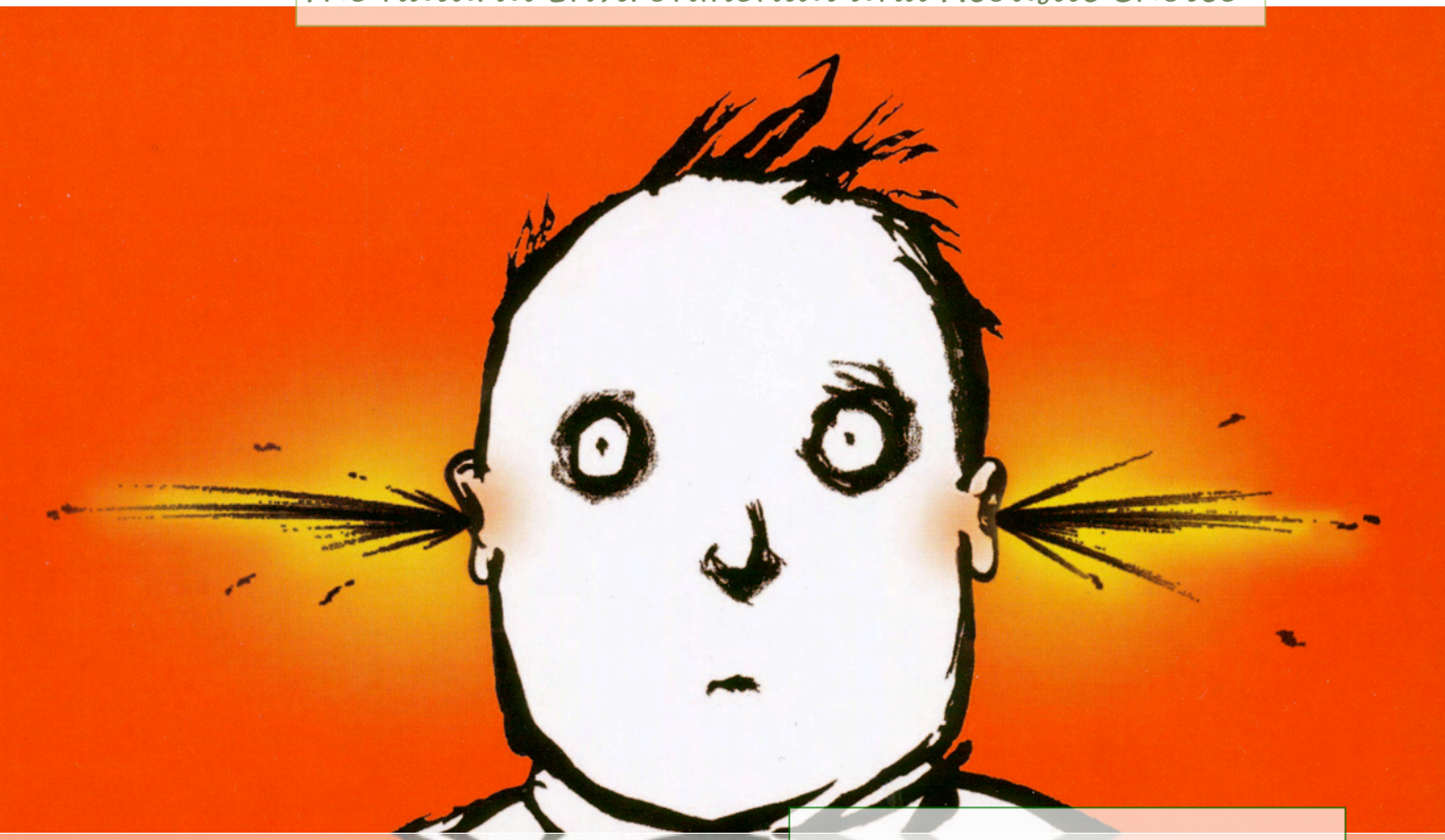
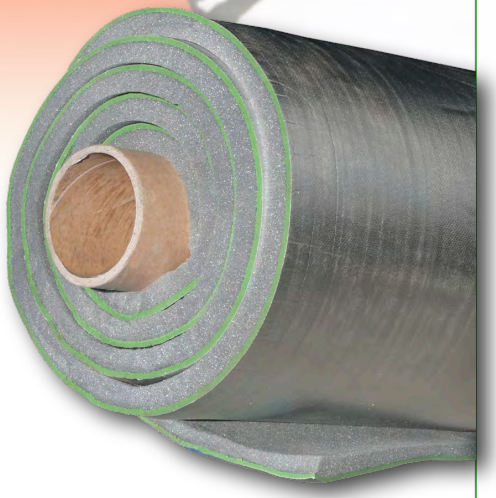
the quiet Australian

GreenLAG® - Acoustic pipe lagging

The natural Environmental and Acoustic Choice





Patented Organic Barrier with *'Green Chemistry'*

- ✓ Exceeds BCA requirements
- ✓ Group 1 Fire rated noise barrier sheathed within aluminium foil
- ✓ Superior acoustic results to thicker convoluted layers
- ✓ Reduced installation time
- ✓ Extremely flexible barrier with thin flat decoupling layer
- ✓ Guaranteed for 10yrs

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GreenLAG®

Acoustic Pipe Lagging

*Incorporating the world's first **GreenChem* Water Based** Noise Barrier*

Unlike the traditional Carbon Based noise barriers which are loaded with PVC or ethylene and include harmful plasticisers, the GreenChem barrier in GreenLAG® is composed of water and includes other natural renewable and biomass materials.

- ✓ **Exceeds the acoustic requirements of the Building Code of Australia (BCA)**
- ✓ **Group 1 fire rated noise barrier bonded to aluminum foil**
- ✓ **Reduced installation time**
- ✓ **15mm flat decoupling layer outperforms 25mm convoluted decoupler**

In developing GreenLAG® we turned to ***Green Chemistry** (GreenChem), also known as Sustainable Chemistry, for the composition of our noise barrier. Green Chemistry is the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances.

GreenLAG® barrier has low VOCs, the material emissions are less than a recognised threshold of 0.5 mg/m2/hr eg: "Green Star". It does not contain ozone depleting substances in composition or as part of the manufacturing process. It is environmentally safe and is made in Australia keeping our carbon footprint to a minimum.

GreenLAG® was developed to contain the intrusive noise generated by the turbulent flow of waste-water through pipes, fittings and general noise break-out from ductwork, fan housings, valves, and the like in residential, commercial and industrial buildings.

Acoustic tests have shown that **GreenLAG®** outperforms fiber pipe insulation (fiberglass products) as well as similar construction based products.

GreenLAG® exceeds the requirements of the current Building Code of Australia 2011 (Ref. F5.6);

- ✓ Exceeds Rw+Ctr 40 for habitable rooms.
- ✓ Exceeds Rw+Ctr 25 for non-habitable rooms.

* For more information on Green Chemistry (GreenChem) visit: www.epa.gov/greenchemistry

To live without unwanted noise is not a luxury but a necessity

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GreenLAG®

Acoustic Pipe Lagging

Features

- ✓ Organic Barrier low VOC's
- ✓ Exceeds BCA requirements**
- ✓ Ultra flexible
- ✓ Easiest product to cut and install
- ✓ Barrier Fire Tested AS 1530.3*
  *Zero rating achieved in all 4 areas
- ✓ Two layers of fire protection with Group 1 Fire rated barrier
- ✓ Environmentally safe
- ✓ Available in different thicknesses & weights
- ✓ Cost effective
- ✓ Made in Australia

Applications

- Waste water & storm water pipes
- Hydraulic pipes
- Air-conditioning ducts
- Swimming pool/Spa pump lagging and enclosures
- Valves
- Fan housings
- Compressor and generator enclosures

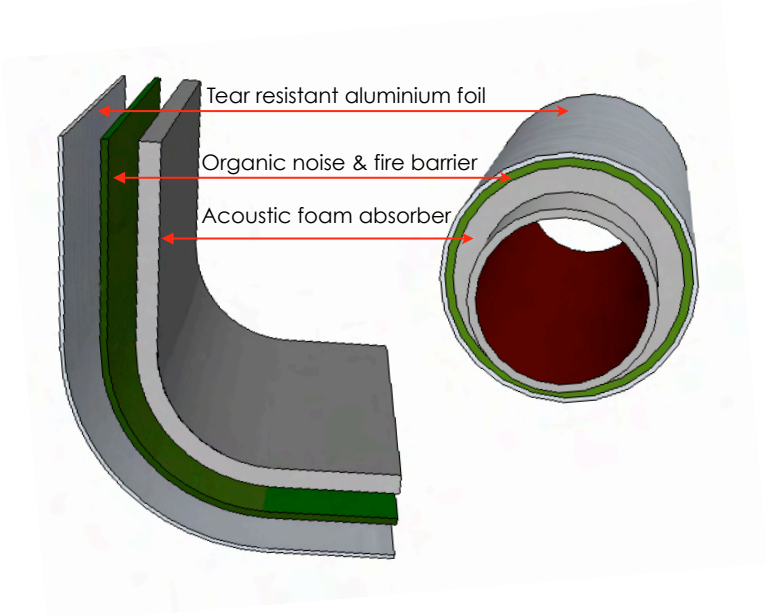
Description

World's first water based organic barrier - Pipe Lagging that really works. **GreenLAG®** is a high-performance, easy to install, laboratory & site tested composite acoustic lagging comprising of:

- ✓ A patented non-oil based organic Visco-elastic acoustic barrier using the GreenChem
- ✓ A Hydrolysis resistant, acoustic foam absorber (decoupling layer)
- ✓ A Special 'design registered' fire resistant reinforced aluminium foil for improved durability

GreenLAG® 5/15 *
Roll dimensions 1300mm x 3000mm
Roll weight 21 kg

*GreenLAG® can also be supplied in varying barrier weights between 4kg - 8 kg/m^2, and the acoustic foam can also be supplied in various thicknesses from 10mm - 25mm thick to suit different application needs.
Pre-cut bends and junctions available on request.
Contact your local Acoustica distributor to discuss your special requirements.



** **BUILDING CODE OF AUSTRALIA (BCA) 2011 REQUIREMENTS: F5.6 Sound Insulation rating of services**

a) If a duct, soil, waste or water supply pipe, including a duct or pipe that is located in a wall or floor cavity, serves or passes through more than one sole-occupancy unit, the duct or pipe must be separated from the rooms of any sole-occupancy unit by construction with an Rw + Ctr (airborne) not less than -
   i) 40 if the adjacent room is a habitable room (other than a kitchen); or
   ii) 25 if the adjacent room is a kitchen or non-habitable room.

b) If a storm water pipe passes through a sole-occupancy unit it must be separated in accordance with a) i) and ii).

GreenLAG® cut - wrap - tape

Installation

Easily cut GreenLAG® with a knife or scissors to size, keeping wastage to a minimum.

Wrap GreenLAG® around the pipe overlapping all joints by 50mm (vertical & horizontal) to avoid potential flanking noise.

Wrap 3 circumferential wraps of high quality 48mm - 72mm wide reinforced aluminium tape at approximately every 350mm (ie. 3 wraps every 1m of pipe length) and tape along seams.

Ensure a minimum separation of 50mm between the pipe and the plasterboard ceiling for maximum effect.

Calculating the width

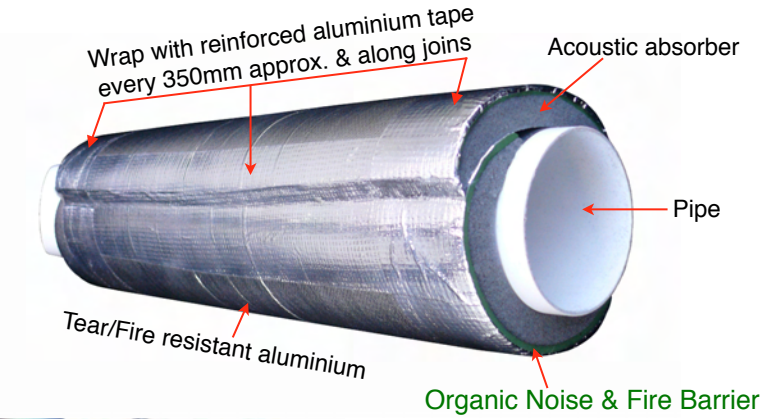
W = ∏ x [OD + (2xT)] +50 mm overlap
W = width of GreenLAG® PL5/15 to go around the pipe
OD = Outside pipe Diameter
T = GreenLAG® PL5/15 thickness (15mm)
∏ = 3.14

Installation Considerations

For maximum sound reduction, penetrations through ceilings and walls need to be addressed Especially when down lights, air conditioning returns and access hatches are present.

Acousticas' Engineers are only a phone call away and will be pleased to assist you in resolving your particular noise problem.

Call (+61 2) 9550 2900



GreenLAG® cut - wrap - tape

Product Specifications

Name	Thickness (mm)	Roll Size (mm) Std	Weight Kg/m²	Roll Weight Kg/m²	Operating Temperature (ºC)
GreenLAG® 5/15	17	1300 x 3000 (3.9 m2)	5.4 Kg/m2	21 kg	-50 to 120
GreenLAG® 5/25	27	1300 x 3000 (3.9 m2)	5.4 Kg/m2	21 kg	
GreenLAG® 5/10	12	1300 x 3000 (3.9 m2)	5.2 Kg/m2	20.5 kg	

Total Volatile Organic Compounds

Name Testing Authority	Test Method	Time	Specific Area Emission Rate mg/m2/hr
CETEC Professional Scientific Solutions	ASTM D5116 (Report No. CV090805)	24 hours	<0.01
The material emissions are less than a recognised threshold of 0.5 mg/m2/hr; eg. "Green Star" This product can be classed as low VOC emitting.			

Acoustic Tests

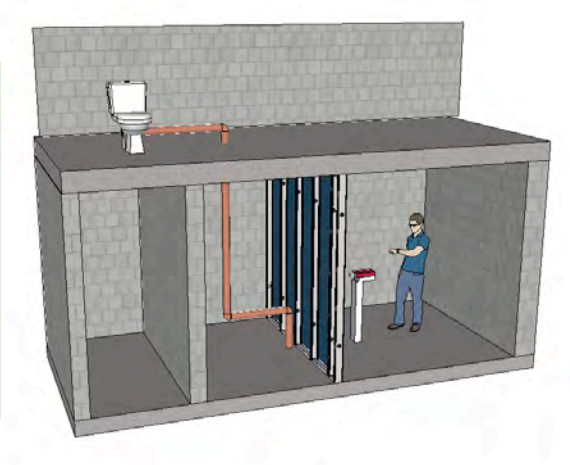
Product	Test*	Description	Results Comparison of Noise Levels dB(A)	
			L_{Amax}	LAE
GreenLAG® 5/15	Wilkinson Murray Report No. 12127 (A)	Bare Pipe with Rw+Ctr 40 ceiling / wall	37.7	44.5
		Pipe Lagged with 'GreenLAG® 5/15 and a ceiling / wall 10mm std plasterboard	34.2	40.9
GreenLAG® 5/10	Report No. 12127 (B)	Pipe Lagged with 'GreenLAG® 5/10 and a ceiling/wall 10mm std plasterboard	34.7	41.3

Maximum Noise Level (L_{Amax}) - The maximum noise level over a sample period is the maximum level, measured on fast response, during the sample period.

LAE - The A Weighed Sound Exposure Level which is the noise level that would be generated if all the energy from a discreet noise event (e.g. a toilet flush) was compressed into 1 second.

Flammability Properties

Product	CSIRO	Results
GreenLAG® 5/15	Flammability - AS 1530 Part 3, 1999	Ignitability 0, Spread of Flame 0, Heat evolved 0, Smoke Developed 0-1
	Noise Barrier - Group 1 (In accordance with Specification A2.4 of the Building Code of Australia.)	Average specific extinction area: 49.0 m2/kg (Refer to Specification C1.10a section 3(c) of the Building Code of Australia.)



* Other tests and assessments available upon request