



INSTALLING SOUNDLAG

Soundlag® is supplied in varying compositions with barrier weights of 3 to 8 kg/m² and the decoupling layer with a choice of foam (plain or convoluted), polyester or fibreglass with thicknesses from 6mm to 50mm. **(Refer Information Page 'Soundlag 411IP')**

Soundlag is typically used to wrap noisy pipes, waste pipes, ducts, valves, and fan housings to prevent breakout noise from pipe walls or ducts.

The following is intended to serve as a general guide for installing Pyrotek Noise Control's pipe and duct lagging material around pipes and ducts.

PREPARATION

- Ensure pipe work pressure testing is complete and the pipe work surface is clean and dry before installing product.
- If the product has been stored on site for a period of time, ensure the material is clean, dry and free from oil and dirt or rips and tears.

ESSENTIALS FOR EFFECTIVE LAGGING

- Coverage of pipe by the lagging material must be continuous.
- There should be no gaps at joints or edges. The smallest of gaps at any joint will result in performance loss. (Refer section 'Treatment of Joints' further in this document)
- A tight seal around all joints and edges is critical for maximum performance. Use **Pyrotek's** pressure sensitive reinforced aluminium insulation tape - '**Tape ALR**' or approved equal. **(Refer Information Page 'Tape ALR - 515IP')**
- Attention to detail and good workmanship in cutting, applying and fixing the product to the pipe is essential.

HOW TO MEASURE AND CUT MATERIAL

For Straight Pipe Sections

Measure the length (L) and outside diameter (OD) of the pipe requiring lagging.

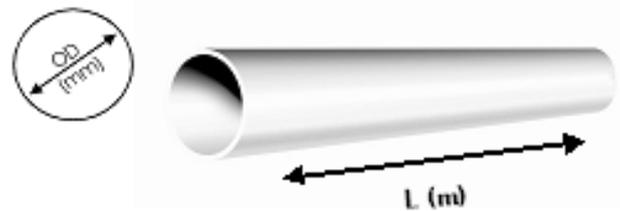
Apply the following formula to calculate and cut the required wrapping width (W) of Soundlag. The formula allows for a 5 (five) per cent overlap .

$$W = \pi \times (OD + (2 \times T)) \times 1.05$$

OD = outside diameter of the pipe

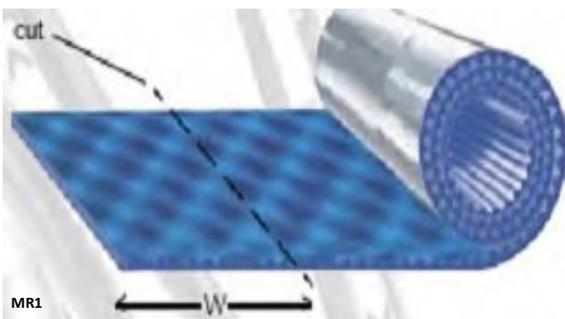
$\pi = 3.14$ (pi)

T = Total thickness of acoustic insulation (allow 20% compression on thickness when using convoluted foam or fibreglass decoupling layers.)



Mark the calculated width (W) along the length of the roll and cut material with a sharp knife or scissors (as shown in figures MR1 and CR1).

Soundlag is easily cut to size with a sharp knife or scissors, minimising wastage. Always cut from the foil faced barrier side of the material.

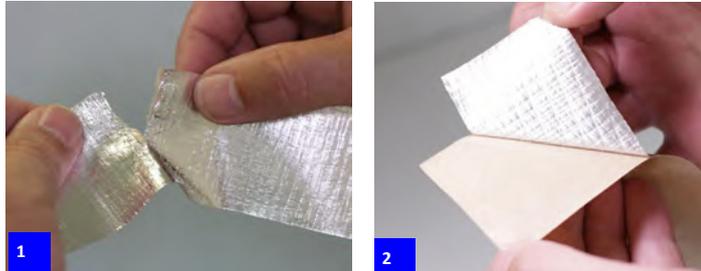


(Refer table on page 5. for an indicative measure of calculated wrapping widths for various pipe diameters.)

ABOUT 'TAPE ALR' - REINFORCED ALUMINIUM INSULATION JOINING TAPE:

Pyrotek can provide on request, 'Tape ALR' - a high quality self-adhesive insulation joining tape. This pressure-sensitive reinforced aluminium foil tape is designed to serve as a joining or covering tape for Pyrotek's 'Soundlag' and other foil-faced products .

(Refer Information Page 'Tape ALR - 515IP').



HOW TO APPLY INSULATION JOINING TAPE

1. Tape ALR is easy to tear by hand.
2. Remove the release liner backing
3. Position tape centrally over the sections to be joined and firmly press along the entire tape surface.
4. Wipe or rub with firm pressure across the tape with a cloth or blade to smooth out any air bubbles or buckles.

Do not over-stretch the tape when applying as this will create buckles and voids in the contact area.



TREATMENT OF JOINTS ON STRAIGHT PIPE SECTIONS

All joints along longitudinal pipe sections must be fitted with an overlap of adjoining material segments. Overlapped sections must then be taped and sealed with 'Tape ALR' or equal.

A strip of 30mm foam can be removed along one or both edges as required to provide for an overlap at joints. (See images below)



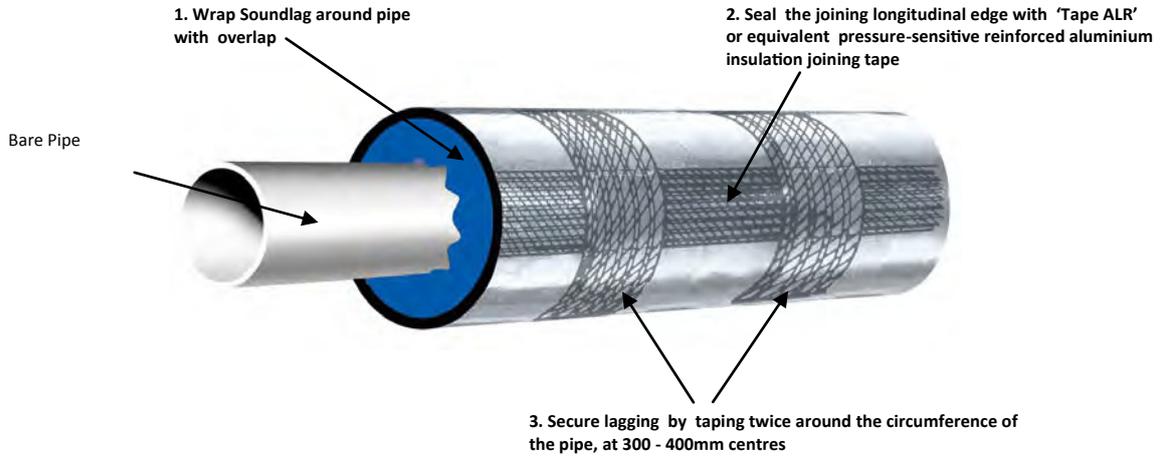
Images left and right show insulation material segments with foam removed being overlapped at joints.

Joints overlapped with foam removal provide a smooth surface.



LAGGING A STRAIGHT PIPE SECTION

1. A diagrammatic representation of Soundlag insulation material lagged to straight pipe section



2. Soundlag on straight pipe section *in situ*



Wrap each material segment with an overlap.



Use small tape patches to secure the wrap and position firmly around the width of the pipe section.



Tape along the longitudinal overlapped length.



Continue lagging adjoining pipe area with the recommended overlap and joint treatment detailed in the earlier sections.



All joints and edges to be taped to provide a tight seal.

TEST TO CHECK FOR A TIGHT SEAL OF JOINTS



Left: A **correctly** sealed joint will **NOT** allow the metal object to pass through the tape.

Right: An **incorrect** butt joint or no overlap will allow the metal object to pass through the tape and lagging.

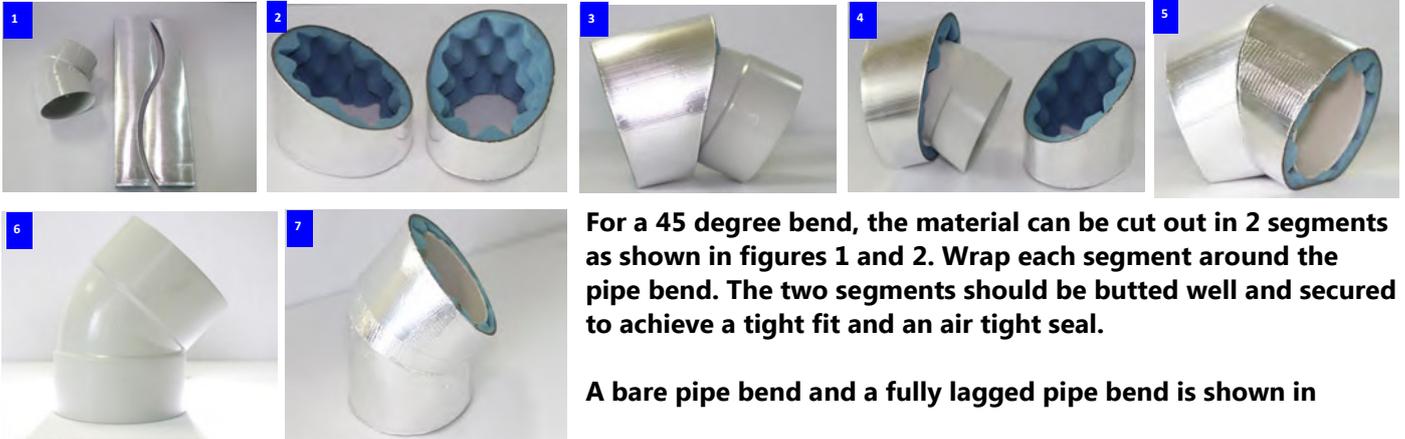


LAGGING SOUNDLAG ON TYPICAL PIPE BENDS :-

Pipe bends can be effectively lagged when the material is cut in segments, depending on the type and shape of the bend. The following is a general guide on how to wrap **Soundlag** on some typical pipe bends.

Pyrotek can offer pre-cut sections produced from templates . Please contact your local representative for more information.

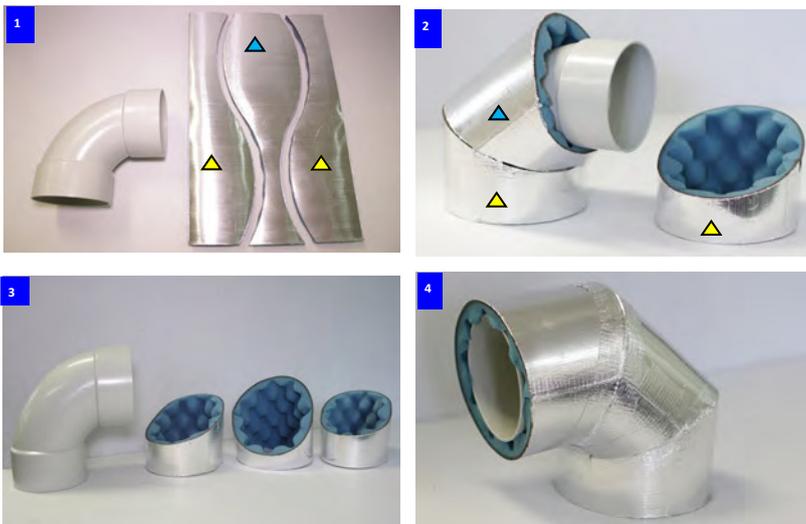
45 degree bend



For a 45 degree bend, the material can be cut out in 2 segments as shown in figures 1 and 2. Wrap each segment around the pipe bend. The two segments should be butted well and secured to achieve a tight fit and an air tight seal.

A bare pipe bend and a fully lagged pipe bend is shown in

90 degree bend



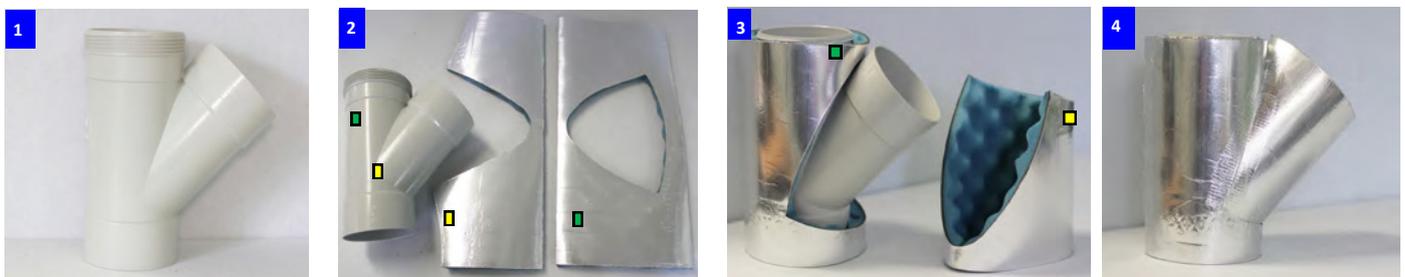
1.The material can be cut into 3 segments to lag a 90 degree band.

2.Lag each segment as marked with colours.

3. Lagged segments when disassembled.

4.Use small tape patches to position the three segments around the pipe bends. Seal joints with Tape ALR to provide a tight seal.

'Y' Pipe bend



1. A bare pipe with a 'Y' junction 2. A 'Y' section can be lagged with two segments as shown. 3. Lag individual segments around pipe as indicated with the coloured dots. A slit can be made on the segment for ease, if slipping the material segment over the pipe section is not possible. 4. Seal and secure all joints with Tape ALR insulation joining tape or equivalent.

Gully traps



To lag a 'Gully Trap' (as in Fig. 1) , cut the lagging material as shown in Fig. 2.

Bend and fold the material to achieve the desired shape. (Fig.3)

Tape all corners at the base and folded edges. (Fig. 5)

The folded shape can then be slipped over the gully closely along the adjoining lagged pipes. (Fig . 7)

The following table is an indicative measure of **Soundlag 4525C (1.35 X 5m roll)** coverage on straight pipe sections. The calculation includes an overlap as stated in the formula provided on page 1.

Nominal Inside Pipe Diameter (mm)	Outside Pipe Diameter (mm)	Actual Cut Length (Wrapping width) (mm)	Pieces per Roll (1.35 X 5m roll) Units	Coverage of straight pipe section (Lineal metres)
32	36	260	19	25.5
40	43	280	17	23
50	56	320	15	20
65	69	360	13	17.5
80	83	405	12	16
100	110	500	10	13.5
150	160	650	7	9.5
225	250	930	5	7
300	316	1135	4	5
375	401	1400	3	4

Caveats: Specifications are subject to change without notice. The data in this document are typical of average values based on tests by independent laboratories or by the manufacturer and are indicative only. Materials must be tested under intended service conditions to determine their suitability for purpose. The conclusions drawn from acoustic test results are as interpreted by qualified independent testing authorities. Nothing here releases the purchaser/user from responsibility to determine the suitability of the product for their project needs. Always seek the opinion of your acoustic or mechanical engineer on data presented by the manufacturer. Due to the wide variety of individual projects, Pyrotek NC is not responsible for differing outcomes from using their products. Pyrotek disclaims any liability for damages or consequential loss as a result of reliance solely on the information presented. No warranty is made that the use of this information or of the products, processes or equipment to which this Information Page refers will not infringe any third party's patents or rights. DISCLAIMER: This document is covered by Pyrotek standard Disclaimer, Warranty and © Copyright clauses. See www.pyroteknc.com/disclaimer.

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