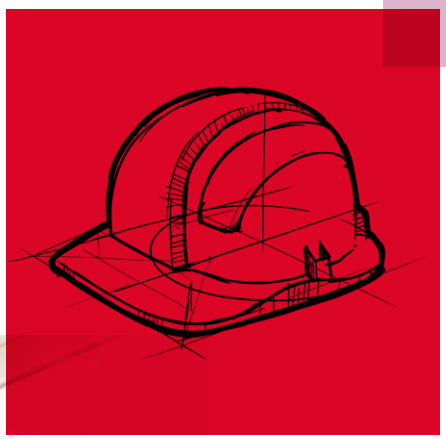
TECHWRAP2 AND TECHTUBE

Acoustic solutions for pipework and equipment

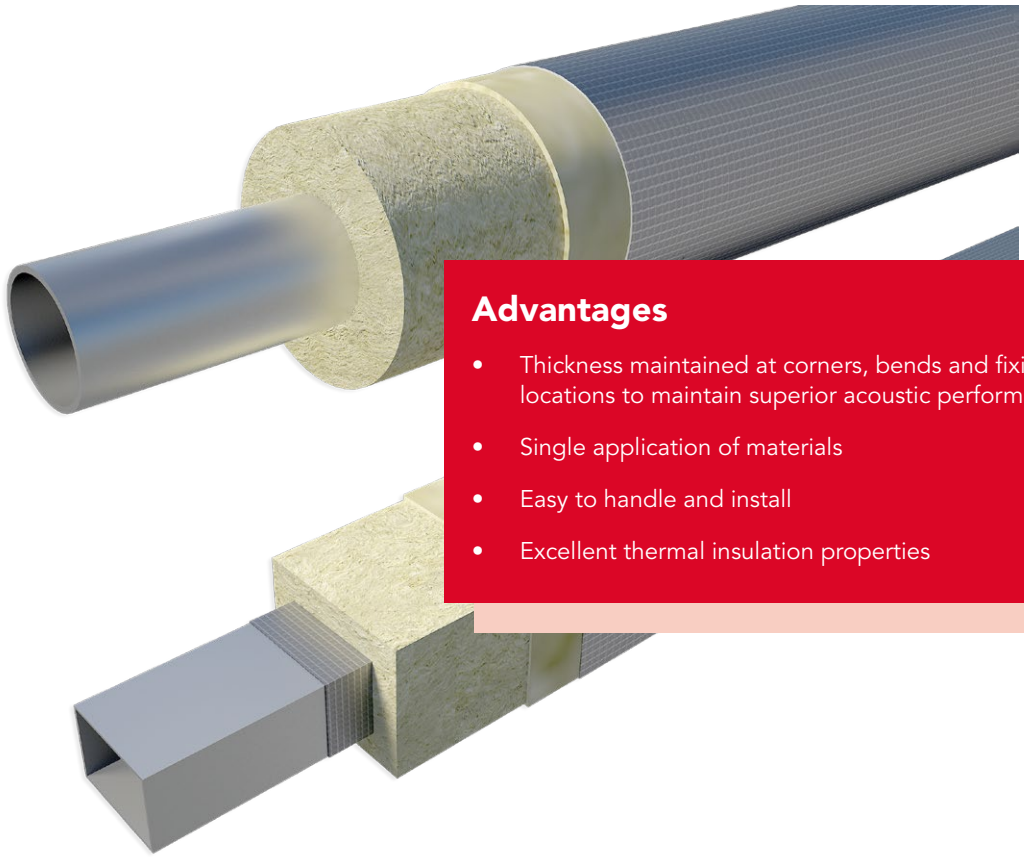


ROCKWOOL®

TECHWRAP2 AND TECHTUBE

Techwrap 2 and Techtube are high performance acoustic solutions for pipes and equipment.

ROCKWOOL Techwrap2 and Techtube are pre-covered with a reinforced ROCKWOOL Acoustic Membrane. The acoustic solutions are engineered to enhance noise control to circular and rectangular ductwork as well as various types of pipework.



Advantages

- Thickness maintained at corners, bends and fixing locations to maintain superior acoustic performance
- Single application of materials
- Easy to handle and install
- Excellent thermal insulation properties

Description

Techwrap2 is constructed from strips (lamella) of ROCKWOOL bonded on edge to ROCKWOOL Acoustic Membrane to provide high resistance to compression:

- Reinforced aluminium foil (inner)
- ROCKWOOL lamella acoustic insulation
- ROCKWOOL Acoustic Membrane
- Reinforced aluminium foil (outer)

Techtube is a strong pre-formed ROCKWOOL pipe section precovered with ROCKWOOL Acoustic Membrane:

- ROCKWOOL pipe section
- ROCKWOOL Acoustic Membrane
- Reinforced aluminium foil (outer)

Dimensions

Techwrap2	
Length	1200mm
Width	1000mm
ROCKWOOL Thickness	25mm, 40mm, 50mm
Mass layer	5kg/m^2

Techtube	
Length	1000mm
Minimum Techtube OD	158mm
ROCKWOOL Thickness	20 - 100mm*
Mass layer	5kg/m^2

*Some combinations of OD and thickness may not be available.

Other forms of insulation, sizes, thicknesses, mass layer types and surface weights may be available to special order.

Performance

Thermal conductivity

Typical lambda values for these products would be: Techwrap2: 0.039 W/mK
Techtube: 0.033 W/mK
(at 10°C mean product temperature)

Service temperature and limiting service temperature

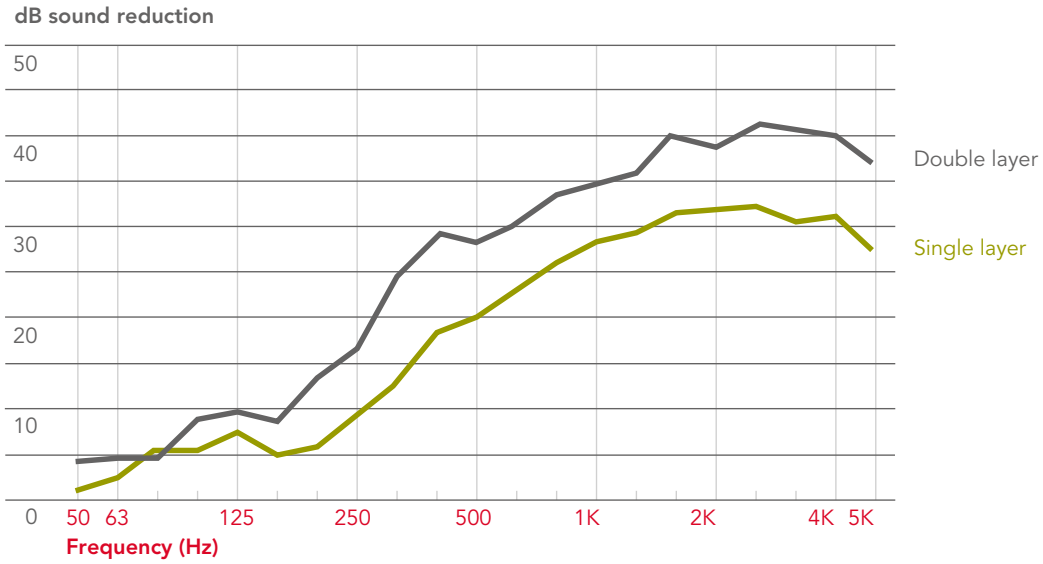
Techwrap2 and Techtube can be used to provide thermal and acoustic insulation to pipes and equipment operating at temperatures in the range 0°C to 230°C. The outer facing temperatures should not exceed 80°C. At temperatures below ambient, the foil facing must be continued onto the pipe surface in order to maintain the vapour barrier.

Test programme and results

ROCKWOOL Techwrap2 has been independently tested at the Acoustical Investigation & Research Organisation (AIRO) laboratory.

Techwrap 25mm dB improvements

dB improvements through 0.8mm steel duct for single and double layers of ROCKWOOL Techwrap



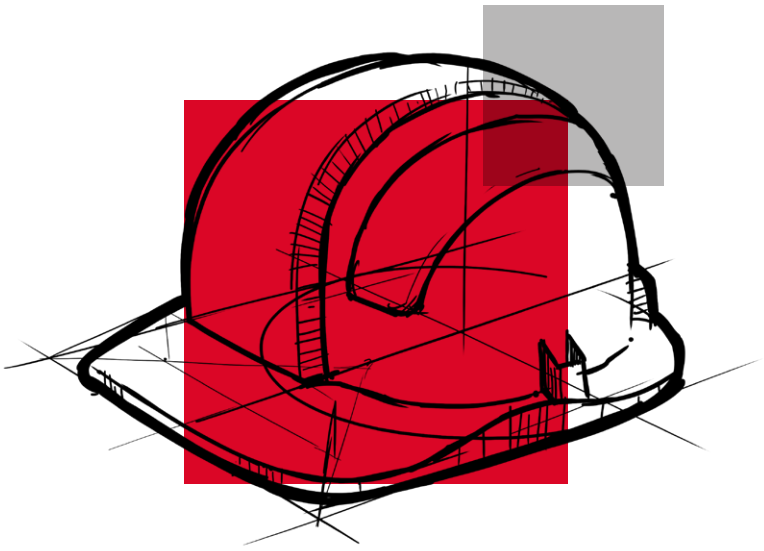
The test programme conducted at AIRO was designed to indicate as closely as possible the true-to-life acoustic performance of Techwrap2 when applied to ductwork. Techwrap was installed in-situ on a 6 metre length of 60mm x 1000mm duct. As expected, sound leakage was noted at inaccessible duct bearer locations during the test. As with other likely on-site irregularities, this leakage may not have been adequately represented by a more simple flat panel test. To show the actual improvements provided by Techwrap, the noise reduction provided by the original 'untreated' duct is excluded from the above graph. The weighted sound reduction for a single layer of Techwrap2 is 30dB; double layer 36dB.

Performance

pH neutrality
ROCKWOOL insulation is chemically compatible with all types of pipes, ducts, equipment and fittings (guidance is given in BS5970 regarding the treatment of austenitic stainless -steel pipework and fittings). Stone wool insulation is chemically inert. A typical aqueous extract of ROCKWOOL insulation is neutral or slightly alkaline (pH 7 to 9.5).

Durability
ROCKWOOL stone wool insulation products have been proven in service for over 60 years, in a wide range of climates and degrees of exposure. ROCKWOOL insulation will generally perform effectively for the lifetime of the building, plant or structure.

Biological
ROCKWOOL stone wool is a naturally inert and rot-proof material that does not encourage or support the growth of fungi, moulds or bacteria, or offer sustenance to insects or vermin.



Handling

Techwrap2 and Techtube are easily cut to shape with a sharp knife.

Installation

General
ROCKWOOL Acoustic Membrane should be positioned outermost from the sound source and overlapped at all joints.

Techwrap2
Techwrap2 should be cut 25mm oversize and a 25mm strip of ROCKWOOL removed to create an overlap. All cutting operations can be completed using a sharp knife.

75mm wide plain aluminium foil self-adhesive tape should be used to seal the joints (Idenden type T303, or similar and approved).

Fixings
Welded steel pins should be used to fix Techwrap2 to the duct. However, subject to the manufacturer's approval, adhesive applied insulation hangers may be used in place of welded pins (check with manufacturer regarding self-adhesive pins). Particular attention should be paid to support of the Techwrap2 at joint locations and where sagging may occur, e.g. in 'soffit' areas. The number of pins required will depend upon size and orientation of the duct. However, where pins are employed at Techwrap2 edges, 4 no. are recommended at 1000mm edges and 5 no. at 1200mm edges. Additional 'lines' of pins should be at nominal 300mm spacings. Where a vapor barrier is required, support pins and hangers, which penetrate the foil, should be sealed using aluminium tape.

For soil-vent and rainwater pipes, ductwork etc. where they pass within a building and a high level of acoustic insulation is required use ROCKWOOL Techtube.

Techtube
All joints should be taped with self-adhesive aluminium foil tape. Techtube is generally secured with aluminium bands at approximately 200mm maximum centres.

Sustainability

As an environmentally conscious company, ROCKWOOL promotes the sustainable production and use of insulation and is committed to a continuous process of environmental improvement.

All ROCKWOOL products provide outstanding thermal protection as well as four added benefits:

- **Fire resistance**
- **Acoustic comfort**
- **Sustainable materials**
- **Durability**

Environment

Made from a renewable and plentiful naturally occuring resource, ROCKWOOL insulation saves fuel costs and energy in use and relies on trapped air for its thermal properties.

ROCKWOOL insulation does not contain (and has never contained) gases that have ozone depletion potential (ODP) or global warming potential (GWP).

ROCKWOOL stone wool insulation is approximately 97% recyclable. For waste ROCKWOOL material that may be generated during installation or at end of life, we are happy to discuss the individual requirements of contractors and users considering returning these materials to our factory for recycling.

Health & Safety

The safety of ROCKWOOL stone wool is confirmed by current UK and Republic of Ireland health & safety regulations and EU directive 97/69/EC:ROCKWOOL fibres are not classified as a possible human carcinogen.

A Material Safety Data Sheet is available and can be downloaded from www.rockwool.co.uk to assist in the preparation of risk assessments, as required by the Control of Substances Hazardous to Health Regulations (COSHH).

Interested?

For further information, contact the Technical Solutions Team on 01656 868490 or email technical.solutions@rockwool.co.uk

Visit www.rockwool.co.uk to view our complete range of products and services.

Notes

April 2018

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