

ROCKLAP H&V PIPE SECTIONS

For rapid, efficient pipework insulation



ROCKLAP H&V PIPE SECTIONS

Rocklap H&V Pipe Sections are designed for thermal and acoustic insulation of heating, ventilation and air-conditioning pipework operating in the temperature range 0°C to 250°C.

The sections are provided with a factory applied foil facing and self-adhesive lap which ensures easy installation.





Advantages

- Resilient, high performance barrier provided by one-piece, reinforced foil with integral lap
- Fast and simple installation reduces costs and time on site
- Installation may be carried out in winter conditions
- Tape requirement reduced
- Limited combustible product with surface finish also complying to Class 0

Description

RockLap H&V Sections are pre-formed sections of stone wool insulation. Manufactured pre-slit and provided with a factory applied foil facing complete with integral self-adhesive lap.

Sizes available

Please see the table on page 9.

Applications

RockLap H&V Pipe Sections are strong lengths of pre-formed insulation with a one piece, factory applied foil facing with integral self-adhesive lap. The integral lap ensures fast and easy installation: just snap the sections onto the pipe, peel off the backing tape and smooth down for a completely sealed joint.

Performance

Standards and approvals

Rockwool H&V Pipe Sections are CE marked in accordance with BS EN 14303. For more information please visit www.rockwool.co.uk/DOP

RockLap H&V Pipe Sections conform to BS 3958-4, 'Bonded preformed stone wool pipe sections' and can be used to satisfy BS 5422: 'Method for specifying thermal insulating materials.....'.

The product has been authorised for use in LUL surface and sub-surface premises when installed in accordance with this data sheet – please refer to the LUL Approved Product Register website www.LU-apr.co.uk for specific details.

Fire

Fire RockLap H&V Pipe Sections are rated Euroclass A2L-s1,d0 and Class 0 as defined within the Building Regulations.

Thermal

Specific heat

The specific heat of ROCKWOOL stone wool is 0.84 kJ/kgK (nom.) at 20°C.

Thermal conductivity and thermal loss

Temperature °C	*Curve 1 (W/mK)	*Curve 2 (W/mK)
10	0.033	0.034
50	0.037	0.039
100	0.044	0.048
150	0.052	0.056

*The thermal conductivity curve used depends upon the size of the pipe section. For further information please refer to the DOP.

Note: Due to the low emissivity of aluminium, heat losses, which depend upon the diameter, thickness and temperature of the pipe to be insulated, are reduced by approx. 9% by using aluminium faced sections compared with painted or PVC faced sections.

Consider a 169 mm O.D. hot water pipe running at 75°C with an ambient temperature of 15°C insulated with 50 mm thick RockLap H&V Pipe Section:

Cladding type	Emissivity (ε)	Outer surface	Outer surface
Aluminium	0.05	24.4	27
Cloth	0.90	19.5	29

Product information

Dimensions

Minimum thickness of ROCKWOOL RockLap H&V to prevent condensation. Taken from BS 5422 Table 8, ambient air temperature 25°C, 80% rh

Outside diameter of steel pipe on which insulation has been based (mm)	Temperature of contents (°C)					
	Temperature of contents +10°C		Temperature of contents +5°C		Temperature of contents 0°C	
	Calculated thickness (mm)	Advised thickness (mm)	Calculated thickness (mm)	Advised thickness (mm)	Calculated thickness (mm)	Advised thickness (mm)
17	16	20	22	25	28	30
21	17	20	24	25	30	30
27	19	20	26	30	32	35
33	20	20	27	30	34	35
42	21	25	29	30	37	40
48	22	25	31	35	39	40
60	24	25	33	35	41	45
76	26	30	36	40	46	50
89	28	30	38	40	48	50
102	29	30	40	40	50	50
114	30	30	41	45	52	60
140	31	35	43	45	55	60
169	33	35	46	50	58	60
219	35	35	49	50	62	70
245	36	40	51	60	64	70
273	37	40	52	60	66	70
324	39	40	55	60	70	70
356	40	40	56	60	71	80
406	41	45	58	60	74	80
456	43	45	60	60	76	80
508	44	45	61	70	78	80
558	45	45	63	70	80	80
610	46	50	64	70	82	90

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Table 15 (BS5422:2009)

Indicative thickness of insulation for non-domestic heating services to control heat loss – low emissivity outer surfaces ($\epsilon=0.05$)

Outside diameter of steel pipe on which insulation has been based (mm)	Hot face temperature (°C)								
	Thickness of ROCKWOOL RockLab H&V Pipe Section (mm)								
	75			100			125		
	Calculated thickness (mm)	Advised thickness (mm)	Heat loss (mm)	Calculated thickness (mm)	Advised thickness (mm)	Heat loss (mm)	Calculated thickness (mm)	Advised thickness (mm)	Heat loss (mm)
17.2	24	25	8.90	24	25	13.34	24	25	17.92
21.3	28	30	9.28	30	30	13.56	30	30	18.32
26.9	31	35	10.06	37	40	13.83	37	40	18.70
33.7	33	35	11.07	44	45	14.39	46	50	19.20
42.4	35	35	12.30	48	50	15.66	64	70	19.25
48.3	37	40	12.94	49	50	16.67	67	70	20.17
60.3	39	40	14.45	57	60	18.25	71	80	21.96
76.1	44	45	16.35	60	60	20.42	76	80	24.21
88.9	45	45	17.91	62	70	22.09	79	80	25.99
114.3	47	50	20.77	65	70	25.31	85	90	29.32
139.7	48	50	23.71	68	70	28.23	89	90	32.47
168.3	49	50	26.89	70	70	31.61	92	100	36.04
219.1	50	50	32.54	72	80	37.66	96	100	42.16
273.0	50	50	38.83	74	80	43.72	99	100	48.48

NOTE 1 Insulation thicknesses in this table have been calculated according to BS EN ISO 12241:2008 using standardised assumptions: horizontal pipe in still air at 15°C, emissivity of outer surface of insulated system as specified. NOTE 2 Heat loss relates to the specified thickness and temperature. NOTE 3 The thicknesses in this table are applicable to pipes serving commercial solar hot water panels.

Table 17 (BS5422:2009)

Indicative thickness of insulation for non-domestic hot water service areas to control heat loss – Low emissivity outer surface

Outside diameter of steel pipe on which insulation has been based (mm)	Thickness of ROCKWOOL RockLap H&V Pipe Section (mm)		
	Calculated thickness (mm)	Advised thickness (mm)	Heat loss / Wm ⁻¹
17.2	23	25	6.60
21.3	25	25	7.13
26.9	27	30	7.83
33.7	29	30	8.62
42.4	30	30	9.72
48.3	32	35	10.21
60.3	33	35	11.57
76.1	35	35	13.09
88.9	35	35	14.58
114.3	38	40	17.20
139.7	39	40	19.65
168.3	40	40	22.31
219.1	40	40	27.52
273.0	41	45	32.40

NOTE 1 Insulation thicknesses in this table have been calculated according to BS EN ISO 12241:2008 using standardised assumptions: horizontal pipe at 60°C in still air at 15°C, emissivity of outer surface of insulated system as specified. NOTE 2 Heat loss relates to the specified thickness and temperature.

Density

The nominal density is not less than 120 kg/m³.

Other product properties

Water resistance

RockLap H&V Pipe Sections are water repellent. However, when used or stored in the open, the insulation should be protected with a waterproof covering.

When used to insulate cold pipes, the joints should be sealed with foil tape to prevent condensation.

Service temperature

RockLap H&V Pipe Sections are used to insulate pipes operating at temperatures in the range 0 to 250°C. The sections are used to insulate against frost damage. For hot pipes, the limiting temperature of the outer foil face is 80°C to maintain facing bond strength.

pH neutrality

ROCKWOOL insulation is chemically compatible with all types of pipes, equipment and fittings. (Guidance is given in BS 5970 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.

Installation

Handling

RockLap H&V Pipe Sections are easy to cut to any shape with a sharp knife. When stored outside, avoid contact with the ground and cover with a securely anchored waterproof sheet.

Maintenance

Once installed RockLap H&V Pipe Sections shouldn't require any maintenance.

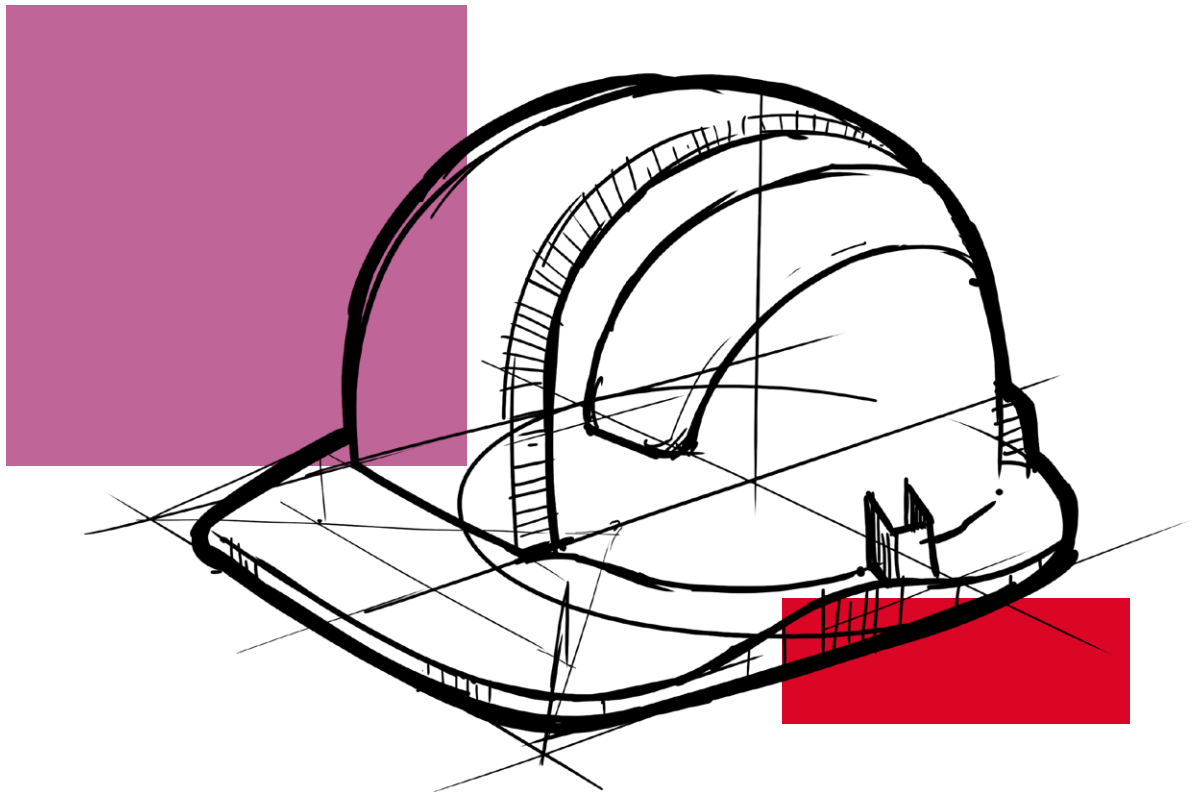
Specification clauses

Typical specification

Pipes to be insulated with *mm thick ROCKWOOL Rocklap H&V Pipe Sections, having a nominal density not less than 120 kg/m³, with a factory applied facing which is a laminate of close mesh reinforcement between two layers of foil including integral lap for fixing. The whole to comply with BS 5422:2009 and BS 5970 water vapour permeance and Building Regulations Class O definition. Fixing to be in accordance with manufacturer's instructions, by peeling protective tape from self-adhesive lap and pressing lap smoothly over joint. Where adjacent Sections abut, approved 75 mm wide aluminium tape to be used to maintain integrity of the vapour barrier.

For external applications please see HVAC Specification Detail Guide for external finishes.

*insert required thickness



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Other guidance

Availability, packing and performance matrix

To Suit Pipe O.D. / mm	Insulation Thickness / mm										
	20	25	30	35	40	45	50	60	70	80	100
17	42 (1)	30 (1)	25 (1)	20 (1)	16 (1)						
21	36 (1)	30 (1)	20 (1)	13 (1)	13 (1)	9 (1)	9 (1)				
27	30 (1)	25 (1)	20 (1)	12 (1)	12 (1)	9 (1)	9 (1)	6 (2)	4 (2)		
34	25 (1)	20 (1)	16 (1)	12 (1)	9 (1)	8 (1)	8 (1)	5 (2)	4 (2)		
42	20 (1)	16 (1)	12 (1)	9 (1)	9 (1)	6 (1)	6 (1)	4 (2)	4 (2)	■ (2)	■ (2)
48	16 (1)	16 (1)	12 (1)	9 (1)	9 (1)	6 (1)	6 (1)	4 (2)	■ (2)	■ (2)	■ (2)
54	16 (1)	12 (1)	10 (1)	8 (1)	8 (1)	5 (1)	5 (1)	4 (2)	■ (2)	■ (2)	
60	12 (1)	12 (1)	9 (1)	7 (1)	7 (1)	5 (1)	5 (1)	4 (2)	■ (2)	■ (2)	■ (2)
67		9 (2)	9 (2)	6 (2)	6 (2)	4 (2)	4 (2)	■ (2)	■ (2)	■ (2)	■ (2)
76		9 (2)	7 (2)	5 (2)	5 (2)	4 (2)	4 (2)	■ (2)	■ (2)	■ (2)	■ (2)
80		9 (2)	6 (2)	5 (2)	5 (2)	4 (2)	4 (2)	■ (2)	■ (2)	■ (2)	■ (2)
89		6 (2)	6 (2)	4 (2)	4 (2)	4 (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
102		5 (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
108		5 (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
114		4 (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
127		4 (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	
133		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
140		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
150		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)			
154		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	
159		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
169		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
178		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)			
191		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)			
194		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
205		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
219		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
230					■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
245		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
253		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
273		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
279		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
305		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
318		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
324		● (2)	● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
356			● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)
406			● (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)	■ (2)

(1 or 2) Applicable DOP Lambda Curve

■ Size is available to order

□ Size currently not available

42 Number indicates the Linear Metres per carton

■ These sections come "split" and are packed as single lengths which are shrink wrapped in polyethylene

● These sections come "unsplit" and are packed as single lengths which are shrink wrapped in polyethylene

Alternative sizes may be available. For further details please contact ROCKWOOL Customer Support

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 occurring 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.

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The ROCKWOOL Trademark

ROCKWOOL® - our trademark

The ROCKWOOL trademark was initially registered in Denmark as a logo mark back in 1936. In 1937, it was accompanied with a word mark registration; a registration which is now extended to more than 60 countries around the world.

The ROCKWOOL trademark is one of the largest assets in the ROCKWOOL Group, and thus well protected and defended by us throughout the world.

If you require permission to use the ROCKWOOL logo for your business, advertising or promotion. You must apply for a Trade Mark Usage Agreement. To apply, write to:
marketcom@rockwool.com.

Trademarks

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RAINSCREEN DUO SLAB®

HARDROCK®

ROCKFLOOR®

FLEXI®

BEAMCLAD®

FIREPRO®

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