

FIREPRO[®]

INSULATED FIRE SLEEVES

Fire stopping of insulated pipe penetrations



FIREPRO INSULATED FIRE SLEEVES

Part of the comprehensive ROCKWOOL FIREPRO® range of fire protection products, Insulated Fire Sleeves are a unique combination of stone wool and graphite intumescent.

Providing all the ROCKWOOL® thermal, noise and fire benefits with an added intumescent effect, Insulated Fire Sleeves deliver both fire stopping and thermal insulation in a single product, helping to overcome the challenges traditionally associated with insulating and fire stopping plastic and metal pipework and rectangular vent ducts, conduits and trunking.





Advantages

- Quick, simple and accurate installation
- Maintains pipe insulation at penetration points
- Supplied with integral vapour barrier
- No mastic or ancillaries required
- Excellent thermal and acoustic insulation

Description

Insulated Fire Sleeves are a unique combination of ROCKWOOL stone wool and graphite intumescent.

Supplied with a factory applied reinforced aluminium foil facing.

When thermally insulated plastic pipes pass through fire resisting walls and floors, the insulation is normally removed at the point of penetration to enable standard pipe collars and wraps to close the resulting void when the plastic softens and melts due to the effects of a fire. However, the removal of this insulation may result in the formation of condensation on cold pipework or heat loss from hot pipes.

Insulated Fire Sleeves avoid this problem by providing both fire stopping and thermal insulation in a single product.

Insulated Fire Sleeves are intended for use on copper, steel and most types of plastic pipes, trunking and conduits to provide up to 2 hours fire resistance.

Insulated Fire Sleeves can be used on numerous division types and under fire attack, expand both inwards to choke the plastic service penetration and also outwards to seal gaps between the sleeve and the surrounding construction.

Applications

Insulated Fire Sleeves should be installed to the same thickness as the pipe insulation (min 25mm thick). For uninsulated pipes, a thickness of 25mm is required to maintain the fire resistance of the wall or floor.

Performance

Standards and approvals

Insulated Fire Sleeves have been independently tested and assessed to BS 476: Part 20 for periods of up to 2 hours in concrete walls and floors, plasterboard partitions and ROCKWOOL Ablative Coated Batts.

Fire

Service Temperature and Limiting Service Temperature - Insulated Fire Sleeves are used to fire stop pipework operating at temperatures between 0°C and 180°C. At low temperatures, care should be taken to maintain the vapour barrier.

Table 1

Fire resistance (FR) performance - ducting, trunking and conduits

				Supporting construction		FR integrity (minutes)	FR insulation (minutes)		
Service type	Material	Max size W/D (mm)	Wall thickness range (mm)	Wall	Floor	Wall & Floor	Wall	Floor	Report
Rectangular vent ducts	PVC	Other sizes available - see ROCKWOOL Oval Insulated Firesleeve Data Sheet	1.6 to 3	M/PB	Concrete	120	90	120	1
Square trunking	PVC		3	M/PB	Concrete	120	90	120	1
Cable conduit	PVC	Up to 55 diameter	3	M/PB	Concrete	120	90	120	1

Table 2

Fire resistance (FR) performance - metal and plastic pipes in masonry, plasterboard or concrete supporting construction

Service type	Material	Min diameter	Wall thickness (mm)	Max diameter	Wall thickness (mm)	Supporting construction		FR integrity (minutes)	FR insulation (minutes)		Report
						Wall	Floor	Wall & Floor	Wall	Floor	
Metal pipes (uninsulated)	Copper	22	2.5	165	14.2	M/PB	Concrete	120	0	0	1
	Mild steel										
	Stainless steel										
Pipes (plastic)	PVC/UPVC	55	3.0	160	4.2	M/PB/CB	Concrete	120	120	120	1
	PVC/UPVC	160	3.0	110	4.2	M/PB	Concrete	120	90	90	
	Polybutylene	12	2.0	28	3.5	M/PB/CB	Concrete	120	120	120	

A minimum thickness of 25mm is required for uninsulated pipes. 25 to 100mm available to match insulation on other pipes. Manufactured to fit pipe diameters of 15 to 169mm
1 = Chilt/A12265 - 2 = Chilt/A08152 Rev D - M = Masonry - PB = Plasterboard - CB = Ablative Coated Batt

Table 3

Fire resistance (FR) performance of plastic pipes in FIREPRO® Ablative Coated Batt

Service type	Material	Pipe Outer diameter (mm)	Wall thickness (mm)	FR integrity (minutes)		FR insulation (minutes)	
				50mm Coated Batt	2 x 50mm Coated Batt	50mm Coated Batt	2 x 50mm Coated Batt
Pipes (plastic)	Polybutylene	15-28	2.5	60	120	60	120
	HDPE	40	3	60	120	60	120
	PVCu	43	1.8	60	120	60	120
	PVC	55	2	60	120	60	120
	HDPE	56	2.3	60	120	60	120
	ABS	57	4	60	120	60	120
	PVC, PVCu	82	3.2-4.0	60	120	60	120
	HDPE	90	3.5	60	120	60	120
	PVC, PVCu	110	4.3	60	120	60	120
	HDPE	110	5	60	120	60	120
	ABS	110	5	60	120	60	120
	PVC, PVCu	160	3.2-4.5	60	120	60	120
	HDPE	160	6.2	60	120	60	120
	ABS	160	6.7	60	120	60	120

For information regarding alternative pipe sizes or types, or for help regarding achieving higher integrity and insulation ratings.
Please contact ROCKWOOL Technical Solutions Team for further assistance.

Acoustics

The use of Insulated Fire Sleeves can considerably reduce the noise emission from noisy pipework. ROCKWOOL Insulated Fire Sleeves have been tested to provide up to Rw 49 dB.

For higher standards of acoustic insulation, it is recommended that an increased length of the pipework either side of the compartment wall or floor is insulated with ROCKWOOL Techwrap 2 or Tectube.

Product information

Dimensions

Insulated Fire Sleeves are supplied 300mm long. They are manufactured to fit a range of standard pipe sizes, from 17mm to 169mm O.D. and in a standard thickness of 25mm. Other pipe sizes and thicknesses may be available to special order.

Installation

Installation instructions

Insulated Fire Sleeves are supplied 300mm long and are simply cut to the desired length and as a minimum, be cut flush with both faces of the wall/floor. When used in conjunction with PVC services or ROCKWOOL Ablative Coated Batts, they are required to extend beyond the face of the wall/floor. For details of how far they need to extend please refer to specification clause 2.

Maintenance

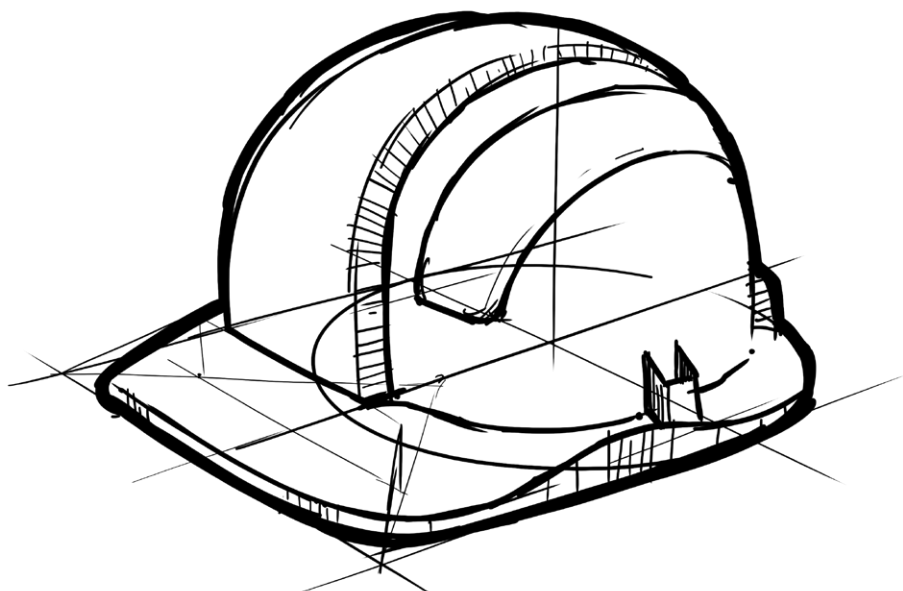
To maintain thermal efficiency, the Insulated Fire Sleeves should tightly abut any existing pipe insulation and where this is foil faced, all joints must be sealed with self-adhesive class O foil tape.

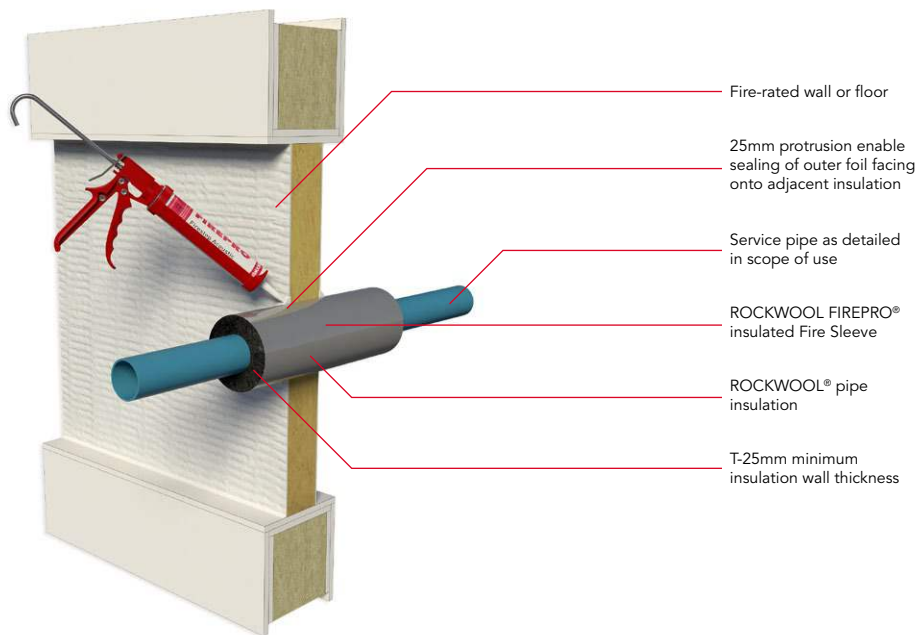
Other install info e.g. ancillaries

No specialist tools or ancillary materials are required for the fitting of Insulated Fire Sleeves. Insulated Fire Sleeves can accommodate irregularities in the division opening and the pipe O.D. of up to 15mm.

Multiple pipe penetrations can be accommodated in conjunction with Ablative Coated Batts.

A minimum thickness of 25mm is required for uninsulated pipes. Thicknesses of 25 to 100mm available to match insulation already installed on pipework. Manufactured to fit pipe diameters of 15 to 169mm.





Specification clauses

1. Supporting construction designation:- Floors: Cast concrete between 1100 and 2400kg/m³ density.
M=Masonry between 600 and 1500kg/m³ density.
PB= Plasterboard clad steel or timber stud partitions with fire resistance at least the same as the Fire Sleeve performance.
CB= ROCKWOOL 50 or 60mm thick Ablative Coated Batt.
2. Insulated Fire Sleeves should extend at least 25mm from each face of the supporting wall or floor construction to allow for effective sealing against any thermal insulation, except when used with ROCKWOOL Ablative Coated batts where a minimum of 50mm protrusion is required from both faces.
3. If gaps exceed 15mm around the aperture and the sleeve, the gap should be filled with ROCKWOOL Acoustic Intumescent or Firepro Firestop Compound. If gaps exceed 8mm between the service and the sleeve, these can be infilled, locally where the service penetrates the aperture, with the Acoustic Intumescent Sealant.
4. The installed length of any Insulated Fire Sleeve shall be at least 60mm.

NBS clauses

FIREPRO Insulated Fire Sleeves are associated with the following NBS clauses:

P12 Fire stopping systems

- - 375 Pipe collar: Insulated Wrap

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

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.

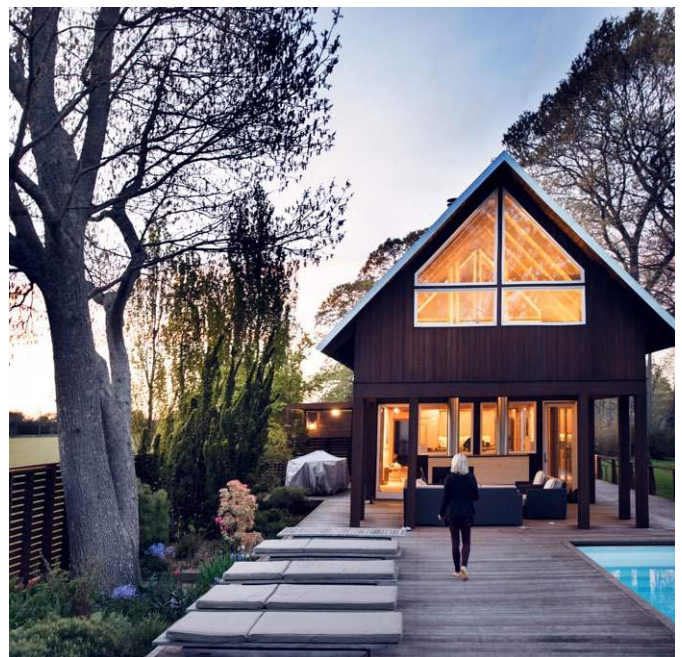
A Material Safety Data Sheet is available and can be downloaded from www.rockwool.co.uk to assist in the preparation of risk assessments, as required by the Control of Substances Hazardous to Health Regulations (COSHH).

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 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.



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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RAINSSCREEN DUO SLAB®

HARDROCK®

ROCKFLOOR®

FLEXI®

BEAMCLAD®

FIREPRO®

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