

**ROCKWOOL®****FIREPRO®**

Insulated Fire Sleeves

Fire stopping of insulated pipe penetrations

As part of the comprehensive ROCKWOOL FIREPRO® range of fire protection products, Insulated Fire Sleeves are a unique combination of stone wool and graphite intumescent. They provide all the ROCKWOOL® thermal, noise and fire benefits with an added intumescent effect.



Insulated Fire Sleeves

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.

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

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.

Description

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

Supplied with a factory applied reinforced aluminium foil facing.

Dimensions

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

Performance

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.

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 Techtube.

pH Neutrality

ROCKWOOL insulation is chemically compatible with all types of pipes, ducts, 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, mould or bacteria, or offer sustenance to insects or vermin.

Applications

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

Insulated Fire Sleeves

Table 1. Fire resistance (FR) performance - ducting, trunking and conduits

Service type	Material	Max size W/D (mm)	Wall thickness range (mm)	Supporting construction		FR integrity (minutes) Wall & Floor	FR insulation (minutes)		Report
				Wall	Floor		Wall	Floor	
Rectangular vent ducts	PVC	210/63 308/66	1.6 to 3	M/PB	Concrete	120	90	120	1
Square trunking	PVC	100/100	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	Minimum diameter	Wall thickness (mm)	Maximum diameter	Wall thickness (mm)	Supporting construction		FR integrity (minutes) Wall & Floor	FR insulation (minutes)	Report
						Wall	Floor			
Metal pipes (uninsulated)	Copper Mild steel Stainless steel	22	2.5	165	14.2	M/PB	Concrete	120	0	0
Pipes (plastic)	PVC/UPVC PVC/UPVC Polybutylene	55 160 12	3.0 3.0 2.0	160 110 28	4.2 4.2 3.5	M/PB/CB M/PB M/PB/CB	Concrete Concrete Concrete	120 120 120	120 90 120	120

A minimum thickness of 25 mm is required for uninsulated pipes.

25 to 100 mm available to match insulation on other pipes.

Manufactured to fit pipe diameters of 15 to 169 mm

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.

Insulated Fire Sleeves

Installation

Insulated Fire Sleeves are supplied 300 mm 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 specification clause 2.

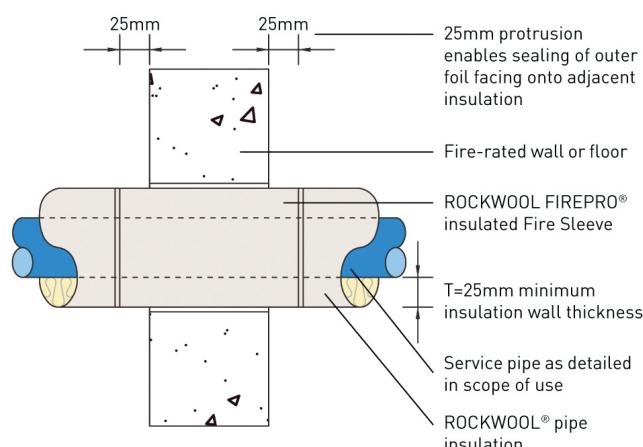
To maintain thermal efficiency, the Insulated Fire Sleeves should tightly abut any existing pipe insulation and where this is foil faced, all joints must be sealed with self-adhesive foil tape.

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 15 mm.

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

A minimum thickness of 25 mm is required for uninsulated pipes. Thicknesses of 25 to 100 mm available to match insulation on other pipes.

Manufactured to fit pipe diameters of 15 to 169 mm.



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 60 mm thick Ablative Coated Batt

2) Insulated Fire Sleeves should extend at least

25 mm 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 50 mm protrusion is required from both faces.

3) The gap between the supporting construction and the Insulated Fire Sleeve should be kept as small as practical. If gaps exceed 15 mm around the sleeve or 8 mm between the service and the sleeve, these should be filled with ROCKWOOL FIREPRO® Acoustic Intumescent Sealant or FIREPRO® Firestop Compound

4) The installed length of any Insulation Fire Sleeve shall be at least 60 mm

ROCKWOOL Limited reserves the right to alter or amend the specification of products without notice as our policy is one of constant improvement. The information contained in this data sheet is believed to be correct at the date of publication. Whilst ROCKWOOL will endeavour to keep its publications up to date, readers will appreciate that between publications there may be pertinent changes in the law, or other developments affecting the accuracy of the information contained in this data sheet. The above applications do not necessarily represent an exhaustive list of applications for ROCKWOOL Insulated Fire Sleeves. ROCKWOOL Limited does not accept responsibility for the consequences of using ROCKWOOL Insulated Fire Sleeves in applications different from those described within this data sheet. Expert advice should be sought where such different applications are contemplated, or where the extent of any listed application is in doubt.

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