Raised Access Floor Barrier

for voids beneath raised access floors

AIM ACOUSTIC AND INSULATION MANUFACTURING

PRODUCT

AIM Raised Access Floor Barrier prevents the passage of flame and smoke through the under floor cavity, for at least the period of fire rating specified. AIM Raised Access Floor Barrier is made from high density Rockwool stone wool slab, faced with impervious foil facing on both sides. It is available cut to size or in slabs suitable for cutting on site. When used in conjunction with Rockwool Ablative Coated Batts underfloor services can be easily accommodated.

APPLICATIONS

Raised Access Floor Barriers are required for four applications (requirements for fire barriers):

1 - Subdivision of large uninterrupted cavities

To comply with Building Regulations - 30 minutes' integrity plus 15 minutes insulation. The AIM Raised Access Floor Fire Barrier meets and exceeds the requirements of Approved Document Part B (in England and Wales) as well as the fire safety sections of other UK Building Regulations'.

2 - Alignment under a partition, to maintain partition rating

i) 30 minute partition - 30 minutes' integrity plus 30 minutes' insulation.

ii) 60 minute partition - 60 minutes' integrity plus 60 minutes' insulation.

iii) 120 minute partition - 120 minutes' integrity plus 120 minutes' insulation.

3 - Reduce flanking transmission of sound

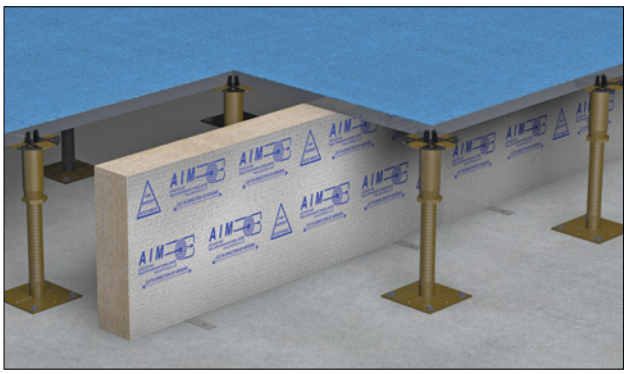
The AIM Raised Access Floor Barrier can be used to reduce flanking transmission of sound through the void it fills by at least 21 dB R_W and typically provides 51 dB when installed with a Tate Global Floor System

4 - Plenum Applications

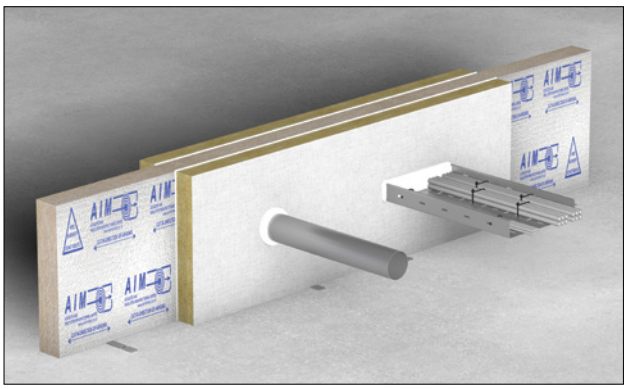
The AIM Raised Access Floor Barrier can also be used to help create a Plenum chamber under a raised access floor system.

5 - Service Penetrations

When used in conjunction with Rockwool Ablative Coated Batts, services such as cable trays and pipes can be accommodated. The system allows for the barrier to be fitted around existing services or they can be retrospectively added.



Example installation beneath raised access flooring by others.



Example product installation with penetration sealing.

FEATURES

- High density foil faced stone wool barrier.
- Thicknesses to provide ½, 1 and 2 hour fire rating.
- For use within voids up to 400mm.
- Reduces airborne transmission of sound by a minimum of 21 dB R_W
- Solutions for all common underfloor service penetrations.

BENEFITS

- Prevents the passage of fire and smoke through underfloor cavities.
- Reduces airborne sound through underfloor voids.
- The product provides up to 120 minutes Integrity & Insulation when tested to BS EN 1366-4 and the principles of TR31.
- Services and penetrations can be easily added without the need to replace the barrier.

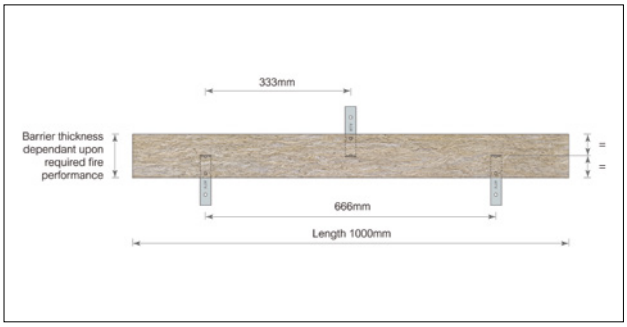
PHYSICAL INFORMATION

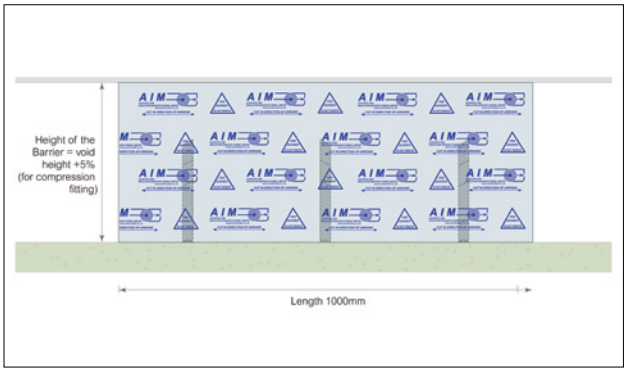
- Length: 1000mm
- Widths: 75mm, 100mm & 125mm

  (depending on the fire rating required)
- Voids: 50 - 400mm

  (barrier to be compressed by 5%)
- Available cut to size and supplied with the required fixing clips
- Available in slab form for cutting on site as required
- Foil faced (see options)
- Also available Polythene sleeved
- Thermal Conductivity λ = 0.036W/mK

Raised Access Floor Barrier with steel mounting strips, intumescent sealant and jointing foil.



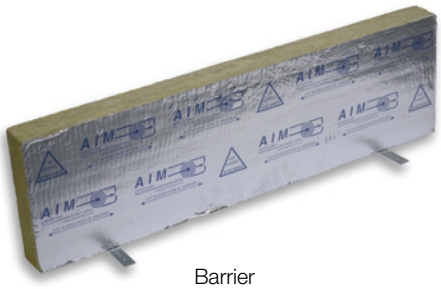


PACKAGING

AIM Raised Access Floor Fire Barrier is generally packed into cartons and stretch wrapped onto wooden pallets with a showerproof polythene pallet cover and high quality edge protectors. We are also able to provide product without cartons if required.

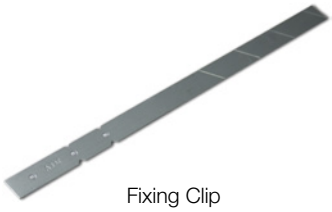
Orders for slab and half slab barrier will be supplied stretch wrapped onto pallets with a showerproof polythene pallet cover and edge protection (ie, no cartons).

COMPONENTS available from AIM



Barrier

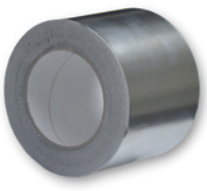
Rockwool Ablative Coated Batt



Fixing Clip

AIM Acrylic fire rated intumescent mastic (optional extra)

Rockwool FirePro® Acoustic Intumescent Sealant



Foil tape for sealing joints (optional extra)
Length - 45m Widths - 100mm, 125mm and 150mm

AS STANDARD

AIM Raised Access Floor Barrier is supplied pre-cut in 1000mm lengths in three standard thicknesses depending on the fire rating required. The product supplied is as required to fill the void.

The pre-cut product is supplied with the required fixing clips.

OPTIONS

The AIM Raised Access Floor Barrier is also available in slab form for cutting on site as required. When ordering in slab form the clips should be purchased separately, clearly identifying small (for voids up to 160mm) or large clips (for voids 161 to 400mm).

The product is also available fully foil enclosed for use within plenum applications. It can also be suppled polythene sleeved.

Foil tapes of 45m length and in widths of 100, 125 and 150mm for the optional sealing of joints.

Rockwool Ablative Coated Batts and Rockwool Intumescent Mastic for applications with service penetrations.

TECHNICAL INFORMATION

Fire Performance

Tested to BS EN 1366-4

The access floor and structural slab should have a proven fire rating at least equal to that of the barrier.

Fire Rating	Integrity	Insulation fire resistance	Barrier thickness	Maximum void
1/2 hour	120 minutes	30 minutes	75mm	400mm
1 hour	120 minutes	60 minutes	100mm	400mm
2 hour	120 minutes	120 minutes	125mm	400mm

Acoustic Performance

AIM Raised Access Floor Barrier provides at least 21dB R_w sound reduction.

When tested in-conjunction with a carpeted Kingspan Raised Access Floor system, the room to room sound reduction was at least 52 dB_{nfw} through the path of the fire barrier. This result was achieved with all fire solutions.

Plenum Chambers

The ultimate performance of the installations airtightness is highly dependent upon the manner of installation. It cannot be guaranteed prior to site installation and accordingly should be tested at site.

TEST REPORTS

WF 432725 = 1/2 hour and 1 hour barriers
WF 432729 = 2 hour barrier and cables passing under the barrier

Tests are conducted to BS EN 1366-4 and the principles of TR31.

Z11012 – Acoustic Performance – Testing on mineral fibre insulation. To BS EN ISO 10140-2.

SRL Test report 24868-SRL-RP-XT-001-P1

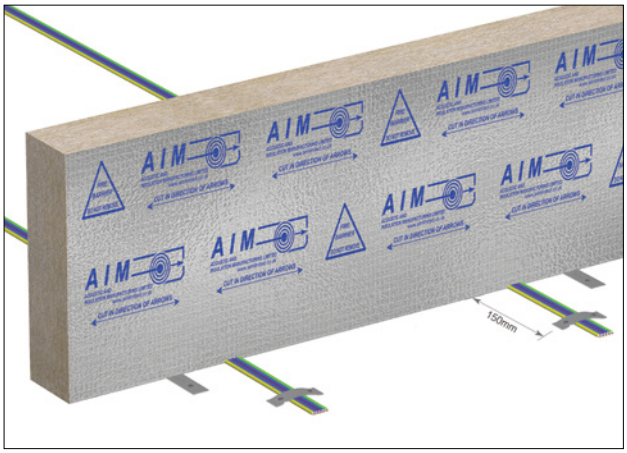
PAR/24946 Covering service penetrations in conjunction with Rockwool Ablative Coated Batts.

NBS Source PARTNER

AIM are partners with NBS. Our products can be found on NBS Source and have been authored to NBS specification standards and have both CAWS and Uniclass 2015 classifications.

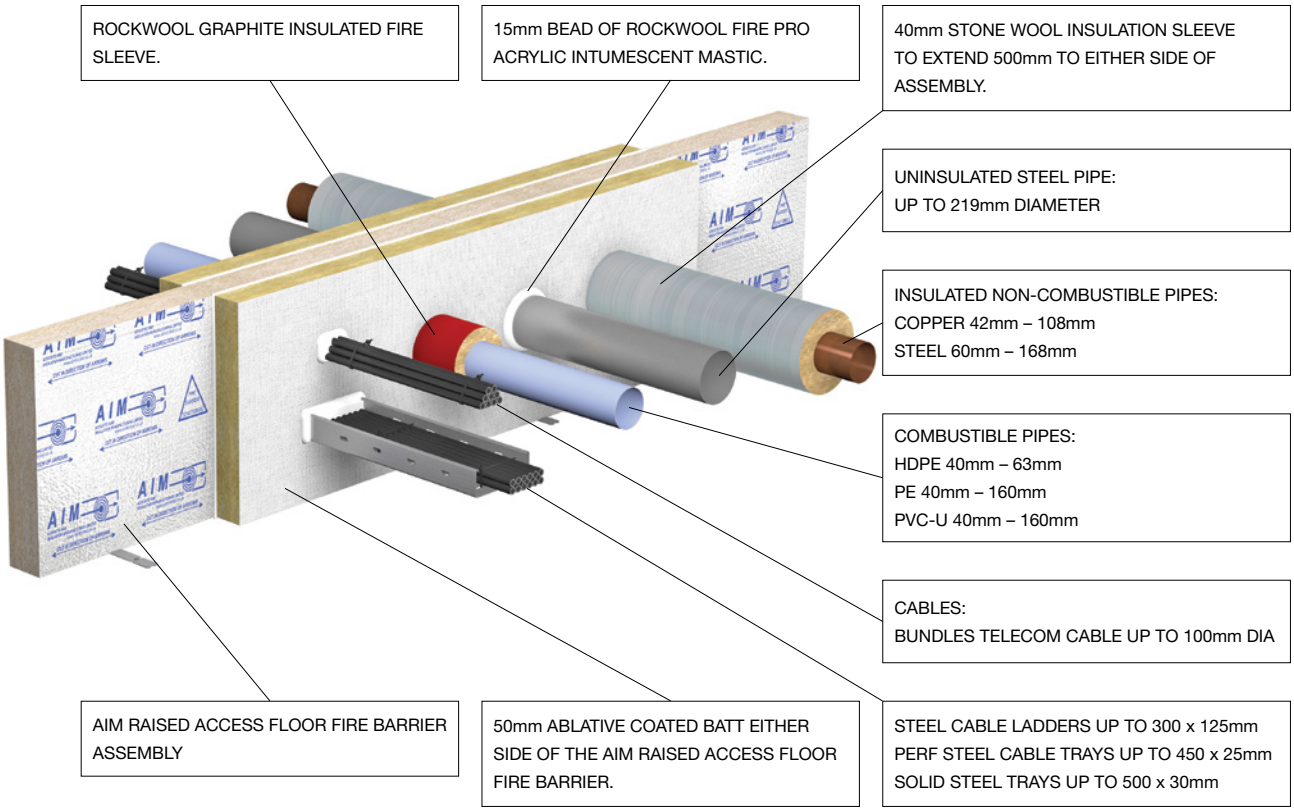
PENETRATIONS

The system allows for up to five CAT5e or five 2.5mm three core PVC cable to be secured to the substrate and run below the Raised Access Floor Fire Barrier. Please contact AIM for specific installation guidance.



When a penetration service is required to pass through the AIM RAF fire barrier, two 50mm Rockwool FirePro® Coated Batts, having the same height as the AIM RAF fire barrier, are placed on either side of the AIM RAF fire barrier and any small gaps around the penetrating component are filled with Rockwool FirePro® Acoustic Sealant. The horizontal distance from any part of the periphery of the penetrating service to the nearest edge of the Rockwool FirePro® Coated Batt should be at least 200mm.

Rockwool has a comprehensive range of test evidence for penetrations of cables and pipes, both with a double layer of Rockwool Ablative Coated Batt or with a double layer of Rockwool FirePro® Ablative Coated Batt. The cables tests are based on the Standard configuration for cable penetration systems, Figure A.1 in BS EN 1366-3: 2009 and the plastic pipes are based on Option 1 and the metal pipes on Option 2 in Figure E.1 in BS EN 1366-3: 2009.



NOTES

- The supporting construction must be capable of achieving the required fire performance of the proposed firestop.
- All penetrations through the assembly must be fully supported on both sides bearing the weight of the services; the assembly is not loadbearing.
- Intumescent mastic / wraps / collars / sleeves etc must be applied to both sides of the assembly.
- Penetrations must be at least 200mm from the ends of the Ablative Coated Batt / Raised Access Floor Fire Barrier assembly.
- Penetrations should be spaced at least 50mm from the upper and lower surface of the assembly.

CABLE SERVICES

Penetrating service (mm)	Integrity (minutes)	Insulation (minutes)	Number of conductors x cross sectional area
A1 ten cables 5x1.5	120	120	5 x 1.5mm^2
A2 ten cables 5x1.5	120	60	5 x 1.5mm^2
A3 ten cables 5x1.5	120	90	5 x 1.5mm^2
B two cables 1x95	120	60	1 x 95mm^2
C1 cable 4x95	120	60	4 x 95mm^2
C2 cable 4x95	120	90	4 x 95mm^2
C3 cable 4x95	120	60	4 x 95mm^2
D1 cable 4x185	120	60	4 x 185mm^2
D2 cable 4x185	120	90	4 x 185mm^2
D3 cable 4x185	120	60	4 x 185mm^2
E two cables 1x185	120	45	1 x 185mm^2
F bundle of telecom cables Ø100	120	120	
G1 cable	120	45	1x 95mm^2
G2 cable	120	60	1 x 185mm^2
H three copper conduits 16dia x 0.5w	120	30	
I three PVC conduits 16dia x 1.0w	120	120	
Steel cable ladder 200 x 125 x 1.5	120	120	
Steel cable ladder 300 x 125 x 1.5	120	60	
Perforated steel cable tray 450 x 25 x 1.0	120	90	
Steel cable tray 500 x 30 x 1.5	120	120	

Table 12a. Approved Scope for Cable Services through AIM RAF Fire Barriers

The cables have been tested together meeting the requirements of Table A.1 so all intermediate sized cables are approved.

PIPE SERVICES

Penetrating service (mm)	Pipe insulation thickness (mm)	Integrity (minutes)	Insulation (minutes)
Insulated copper pipe 42dia x 1w	40	120	120
Insulated copper pipe 54dia x 1.5w	40	120	120
Insulated copper pipe 108dia x 1.2w	40	120	120
Insulated copper pipe 108dia x 1.5w	40	120	90

Table 12b. Approved Scope for Copper Pipe Services through AIM RAF Fire Barriers

The insulation used in these tests is Rockwool Fire Tube pipe insulation with a density of 140kg/m^3 or Rocklap H&V pipe section with a density of 120kg/m^3 so both these types are approved. The pipes have been tested in an Option 2 configuration (section Figure E.1 BS EN 1366-3: 2009) with three pipes touching and also very close to the edge of the batt so there are no spacing restrictions for adjacent pipes.

Penetrating service (mm)	Pipe insulation thickness (mm)	Integrity (minutes)	Insulation (minutes)
Insulated steel pipe 60dia x 2.3w	40	120	120
Insulated steel pipe 152dia x 3w	40	120	120
Insulated steel pipe 168.3dia x 5w	40	120	120
Uninsulated steel pipe 219.1dia x 5w	-	120	15

Table 12c. Approved Scope for Steel Pipe Services through AIM RAF Fire Barriers

The insulation used in these tests is Rockwool Fire Tube pipe insulation with a density of 140kg/m^3 or Rocklap H&V pipe section with a density of 120kg/m^3 so both these types are approved. The pipes have been tested in an Option 2 configuration (section Figure E.1 BS EN 1366-3: 2009) with three pipes touching and also very close to the edge of the batt so there are no spacing restrictions for adjacent pipes.

Penetrating service (mm)	Pipe insulation thickness (mm)	Integrity (minutes)	Insulation (minutes)
HDPE pipe 40dia x 1w	-	120	120
HDPE pipe 40dia x 3.7w	-	120	120
HDPE pipe 63dia x 3.8w	-	120	120
HDPE pipe 63dia x 5.8w	-	120	120
PE pipe 40dia x 5.5w	-	120	120
PE pipe 160dia x 4.9w	-	120	120
PE pipe 160dia x 9.5w	-	120	120
PVC-U pipe 40dia x 1.9w	-	120	120
PVC-U pipe 40dia x 3w	-	120	120
PVC-U pipe 63dia x .5w	-	120	120
PVC-U pipe 63dia x 5.8w	-	120	120
PVC-U pipe 160dia x 6.2w	-	120	120

Table 12d. Approved Scope for Plastic Pipe Services through AIM RAF Fire Barriers

All the plastic pipes were tested without insulation in a linear arrangement (Option 1 configuration) and were spaced 30mm apart 200mm from the vertical and 50mm from the horizontal edges of the batt so these are the minimum dimensions approved.

INSTALLATION GUIDELINES

Items required for installation

PPE abrasion resistant gloves

PPE impact resistant goggles

RPE dust mask - FFP3

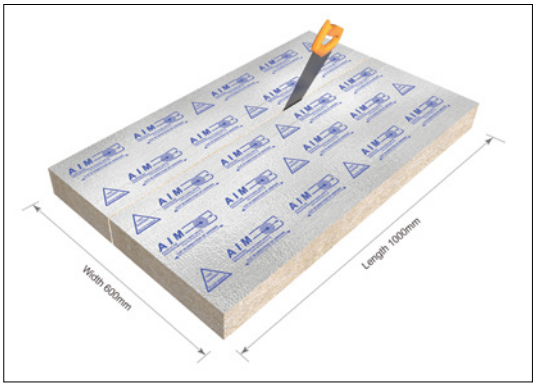
Drill

Insulation saw

Screwdriver

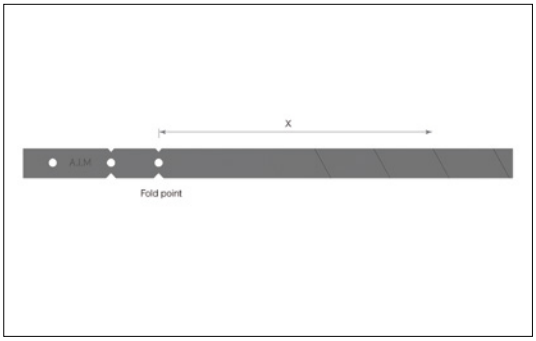
Tape measure

BASIC BARRIER INSTALLATION



1 Measure the void depth and add 5%. Mark the slab and carefully cut using an insulation saw or hand saw. Please cut in the direction of the arrows printed on the foil facing.

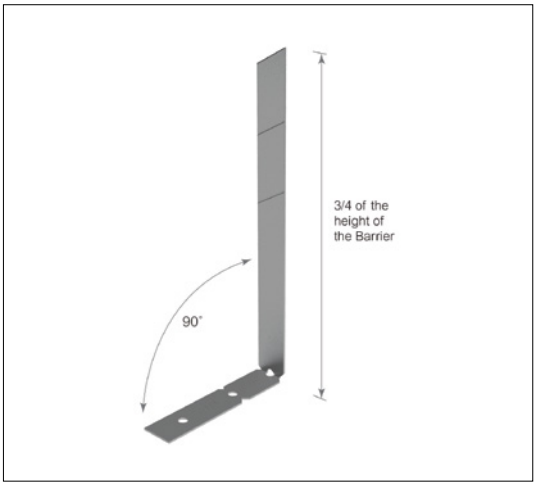
Please note: This step is not required if the barrier supplied has been pre-cut to the identified void size.



2 The product is installed with three ‘L’ clips per length of barrier

Snap the fixing clips to the correct length.

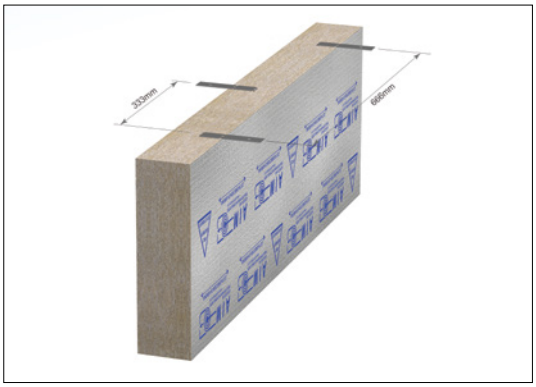
Dimension ‘X’ should be three quarters of the barriers height.



3 For all voids three ‘L’ angle brackets are supplied per length. Form the three fixing clips to 90° to form an ‘L’ shape.

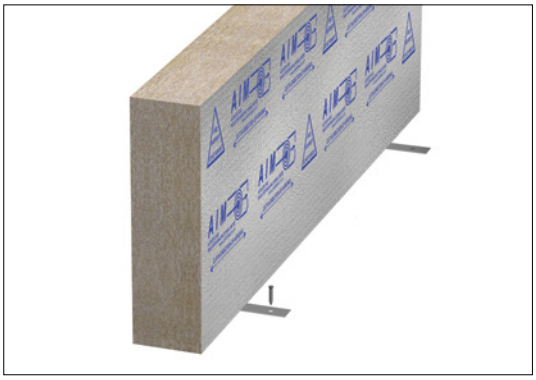
4 Insert into the base of the barrier to approximately ¾ depth with the two end brackets having their 'leg' to one side of the barrier and the middle one with its leg to the other side.

The clips should be at 333mm nominal centres.



5 Place the barrier into position ensuring a tight butt joint between sections.

Secure the three fixings to the substrate using non-combustible fixings.

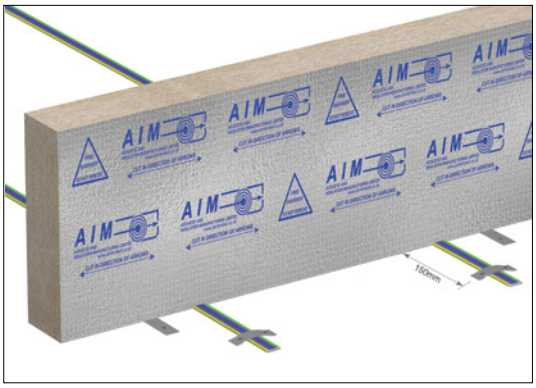


6 The Barrier should maintain contact with the underside of the access floor and the top of the structural floor so that no gaps are present, as this may risk loss of integrity. The barrier should be installed so that it completely fills the cavity without any gaps or voids.

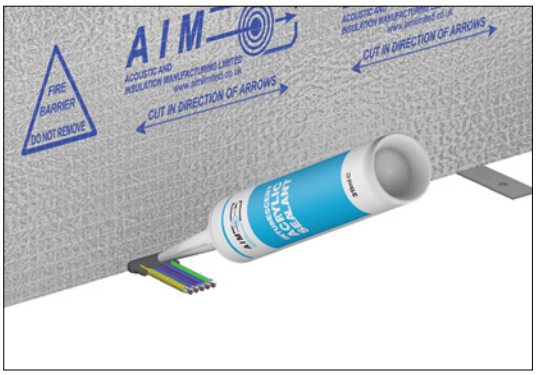
Fit the access floor tile ensuring that the barrier is held under compression. Minor imperfections or any gaps caused by joints or coffers in the floor should be sealed with a fire rated intumescent mastic.

7 If cables pass the cavity barrier line then these should be secured 150mm away from each edge of the barrier.

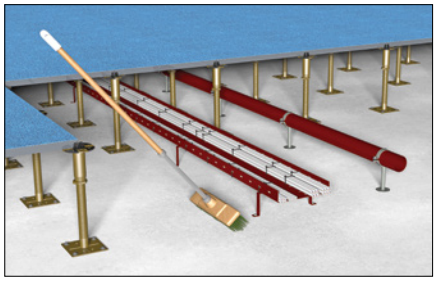
The system allows for up to five CAT5e or five 2.5mm three core PVC cable to be secured to the substrate and run below the Raised Access Floor Fire Barrier. Please contact AIM for specific installation guidance.



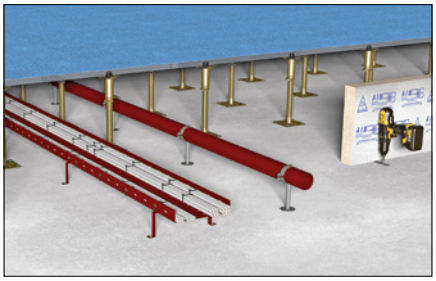
8 Prior to installing the Raised Access Floor Barrier, ensure there is intumescent mastic all around the cables. Once the slab is fitted, check for gaps and add more mastic if required.



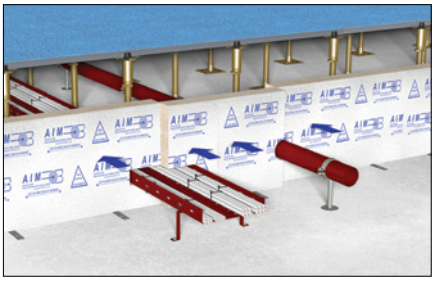
SERVICE PENETRATIONS (AROUND PRE-EXISTING NON-COMBUSTIBLE SERVICES)



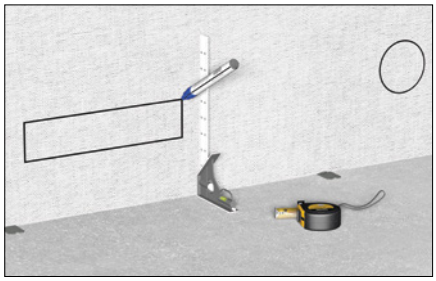
1 Check the floor is clear of debris; seal any imperfections with intumescent mastic.



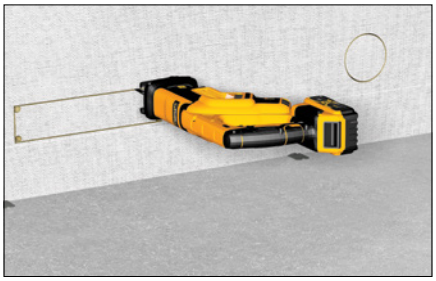
2 Fit the Raised Access floor Fire Barrier in the usual manner remembering to use fixing clips.



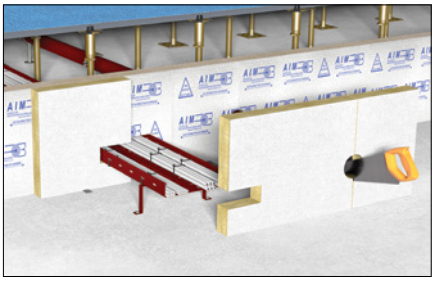
3 Fit the Raised Access Floor Fire Barrier tightly around the services; fill any gaps by packing with off-cut material and make good with intumescent mastic.



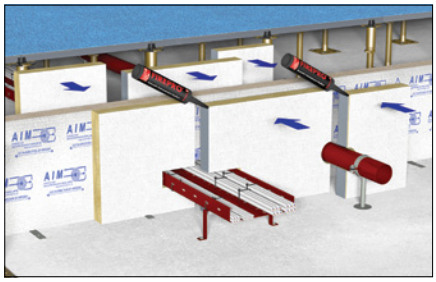
4 Mark where the services will penetrate the Ablative Coated Batt. **These need to be at least 200mm from each end of the Ablative Batt.**



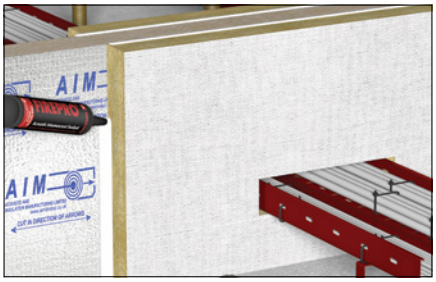
5 Cut openings into the Ablative Coated Batts to accept the services.



6 Cut the Ablative Coated Batts into two sections through the middle of the opening.

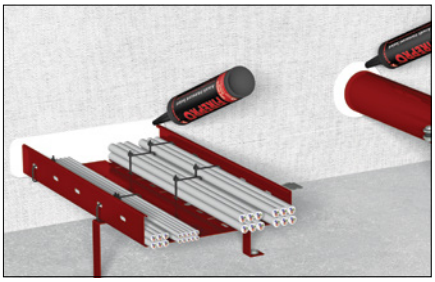


7 Fit the Ablative Coated Batts around the services. **The cut edges of the Ablative Coated Batt need to be coated with intumescent mastic to adhere them together.**



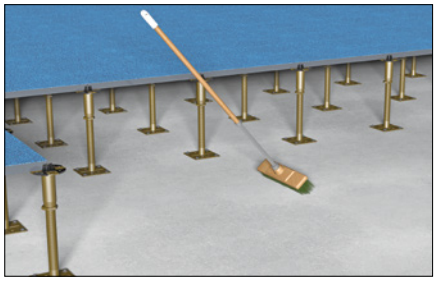
8 Seal the outer edge of the Ablative Coated Batts to the face of the Raised Access Floor Fire Barrier using Rockwool FirePro® Acoustic Intumescent Sealant*.

*NOTE: Only the combination of Rockwool Ablative Batt with FirePro® Acoustic Sealant has been tesetd as a system. The use of other products will require independent testing or approval of a competent person such as a fire engineer.

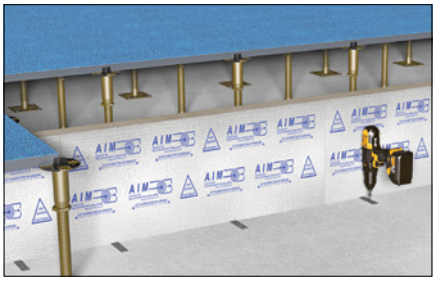


9 Pack any gaps or voids with off-cut Ablative Coated Batt material and make good with intumescent mastic or Ablative Paint.

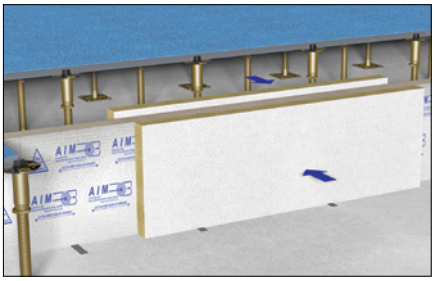
SERVICE PENETRATIONS (FITTING NON-COMBUSTIBLE SERVICES THROUGH THE BARRIER)



1 Check the floor is clear of debris; seal any imperfections with intumescent mastic.



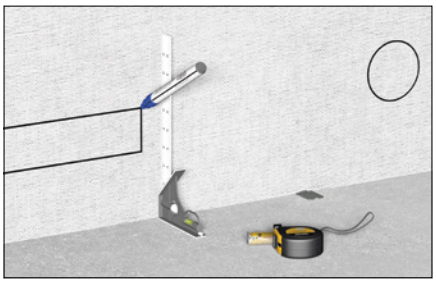
2 Fit the Raised Access floor Fire Barrier in the usual manner remembering to use fixing clips.



3 Fit a Rockwool Ablative Coated Batt to either side of the Raised Access Floor Fire Barrier. Remember the services need to be at least 200mm from each end of the Ablative Batt.

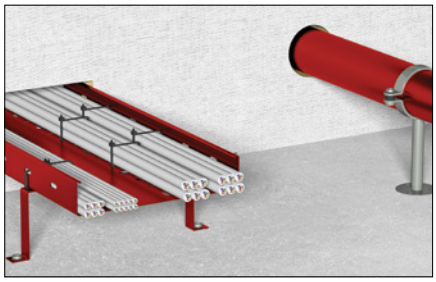
4 Seal the outer edge of the Ablative Coated Batts to the face of the Raised Access Floor Fire Barrier*.

*NOTE: Only the combination of Rockwool Ablative Batt with FirePro® Acoustic Sealant has been tested as a system. The use of other products will require independent testing.

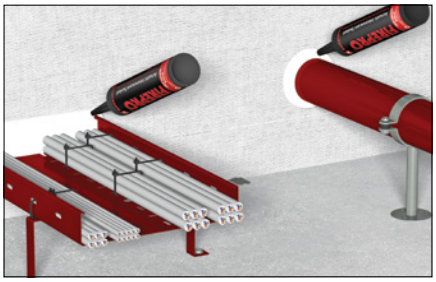


5 Carefully mark where the services will penetrate through the Ablative Coated Batts and Raised Access Floor Fire Barrier.

6 Cut openings into the Ablative Coated Batts to accept the services.

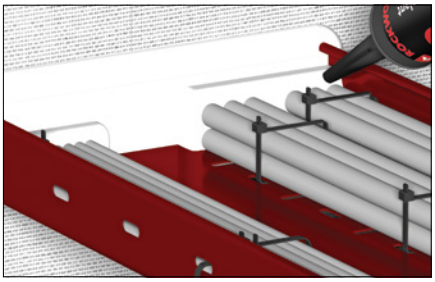


7 Pass the services through the apertures cut.



8 Seal where the services penetrate by packing the opening with off-cut Ablative Batt material and make good with intumescent mastic or ablative paint*.

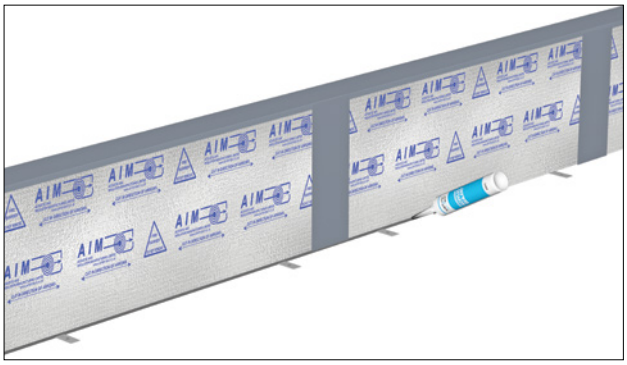
*NOTE: Only the combination of Rockwool Ablative Batt with FirePro® Acoustic Sealant has been tested as a system. The use of other products will require independent testing.



9 Make sure no gaps or voids are present anywhere in the assembly.

PLENUM APPLICATIONS

For Plenum applications we can supply the AIM Raised Access Floor Barrier fully foil enclosed. The barrier should then be installed on a bed of mastic with all vertical joints sealed with foil tape to ensure airtightness.



STORAGE

Products are supplied on wooden pallets with edge protection and a shower proof hood. Products should be stored away from the elements until ready for installation.

MAINTENANCE

This product does not contain moving parts and, if undisturbed in the underfloor cavity, requires no routine inspections or maintenance.

It is recommended that the integrity of the barrier is rechecked if further works are carried out that may have involve disturbing the product e.g. installing new cables.

HEALTH & SAFETY

Insulation products supplied by AIM are considered to be inert articles and as such are exempt from requirements to provide a Safety Data Sheet.

A Product Safety and Handling Information Sheet is available upon request.

ENVIRONMENT

Global warming potential = zero

For product recycling please contact: Rockwool
T: 01656 868400 E: recycling@rockwool.co.uk

ORDERING

To order this product the following information will be required:

- Underfloor void Height
- Fire Performance Required
- Approximate Quantity
- Delivery location

Products are typically supplied in seven to ten working days but lead times may vary depending on existing factory commitments.

There is no minimum order quantity or value although small orders may attract transport surcharges.

TECHNICAL SUPPORT

Technical Support is available from our experienced sales team on 01293 582 400 or

sales@aimlimited.co.uk

ABOUT AIM

AIM are a quality insulation convertor with over 30 years experience in the design, testing & manufacturing of high quality fire barriers for customers worldwide.

VERSION CONTROL

Issue 6 - 05 2025

This document replaces and supersedes all previous versions.

The current version number can be verified at https://www.aimlimited.co.uk/downloads/
or call AIM on 01293 582400

AIM are members of

ASFP

AIM working in partnership with

ROCKWOOL

Raised Access Floor System acoustic test conducted with

SRL

Service penetrations in conjunction with Rockwool Ablative Coated Batts under assessment from Kiwa Fire Safety Compliance

AIM
ACOUSTIC AND INSULATION MANUFACTURING

T 01293 582400
E sales@aimlimited.co.uk
W www.aimlimited.co.uk