



Project number: 4790145104

30th November 2021

ASSESSMENT REPORT

On ROCKWOOL FIREPRO® SoftSeal

Title

The fire resistance performance of ROCKWOOL FIREPRO® SoftSeal when installed within a 100 mm thick 'Eurobond Firemaster' partition system.

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1. Introduction

This report provides an appraisal of the fire resistance performance of ROCKWOOL FIREPRO® SoftSeal when installed within a 100 mm thick 'Eurobond Firemaster' partition system.

The 'Eurobond Firemaster' partition wall system often incorporates apertures to accommodate the passage of services. The fire resistance of the partition system is only as good as its weakest point, and it is therefore important that any apertures are adequately sealed, such that weaknesses are not created at the positions of the service penetrations.

This assessment report considers the ability of the ROCKWOOL FIREPRO® SoftSeal product to reinstate the Integrity and Insulation performance of the 100 mm thick 'Eurobond Firemaster' partition system, where it is penetrated by various service types, as described in the proposals section of this report, and subjected to a fire resistance test in accordance with EN 1366-3: 2009.

2. Assumptions

The constructions described within this report are symmetrical and so apply to fire from either direction.

It is assumed that the proposed Firemaster partition wall will be installed by competent installers, in a manner that is in accordance with the manufacturers approved installation methods and similar to that detailed within this report.

It is further assumed that the wall apertures will be formed in the same manner as that detailed within this assessment.

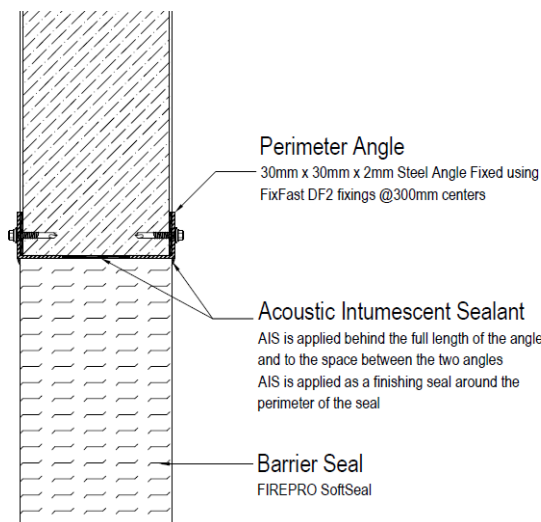
It is assumed that ROCKWOOL FIREPRO® SoftSeal penetration sealing system will be as detailed within the supporting data section of this report, unless otherwise detailed within this report.

3. Assessment – Performance to EN 1366-3: 2009

Wall Construction The 'Eurobond Firemaster' wall into which the ROCKWOOL FIREPRO® SoftSeal penetration sealing system is to be installed has an overall thickness of 100 mm and is constructed using steel faced stone mineral wool cored panels. Where apertures are to be introduced, to allow the passage of services, then angle framing shall be introduced in line with the supporting test data.

The framing shall consist of a 30mm x 30mm x 2mm steel angle fixed around the aperture edge using FixFast DF2 fixings at 300 mm centres. The angle shall be bedded on a bead of ROCKWOOL Acoustic Intumescent Sealant.

Aperture lining detail:



Aperture Size and Lining

The Fire Resistance test report referenced WF 431646 details a test conducted in accordance with EN 1363-1:2012 and BS EN 1366-3:2009. The report details the fire resistance performance of a fire seal incorporating 2 No. pipe penetrations, a blank fire seal, a fire seal including 2 No. EZ Path multiple cable penetration sealing systems and an IBAR busbar trunking penetration sealing system, within a 100 mm thick ‘Eurobond Firemaster’ partition system.

The ‘Eurobond Firemaster’ wall was built with 4 apertures, into which the ROCKWOOL FIREPRO® SoftSeal was installed. The largest of the apertures (Specimen C) was 1200 mm wide x 2000 mm high. This blank aperture incorporated no services and was tested to assess the ability of the ROCKWOOL FIREPRO® SoftSeal to be able to self-support itself and also reinstate the integrity and insulation performance of the wall for the required 60 minutes duration.

The results of the test were as follows:

Test reference	Integrity			Insulation
	Cotton Pad	Gap Gauge	Continuous Flaming	
Fire Seal C	132 minutes*	132 minutes*	132 minutes*	84 Minutes

*No Failure of this test criteria at the termination of the test at 132 minutes.

The Results from the test show that there were no Integrity failures associated with the ROCKWOOL FIREPRO® SoftSeal in this large aperture seal. The seal had no additional services passing through it and was therefore entirely self-supporting. The tested integrity performance is more than double that required by this assessment and coverage for sizes up to 1200mm x 2000 mm is therefore proven.



In addition to the large blank seal specimen that was installed in the fire resistance test detailed within WF 431646, four other penetration seal configurations were tested. These seals also incorporated the ROCKWOOL FIREPRO® SoftSeal product, however, within these seals there were service penetrations that passed through the firestop. The three specimens, referenced A, B and D were constructed as follows:

Service penetrations: COOL-FIT 2.0 Pipes

Seal A: 750 mm high x 650 mm wide aperture. The seal was penetrated by two George Fischer COOL-FIT 2.0 pipes, which were pre-insulated 'pipe in Pipe' PE 100 SDR pipes. Pipe A1 had an OD of 200 mm and was wrapped with 6 No. Layers of ROCKWOOL FIREPRO® Intumescent Pipewrap Roll on both faces of the SoftSeal. Pipe A2 had an OD of 75 mm and was wrapped with 3 No. Layers of ROCKWOOL FIREPRO® Intumescent Pipewrap Roll on both faces of the SoftSeal.

The largest and smallest of the pipe sizes to be considered were tested and as such, based on interpolation of intumescent material thickness vs diameter and pipe wall thickness, in accordance with the field of direct application rules of EN1366-3:2009, then the following scope can be covered:

George Fischer COOL-FIT 2.0 pipe range		ROCKWOOL FIREPRO® Intumescent Pipewrap Roll
Pipe Dia.	Overall dia.	Number of layers
32	75	3
40	90	4
50	90	4
63	110	4
75	120	5
90	140	5
110	160	6
140	200	6

The results of the test were as follows:

Test reference	Integrity			Insulation
	Cotton Pad	Gap Gauge	Continuous Flaming	
Fire Seal A	132 minutes*	132 minutes*	132 minutes*	90 Minutes

* No failure of this test criteria at termination of the test at 132 minutes



**Penetrations: IBAR
Busbar penetration**

No extension to scope from that tested within 431646

The results of the test were as follows:

Test reference	Integrity			Insulation
	Cotton Pad	Gap Gauge	Continuous Flaming	
Fire Seal D and busbar penetration	132 minutes*	132 minutes*	132 minutes*	102 minutes

* No failure of this test criteria at termination of the test at 132 minutes

**Penetrations: EZ-
Path Series 44+
Pathway**

No extension to scope from that tested within 431646

The results of the test were as follows:

Test reference	Integrity			Insulation
	Cotton Pad	Gap Gauge	Continuous Flaming	
Fire Seal B	132 minutes*	132 minutes*	132 minutes*	98 minutes

* No failure of this test criteria at termination of the test at 132 minutes

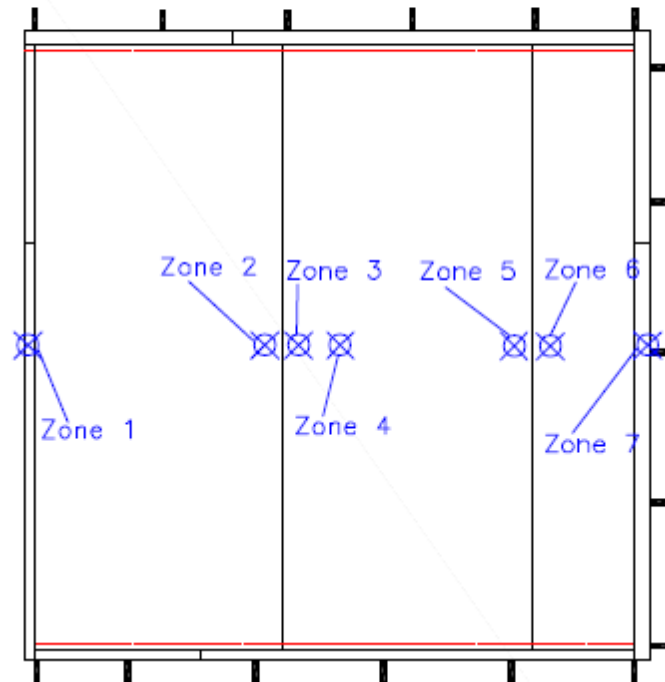
Additional services

The ROCKWOOL FIREPRO® SoftSeal has been subjected to further testing, conducted in flexible wall constructions, that offers further scope to the service penetration types that it can be used to protect. Whilst this additional test data was not obtained through testing within the 'Eurobond Firemaster' partition system, it was obtained through similarly full sized flexible constructions that would offer similar or greater deflection forces on to the installed firestop.

There were no recordings made as to the overall deflection of the 'Eurobond Firemaster' partition with ROCKWOOL FIREPRO® SoftSeal, as this is not a requirement of the test standard EN 1366-3: 2009. There were, however, readings taken during the original fire resistance data for the wall, which was conducted without apertures, and the testing recorded the following deflection measurements:

4.6 Deflection

The deflection of the specimen was measured from the centre point, and at mid height on each joint. The readings have been tabulated and are shown graphically below. A positive reading represents deflection in towards the furnace and a negative reading represents deflection away from the furnace.



Time (minutes)	0	15	30	45	60	75	90
Zone 1 (mm)	0	11	11	20	17	18	18
Zone 2 (mm)	0	19	25	59	80	87	85
Zone 3 (mm)	0	20	26	60	80	89	88
Zone 4 (mm)	0	18	24	54	81	83	83
Zone 5 (mm)	0	12	14	39	54	66	70
Zone 6 (mm)	0	10	12	36	50	61	64
Zone 7 (mm)	0	-1	-1	-1	-2	-2	-3



The data shows that the walls deflected up to a maximum of 81 mm at 60 minutes of testing, and 89 mm at 90 minutes of testing. The wall itself exhibited a gradual movement over the course of the first 60 minutes of testing, rather than there being a sudden forceful deflection of the partition system. This movement is similar to that commonly exhibited by gypsum based flexible walls of the type that the additional penetration seal data was obtained from. The supporting test data shows that the ROCKWOOL FIREPRO® SoftSeal testing was conducted in walls that complied with the requirements of Table 3 of BS EN 1366-3: 2009. The table defines the 'standard supporting construction' that allow extrapolation of test data to other similarly built wall types.

The use of these insulated gypsum walls as 'standard supporting constructions' in the test standard is because of their onerous nature in offering considerable deformation during the testing. The inclusion of the fully insulated cavity creates a large temperature disparity between the exposed face and the unexposed face causing the partition to deflect. This puts considerable force onto the penetration seal as the firestop moves in sympathy to the wall whilst the services themselves remain fixed on their supports. The greater the movement of the wall the greater the force placed on the firestop. Movement of these flexible walls is commonly seen to be around 100 mm.

It is therefore reasonable to accept that the testing obtained with the EN 1366-3:2009 standard supporting constructions would be at least equally as onerous were the same seal configuration to be tested within the Eurobond Firemaster partition. The interface between the ROCKWOOL FIREPRO® SoftSeal and the Eurobond Firemaster wall has been proven within test report WF 431646. Based on this the following additional service types can be positively appraised to pass through the ROCKWOOL FIREPRO® SoftSeal mounted within the Eurobond Firemaster partition system.

**Test Report: WF
411471/R**

The Fire Resistance test report referenced WF 411471/R details a test conducted in accordance with EN 1366-3:2009. The report details the fire resistance performance of four specimens of penetration sealing systems that were installed within a flexible partition.

The flexible drywall construction had overall dimensions of 3000mm high by 3000mm wide by 100mm thick. The wall incorporated two apertures which were penetrated by various services and into which ROCKWOOL FIREPRO® SoftSeal seals were installed. The specimens were referenced Specimen A and Specimen B. The wall also incorporated two partial penetrations that are not subject to this assessment. These specimens were referenced C and D.



Metallic pipe penetrations

Specimen B incorporated an aperture that was 900 mm wide by 1200 mm high that was penetrated by various service types. Within the seal were three metallic pipes that were referenced; B1, B2 & B3. The pipes were installed such that they formed a cluster formation with 0 mm separation between the installed pipe insulation. The pipes comprised;

Specimen	Pipe type	Size	Wall thickness	Insulation
B1	Steel	Ø219 mm	5.0 mm	25 mm thick ROCKWOOL Rocklap H&V – 1000 mm long mounted centrally though the seal (LS).
B2	Copper	Ø159 mm	2.0 mm	
B3	Copper	Ø42 mm	1.2 mm	

The performance of the tested pipes was as follows;

Test reference	Integrity			Insulation
	Cotton Pad	Gap Gauge	Continuous Flaming	
B1	103 minutes	132 minutes*	132 minutes*	97 Minutes
B2	132 minutes*	132 minutes*	132 minutes*	58
B3	132 minutes*	132 minutes*	132 minutes*	132 minutes*

*No Failure of this test criteria at the termination of the test at 132 minutes.

Test reference B2 suffered an insulation failure at 58 minutes. The position of the failure was taken on the Copper pipe itself rather than on the Rocklap H&V insulation (which satisfied the 60 minutes insulation criteria). It is proposed that the length of the insulation is increased by 50% to achieve 60 minutes. The additional 2 minutes of insulation performance to meet the required 60 minute requirement.

The Direct Field of Application contained within the test standard EN 1366-3: 2009 (Clause E.1.5.1) allows for the interpolation of pipe sizes between that tested. As such the scope detailed in Appendix 1 – Service type: Metallic pipes, can be gained from the above test results.



Plastic pipe penetrations

Specimen A incorporated an aperture that was 1200 mm wide by 1200 mm high that was penetrated by six plastic pipes, installed at 45°, that were referenced; A1 – A6. Specimen B (detailed above) was also penetrated by 3 plastic pipes that were referenced B4, B5 & B6. The pipes comprised;

Specimen	Pipe type	Size	Wall thickness	Insulation
A1	PP	Ø110 mm	2.7 mm	300 mm long x 25 mm thick ROCKWOOL FirePro Insulated Fire Sleeve (IFS)
A2	PVC	Ø110 mm	4.2 mm	
A3	PE	Ø110 mm	6.6 mm	
A4	PVC	Ø160 mm	6.2 mm	
A5	PE	Ø160 mm	9.5 mm	
A6	PE	Ø160 mm	4.9 mm	
B4	PE	Ø160 mm	4.9 mm	150 mm long x 25 mm thick ROCKWOOL FirePro Insulated Fire Sleeve (IFS)
B5	PE	Ø160 mm	9.5 mm	
B6	PVC	Ø160 mm	6.2 mm	

The performance of the tested pipes was as follows;

Test reference	Integrity			Insulation
	Cotton Pad	Gap Gauge	Continuous Flaming	
A1	132 minutes*	132 minutes*	132 minutes*	132 minutes*
A2	132 minutes*	132 minutes*	132 minutes*	132 minutes*
A3	132 minutes*	132 minutes*	132 minutes*	132 minutes*
A4	132 minutes*	132 minutes*	132 minutes*	132 minutes*
A5	132 minutes*	132 minutes*	132 minutes*	130 minutes
A6	132 minutes*	132 minutes*	132 minutes*	132 minutes*
B4	108 minutes	108 minutes	110 minutes	88 minutes
B5	110 minutes	110 minutes	110 minutes	88 minutes
B6	110 minutes	110 minutes	110 minutes	91 minutes

*No Failure of this test criteria at the termination of the test at 132 minutes.

The pipe sizes/specifications included within this test had been determined as 'critical pipes' in the previous test referenced WF Test Report No. 411457/R. This test incorporated a range of plastic pipes to allow for interpolation of diameters and wall thicknesses and thus by again testing the 'critical pipes', the established field of application may be transferred into alternative constructions/substrates. The tested pipe comprised:



Specimen	Seal	Aperture	Service
A	150 mm long by 25 mm thick 'FIREPRO [®] Insulated Fire Sleeve' installed symmetrically within the aperture. The remaining annular space was filled with 25 mm deep 'FIREPRO [®] Acoustic Intumescent Sealant' on both sides.	Ø 110 mm	Ø 40 mm by 1.8 mm wall thickness PP pipe, U/C
B		Ø 110 mm	Ø 40 mm by 1.9 mm wall thickness PVC pipe, U/C
C		Ø 180 mm	Ø 110 mm by 6.3 mm wall thickness PP pipe, U/C
D		Ø 180 mm	Ø 100 mm bundle of 'F' type telecom cables
E		Ø 110 mm	Ø 40 mm by 5.5 mm wall thickness PP pipe, U/C
F		Ø 180 mm	Ø 110 mm by 6.6 mm wall thickness PVC-u pipe, U/C
G		Ø 230 mm	Ø 160 mm by 4.9 mm wall thickness PE pipe, U/C
H		Ø 230 mm	Ø 160 mm by 9.5 mm wall thickness PE pipe, U/C
I		Ø 110 mm	Ø 40 mm by 2.4 mm wall thickness PE pipe, U/C
J		Ø 180 mm	Ø 110 mm by 4.2 mm wall thickness PVC-u pipe, U/C
K		Ø 230 mm	Ø 160 mm by 9.5 mm wall thickness PVC-u pipe, U/C
L		Ø 230 mm	Ø 160 mm by 6.2 mm wall thickness PVC-u pipe, U/C
M		Ø 110 mm	Ø 40 mm by 3.7 mm wall thickness PE pipe, U/C
N		Ø 180 mm	Ø 110 mm by 6.6 mm wall thickness PE pipe, U/C
O		Ø 230 mm	Ø 160 mm by 4 mm wall thickness PP pipe, U/C
P	Ø 230 mm	Ø 160 mm by 9.1 mm wall thickness PP pipe, U/C	

Specimen	Seal	Aperture	Service
Q	150 mm long by 25 mm thick 'FIREPRO [®] Insulated Fire Sleeve' installed symmetrically within the aperture. The remaining annular space was filled with 25 mm deep 'FIREPRO [®] Acoustic Intumescent Sealant' on both sides.	Ø 110 mm	Ø 40 mm by 3.0 mm wall thickness PVC pipe, U/C
R		Ø 180 mm	Ø 110 mm by 2.7 mm wall thickness PE pipe, U/C
S		Ø 180 mm	Ø 110 mm by 2.7 mm wall thickness PP pipe, U/C
T		Ø 240 mm	Ø 169.3 mm by 5.0 mm wall thickness mild steel pipe, C/U



The performance of the tested pipes was as follows;

Specimen	Integrity (minutes)			Insulation (minutes)
	Cotton Pad	Sustained flaming	Gap Gauge	
A	132*	132*	132*	132*
B	132*	132*	132*	132*
C	132*	132*	132*	132*
D	32	32	35 [#]	32
E	132*	132*	132*	132*
F	132*	132*	132*	132*
G	132*	132*	132*	132*
H	132*	132*	132*	132*
I	132*	132*	132*	132*
J	132*	132*	132*	132*
K	132*	132*	132*	132*
L	124	126 [#]	126 [#]	124
M	132*	132*	132*	132*
N	132*	132*	132*	132*
O	94 [#]	94 [#]	94 [#]	60
P	132*	132*	132*	132*
Q	132*	132*	132*	132*
R	132*	132*	132*	132*
S	132*	132*	132*	61
T	132*	132*	132*	132*

[#]Specimen blanked off to allow test to continue.

*Test was discontinued after a period of 132 minutes.

The pipes referenced G, H & L (160mm diameter) and J, N & S (110m diameter) were selected as critical based upon their observed performance and were therefore included in the test referenced WF 411471/R. The pipe referenced O was not selected as critical as PP pipes greater than 110mm diameter are not covered in the scope of this assessment.

The Direct Field of Application contained within the test standard EN 1366-3: 2009 (Clause E.2.7.2) allows for the interpolation of pipe sizes between that tested. As such the scope detailed in Appendix 1 – Service type: Plastic pipes with Rockwool Insulated Firesleeve (Rockwool IFS), can be gained from the above test results.

Test Report: WF 411470/R

The Fire Resistance test report referenced WF 411470/R details a test conducted in accordance with EN 1366-3:2009. The report details the fire resistance performance of four specimens of penetration sealing systems that were installed within a flexible partition.

The flexible drywall construction had overall dimensions of 3000mm high x 3000mm wide x 100mm thick. The wall incorporated two apertures which were penetrated by various services and into which ROCKWOOL FIREPRO® SoftSeal seals were installed. The specimens were referenced Specimen A and Specimen B. The wall also incorporated two partial penetrations that are not subject to this assessment. These specimens were referenced C and D.



cPVC Blazemaster Specimen B incorporated an aperture that was 900 mm wide by 1200 mm high that was penetrated by various service types. Within the seal there were two CPVC plastic pipes, installed at 45°, that were referenced; B2 and B3. The pipes comprised;

Specimen	Pipe type	Size	Service Seal
B2	CPVC	3/4"	FIREPRO High Expansion Sealant 20 mm wide by 25 mm deep at both faces
B3	CPVC	3"	

The performance of the tested pipes was as follows;

Test reference	Integrity			Insulation
	Cotton Pad	Gap Gauge	Continuous Flaming	
B2	90 minutes*	90 minutes*	90 minutes*	90 minutes*
B3	90 minutes*	90 minutes*	90 minutes*	90 minutes*

*Test was discontinued after a period of 90 minutes

The scope gained from the above test results of the cPVC Blazemaster pipes is detailed in Appendix 1 – Service type: cPVC Blazemaster.

Cables/ Cable Carries Specimen A incorporated an aperture that was 1200 mm wide by 1200 mm high that was penetrated by various service types. Within the seal there was a cable tray supporting F type cables, this service was referenced; A3. The service comprised;

Specimen	Carrier	Cable type	Cable Size	Service Seal
A3	500mm wide perforated galvanised mild steel cable tray	F	3 no. Ø 100mm bundles	FIREPRO High Expansion Sealant 20 mm wide by 25 mm deep at both faces

The performance of the tested pipes was as follows;

Test reference	Integrity			Insulation
	Cotton Pad	Gap Gauge	Continuous Flaming	
A3	63 minutes	65 minutes	65 minutes	63 minutes

The scope gained from the above test results of the cable tray supporting F type cables is detailed in Appendix 1 – Service type: Cables/cable carriers.



Classification This classification report defines the classification assigned to the element 'Rockwool Firepro Softseal' in accordance with the procedures given in BS EN 13501-2:2007 + A1: 2009.

Report: WF 371988B

Cables/ Cable Carries The following classifications were given for various services installed within Rockwool 'Firepro Softseal' in rigid or flexible walls 100 mm thick (minimum):

Rockwool 'Firepro Softseal' in Rigid or Flexible Walls 100 mm thick (min.)				
Aperture size (mm)	Seal composition	Service(s)	Position of service(s)	Classification
Max 800mm wide by 800mm high Flexi Seal Or *Max 430mm wide by 800mm high Flexi Seal	100mm thick by 100mm deep stonewool blocks 80kg/m ³ . Compressed 20%. Coated with 0.7mm DFT Flexi Coat external faces	¹ Electrical cables up to 21mm – 50mm dia	50mm edge. min	EI90
		¹ Electrical cables 51 - 80 mm dia		E90 EI60
		¹ Cable trays and ladders		EI90
		¹ 100 mm diameter bundle telecommunication cable type "F"		EI120
		¹ Unsheathed electrical cables up to 24mm dia		E90 EI60
		¹ Steel or Copper Conduits up to 16mm		EI90

*Installed within 2 x 50mm FirePro Ablative Coated Batt (Coated external faces) max opening 730mm wide x 1200mm high (min 100mm edge cover)

¹Insulated with Stonewool 40mm thick, 45Kg/m³ 200mm (LI)

The scope gained from the above classification for various services is detailed in Appendix 1 – Service type: Cables/cable carriers.

4. Limits of Applicability

The conclusions of this report only apply to ROCKWOOL FIREPRO® SoftSeal when installed within a 100 mm thick 'Eurobond Firemaster' partition system as detailed in section 3 of this report.

This assessment does not constitute product certification by UL and should not be used to demonstrate compliance where the project requires product certification.

5. Conclusions

It can be concluded that the fire resistance performance of ROCKWOOL FIREPRO® SoftSeal when installed within a 100 mm thick 'Eurobond Firemaster' partition system, as discussed earlier in this report, can be expected to provide the required level of performance if subjected to a test in accordance with EN 1366-3: 2009. The positively assessed scope is detailed in Appendix 1.



6. Validity

This assessment is issued on the basis of test data and information available at the time of issue.

If contradictory evidence becomes available to UL International (UK) Ltd the assessment will be unconditionally withdrawn and ROCKWOOL LIMITED will be notified in writing. Similarly, the assessment is invalidated if the assessed construction is subsequently tested because actual test data is deemed to take precedence over an expressed opinion.

The assessment is valid initially for a period of five years i.e. until 1st December 2026, after which time it is recommended that it be returned for re-appraisal.

The appraisal is only valid provided that no other modifications are made to the tested construction other than those described in this report.

7. Declaration by ROCKWOOL LIMITED

We the undersigned confirm that we have read and complied with the obligations placed on us by the UK Fire Test Study Group Resolution No. 82: 2001.

We confirm that the component or element of structure, which is the subject of this assessment, has not to our knowledge been subjected to a fire test to the Standard against which the assessment is being made.

We agree to withdraw this assessment from circulation should the component or element of structure be the subject of a fire test to the Standard against which this assessment is being made.

We are not aware of any information that could adversely affect the conclusions of this assessment.

If we subsequently become aware of any such information, we agree to cease using the assessment and ask UL International (UK) Ltd to withdraw the assessment.

Signed:

For and on behalf of:



8. Signatories

Report by:

Reviewed by:

A handwritten signature in black ink, appearing to read 'Chris Sweeney'.

A handwritten signature in blue ink, appearing to read 'David Yates'.

Chris Sweeney*
Engineer Project Associate
Built Environment

David Yates*
Senior Project Engineer
Built Environment

*For and on behalf of UL International (UK) Ltd

The assessment report is not valid unless it incorporates the declaration duly signed by the applicant. This is included in Section 7 to this report.

REPORT ISSUED: 30th November 2021

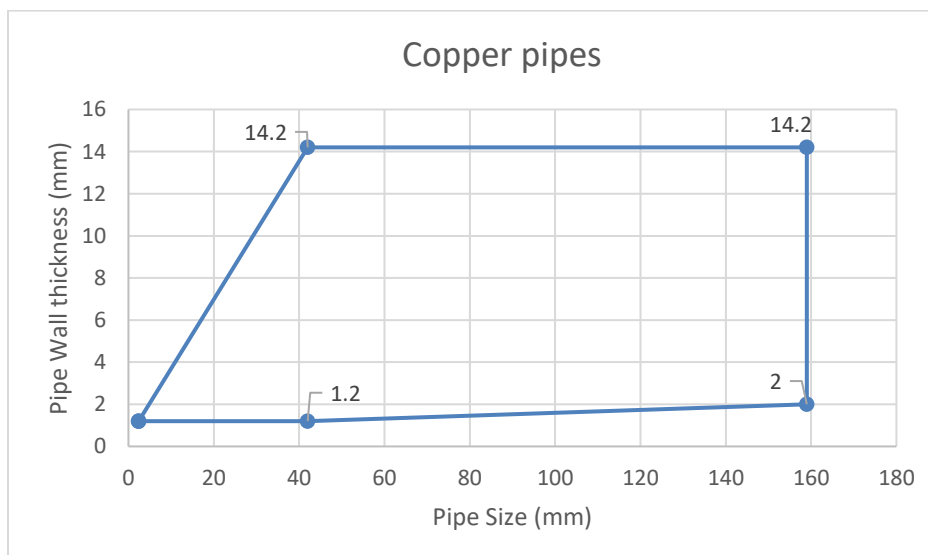
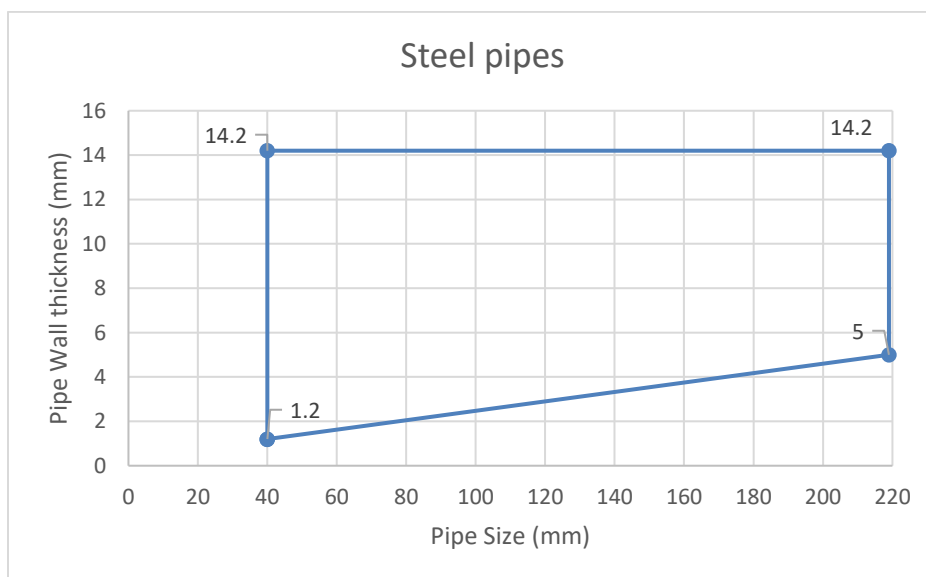


Appendix 1

Service type: Metallic pipes

Pipe material	Pipe Dia. Range (mm)	Insulation	Firestop type	Pipe arrangement	Pipe angle	Aperture edge distance	Service separation	Integrity (minutes)	Insulation (minutes)
Steel	42 - 219	1m Long 25mm Thick RockLap H&V Section	SoftSeal (100mm)	Clustered	0° in a Cluster Up to 45° when single pipes	50 (mm)	0 (mm)	60	60
Copper	0 - 42								
Copper	43 - 159	1.5m Long 25mm Thick RockLap H&V Section							

See graphs for pipe wall thickness interpolated sizes



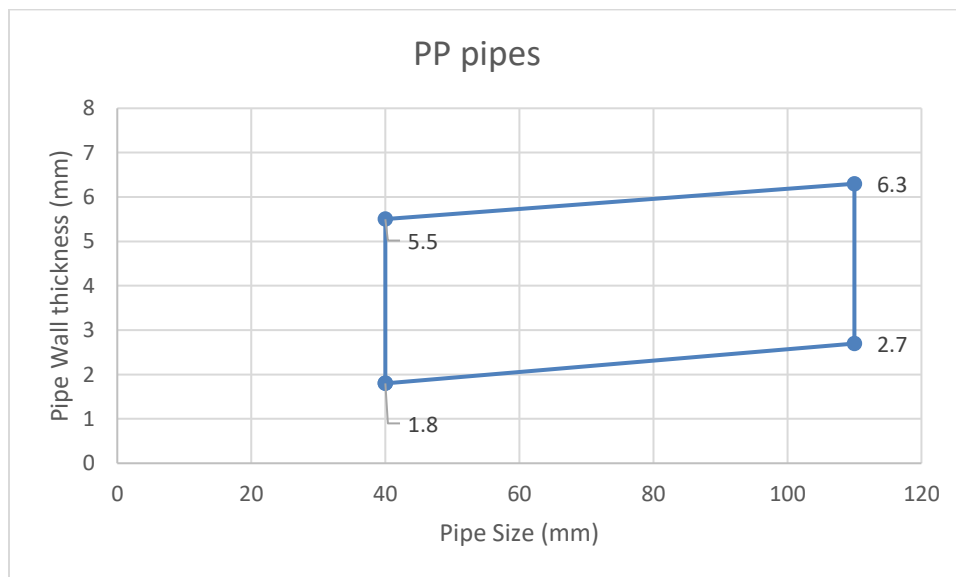
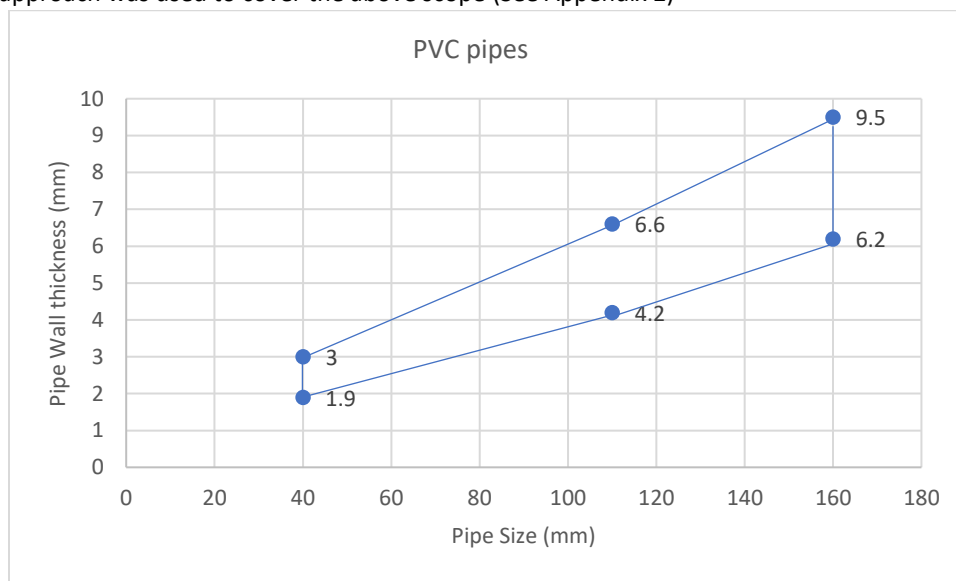


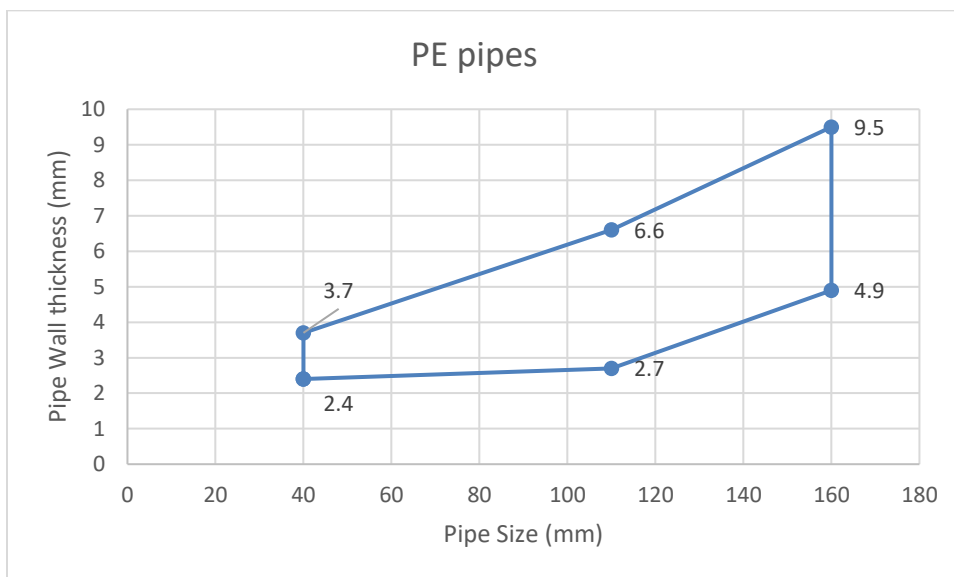
Service type: Plastic pipes with Rockwool Insulated Firesleeve

Pipe material	PVC & PE pipes	Firestop type	Closure device	Pipe Arrangement	Pipe angle	Aperture edge distance	Service separation	Integrity (minutes)	Insulation (minutes)
PVC, PP & PE	0-110 mm	SoftSeal (100mm)	300 mm IFS Insulated Fire Sleeve	Linear	0 - 45° Horizontal	50 (mm)	0 (mm)	60	60
PVC & PE	110-160 mm						35 (mm)		
PVC & PE	0-160 mm	SoftSeal (100mm)	150mm IFS	Clustered	NA	50 (mm)	35 (mm)		

See graphs for pipe wall thickness interpolated sizes

Critical pipe approach was used to cover the above scope (See Appendix 2)





Service type: Cables/Cable carriers

Electrical/Data Cables		Firestop Type	Additional Protection	Aperture edge Distance	Service Separation	Integrity (minutes)	Insulation (minutes)
Cable Size				a ₁			
Type	Size	SoftSeal (100mm)	200mm long 40 mm ROCKWOOL RWA 45 Each face	50 mm	50 mm	60	60
S	0-21 mm						
M	22-50 mm						
L	51-80 mm						
F-Bundle	100 mm dia.						
Perforated Tray							
Ladder							
F-Bundle	100 mm high x 300 mm wide		ROCKWOOL HE Sealant 20 mm annulus & 25 mm depth on each face	50 mm	80 mm		
Perforated tray				50 mm	80 mm		

Service type: cPVC Blazemaster

Blazemaster	Firestop type	Closure device	Pipe angle	Aperture edge distance	Service separation	Integrity (minutes)	Insulation (minutes)
FlameGuard 3/4"	SoftSeal (100mm)	High Expansion Sealant 20mm Annulus 25mm Deep both faces	0 - 45° Horizontal	50 (mm)	100 (mm)	60	60
FlameGuard 3"							



Appendix 2

Warringtonfire Test Report

Report No.: WF 431646

Test Specimen:

Rockwool Firepro Softseal in 100mm thick Eurobond Firemaster partition

Standards:

BS EN 1366-3: 2009

This report relates to the use of Rockwool Firepro Softseal in providing fire resistance of 60 minutes as defined in BS EN 1363-1 :2012 when installed in a 100mm thick Eurobond Firemaster partition. It also proves the performance of Cool-Fit 2.0 pipes, IBar Busbar system and EZ-Path Series 44+ Pathway detailed in section 3 of this assessment.

Report Provider : Warringtonfire (Element)

Test Date : 17th August 2020

Warringtonfire Test Report

Report No.: WF 411471/R

Test Specimen:

Rockwool Firepro Softseal in 100mm thick flexible construction

Standards:

BS EN 1366-3: 2009

This report relates to the use of metallic and plastic pipe services installed through Rockwool Firepro Softseal in providing fire resistance of 60 minutes as defined in BS EN 1363-1 :2012.

Report Provider : Warringtonfire (Element)

Test Date : 13th December 2019



Project No. 4790145104 Issue 1

Warringtonfire Test Report

Report No.: WF 411470/R

Test Specimen:

Rockwool Firepro Softseal in 100mm thick flexible construction

Standards:

BS EN 1366-3: 2009

This report relates to the use of cable tray, F type cables and cPVC Blazemaster pipes installed through Rockwool Firepro Softseal in providing fire resistance of 60 minutes as defined in BS EN 1363-1 :2012.

Report Provider : Warringtonfire (Element)

Test Date : 18th December 2019

Warringtonfire Classification Report

Report No.: 371988B

Product Covered:

Rockwool Firepro Softseal in 100mm thick rigid or flexible construction

Standards:

EN 13501-2: 2007 + A1: 2009

This report relates to the use of cables and cable carriers installed through Rockwool Firepro Softseal in providing fire resistance of 60 minutes as defined in BS EN 1363-1 :2012.

Report Provider : Warringtonfire (Exova)

Issue Date : 27th September 2016



Project No. 4790145104 Issue 1

Warringtonfire Test Report

Report No.: WF 411457/R

Test Specimen:

Various pipe penetrations sealed with Firepro Insulated Fire Sleeves in 100mm thick flexible construction

Standards:

BS EN 1366-3: 2009

This report relates to the critical pipes used to justify the coverage of plastic pipes detailed in Appendix 1 of this assessment report.

Report Provider : Warringtonfire (Element)

Test Date : 24th July 2019

Appendix 3

