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## CERTIFICATE OF APPROVAL

### No CF 614

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This is to certify that, in accordance with  
TS00 General Requirements for Certification of Fire Protection Products  
The undermentioned products of

## ASTROFLAME (FIRESEALS) LIMITED

Unit 8 The I O Centre, Stephenson Road, Segensworth, Fareham,  
Hampshire, PO15 5RU

Tel: 01329 844500 Fax: 01329 844600

Int tel: +44 (0) 1329 844500 Int fax: +44 (0) 1329 844600

e-mail: sales@astroflame.com Web site: www.astroflame.com

Have been assessed against the requirements of the Technical Schedule(s)  
denoted below and are approved for use subject to the conditions  
appended hereto:

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#### CERTIFIED PRODUCT

Astro Batt  
Astro Coat

#### TECHNICAL SCHEDULE

TS03 Penetration Sealing  
Systems

Signed and sealed for and on behalf of Exova (UK) Limited trading as  
Warrington Certification



Sir Ken Knight  
Chairman  
Impartiality Committee



Paul Duggan  
Certification Manager

Issued: 21<sup>st</sup> February 2008  
Reissued: 10<sup>th</sup> May 2017  
Next audit test due: 10/05/2020  
Frequency: Every 3 years  
Valid to: 1<sup>st</sup> May 2022

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## CERTIFICATE No CF 614

### ASTROFLAME (FIRESEALS) LIMITED

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#### Astro Batt & Astro Coat

1. This approval relates to the use of Astro Batt & Astro Coat for the fire protection where services are penetrating walls. The detailed scope is given in the Approval Matrix included in this Certificate. This shows the thickness and acceptable services for Astro Batt & Astro Coat required to provide fire resistance periods in accordance with BS 476: Part 20: 1987 of up to 240 minutes for differing services and wall constructions and up to 120 minutes for floor constructions. The scope of this certification complies with the guidelines stated in the ASFP Redbook: 3<sup>rd</sup> Edition for 3<sup>rd</sup> party certification schemes.
2. This certification is designed to demonstrate compliance of the product or system specifically with Approved Document B (England and Wales), Section 2 of the Technical Standards (Scotland), Technical Booklet E (N. Ireland). If compliance is required to other regulatory or guidance documents there may be additional considerations or conflict to be taken into account.'
3. The product is approved on the basis of:
  - i) Initial type testing
  - ii) Audit testing at the frequency specified in TS03
  - iii) A design appraisal against TS03
  - iv) Inspection and surveillance of factory production control
4. The stud partition drywalls, masonry or concrete walls shall be at least 130 mm thick and have at least the same fire rating as that required for the penetration seal.
5. The services which may be fitted through the seals are cable ladders, cables, pipes and ducts as detailed within the Approval Matrix included in this Certificate.
6. The approval relates to ongoing production. Product and/or its immediate packaging is identified with the manufacturers' name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application where appropriate.

## CERTIFICATE No CF 614

### ASTROFLAME (FIRESEALS) LIMITED

#### Astro Batt & Astro Coat

#### Approval Matrix BS476 - Up To 120 Minute Walls

<b>Product Name:</b>	Astro Batt & Astro Coat		
<b>Coating / DFT:</b>	Astro Batt or Astro Coat/1mm thick		
<b>Density:</b>	140 kg/m <sup>3</sup> minimum		
Barrier	Service	Integrity	Insulation
Single layer (50 & 60 mm)	Cable Ladder (340 mm wide by 100 mm high max.)	120 minutes	60 minutes
	Cables up to 26 mm diameter	120 minutes	N/A
	Steel pipes up to 60 mm diameter	120 minutes	N/A
	PVC pipes up to 110 mm diameter*	60 minutes	N/A
	Steel ducts (445 mm wide by 445 mm high max.)	120 minutes	N/A
Double layer (100 & 120 mm)	Cable Ladder (340 mm wide by 100 mm high max.)	120 minutes	60 minutes
	Cables up to 26 mm diameter	120 minutes	60 minutes
	Steel pipes up to 60 mm diameter	120 minutes	30 minutes
	PVC pipes up to 110 mm diameter*	60 minutes	N/A
	Steel ducts (445 mm wide by 445 mm high max.)	120 minutes	N/A
* PVC pipes must be used in conjunction with Astro Wrap over sealed with ablative coating			
<b>Maximum aperture:</b>	2400 mm high by 1200 mm (120 minutes integrity performance) 2880 mm high by 1440 mm (60 minutes integrity performance) Multiple apertures must be separated by a minimum of 400 mm in drywalls and 240 mm in concrete/masonry constructions.		
<b>Walls</b>	The walls shall be a minimum of 130 mm thick. The minimum density for the concrete or brick of the wall is 780kg/m <sup>3</sup> and for walls made of concrete blocks is 600kg/m <sup>3</sup> . Partition drywalls will comprise at least 2 layers of 15 mm thick Type 'F' gypsum boards on each side of minimum 70 mm by 32 mm steel studs. All concrete, masonry or drywalls shall have at least the same fire rating as that required for the barrier.		
<b>Application Technique:</b>	<b>Concrete/masonry walls:</b> Boards tightly friction fitted into the aperture at mid-depth of the wall. Board joints and the board to aperture junction is sealed with Astro Batt or Astro Coat coating or Astro Intu Mastic. Apertures for penetrating items are to be tightly fitting and be sealed Astro Batt or Astro Coat coating or Astro Intu Mastic and must be separated by at least 400 mm. <b>Drywalls:</b> As above and additionally the aperture must be formed from track sections and be lined with two layers of 15 mm thick Type 'F' gypsum boards.		
<b>Service Coat-Back :</b>	Not required	<b>U Value:</b>	Not known
<b>Service Support Requirements:</b>	Services should be rigidly supported via steel angles, hangars or channels, not further than 500 mm from the surface of the sealing system on both faces.		

## CERTIFICATE No CF 614

### ASTROFLAME (FIRESEALS) LIMITED

#### Astro Batt & Astro Coat

#### Approval Matrix BS476 - Up To 240 Minute Walls

<b>Product Name:</b>	Astro Batt & Astro Coat		
<b>Coating / DFT:</b>	Astro Batt or Astro Coat/1mm thick		
<b>Density:</b>	140 kg/m <sup>3</sup> minimum		
<b>Barrier</b>	<b>Service</b>	<b>Integrity</b>	<b>Insulation</b>
Single layer (50 & 60 mm)	Cable Ladder (340 mm wide by 100 mm high max.)	240 minutes	N/A
	Cables up to 20 mm diameter	240 minutes	N/A
	Areas of seal without services	240 minutes	60 minutes
Double layer (100 & 120 mm)	Cable Ladder (340 mm wide by 100 mm high max.)	240 minutes	60 minutes
	Cables up to 20 mm diameter	240 minutes	60 minutes
	Areas of seal without services	240 minutes	240 minutes
<b>Maximum aperture:</b>	1000 mm high and 660 mm wide subject to a maximum area of 0.6 m <sup>2</sup> . Multiple apertures must be separated by a minimum of 240 mm in concrete/masonry constructions.		
<b>Walls</b>	The walls shall be a minimum of 140 mm thick. The minimum density for the concrete or brick of the wall is 780kg/m <sup>3</sup> and for walls made of concrete blocks is 600kg/m <sup>3</sup> . All concrete or masonry walls shall have at least the same fire rating as that required for the barrier.		
<b>Application Technique:</b>	<b>Concrete/masonry walls:</b> Boards tightly friction fitted into the aperture at mid-depth of the wall. Board joints and the board to aperture junction is sealed with Astro Batt or Astro Coat coating or Astro Intu Mastic. Apertures for penetrating items are to be tightly fitting and be sealed with Astro Batt or Astro Coat coating or Astro Intu Mastic and must be separated by at least 240 mm.		
<b>Service Coat-Back :</b>	Not required	<b>U Value:</b>	Not known
<b>Service Support Requirements:</b>	Services should be rigidly supported via steel angles, hangars or channels, not further than 500 mm from the surface of the sealing system on both faces.		

## CERTIFICATE No CF 614

### ASTROFLAME (FIRESEALS) LIMITED

#### Astro Batt & Astro Coat

#### Approval Matrix BS476 - Up To 120 Minute Floors

<b>Product Name:</b>	Astro Batt & Astro Coat		
<b>Coating / DFT:</b>	Astro Batt or Astro Coat/1mm thick		
<b>Density:</b>	140 kg/m <sup>3</sup> minimum		
<b>Barrier</b>	<b>Service</b>	<b>Integrity</b>	<b>Insulation</b>
Double layer (100 & 120 mm)	Cable Ladder (340 mm wide by 100 mm high max.)	120 minutes	60 minutes
	Cables up to 20 mm diameter	120 minutes	60 minutes
	Areas of seal without services	120 minutes	120 minutes
<b>Maximum aperture:</b>	1200 mm long and 600 mm wide subject to a maximum area of 0.72 m <sup>2</sup> . Multiple apertures must be separated by a minimum of 240 mm in concrete constructions.		
<b>Floors</b>	The floors shall be a minimum of 115 mm thick. The minimum density for the concrete floor is 780kg/m <sup>3</sup> . All concrete floors shall have at least the same fire rating as that required for the barrier.		
<b>Application Technique:</b>	<b>Concrete floors:</b> Boards cut to size (not jointed) and tightly friction fitted into the aperture at mid-depth of the floor. Board to aperture junction is sealed with Astro Batt or Astro Coat coating or Astro Intu Mastic. Apertures for penetrating items are to be tightly fitting and be sealed with Astro Batt or Astro Coat coating or Astro Intu Mastic and must be separated by at least 240 mm.		
<b>Service Coat-Back :</b>	Not required	<b>U Value:</b>	Not known
<b>Service Support Requirements:</b>	Services should be rigidly supported via steel angles, hangars or channels, not further than 500 mm from the surface of the sealing system on both faces.		

## CERTIFICATE No CF 614

### ASTROFLAME (FIRESEALS) LIMITED

#### Astro Batt & Astro Coat

#### Approval Matrix BSEN 1366-3: 2009 - Up To 60 Minute Walls

<b>Product Name:</b>	Astro Batt & Astro Coat		
<b>Coating / DFT:</b>	Astro Batt or Astro Coat/1mm thick		
<b>Density:</b>	140 kg/m <sup>3</sup> minimum		
<b>Barrier</b>	<b>Service</b>	<b>Integrity</b>	<b>Insulation</b>
Single layer (50 & 60 mm)	<sup>1</sup> Cable Trays and Ladder	60	60
	<sup>1</sup> Cables up to 80 mm diameter	60	60
	<sup>1</sup> 100mm diameter bundle telecommunication cables type F	60	60
	<sup>1</sup> Unsheathed electrical cables up to 24mm diameter	60	60
	<sup>*</sup> Steel or Copper pipes 108mm diameter 1.5mm-14.2mm wall <sup>1</sup>	60	45
<sup>1</sup> Insulated with 6mm ASTRO Thermal Defense Wrap 300mm either side of the seal			
<sup>2</sup> Insulated with continuous interrupted 40mm thick stone wool insulation (min 140kg.m <sup>3</sup> )			
<b>Maximum aperture:</b>	600mm high by 600mm. Multiple apertures must be separated by a minimum of 400 mm in drywalls and 240 mm in concrete/masonry constructions.		
<b>Walls</b>	The walls shall be a minimum of 100 mm thick. The minimum density for the concrete or brick of the wall is 780kg/m <sup>3</sup> and for walls made of concrete blocks is 600kg/m <sup>3</sup> . Partition drywalls will comprise at least 2 layers of 12.5 mm thick Type 'F' gypsum boards on each side of minimum 500 mm by 32 mm steel studs. All concrete, masonry or drywalls shall have at least the same fire rating as that required for the barrier.		
<b>Application Technique:</b>	<b>Concrete/masonry walls:</b> Boards tightly friction fitted into the aperture at mid-depth of the wall. Board joints and the board to aperture junction is sealed with Astro Batt or Astro Coat coating or Astro Intu Mastic. Apertures for penetrating items are to be tightly fitting and be sealed with Astro Batt or Astro Coat coating or Astro Intu Mastic and must be separated by at least 400 mm. <b>Drywalls:</b> As above		
<b>Service Coat-Back :</b>	Not required	<b>U Value:</b>	Not known
<b>Service Support Requirements:</b>	Services should be rigidly supported via steel angles, hangars or channels, not further than 250 mm from the surface of the sealing system on both faces.		

## CERTIFICATE No CF 614

### ASTROFLAME (FIRESEALS) LIMITED

#### Astro Batt & Astro Coat

#### Approval Matrix BSEN 1366-3: 2009 - Up To 90 Minute Walls

<b>Product Name:</b>	Astro Batt & Astro Coat		
<b>Coating / DFT:</b>	Astro Batt or Astro Coat/1mm thick		
<b>Density:</b>	140 kg/m <sup>3</sup> minimum		
Barrier	Service	Integrity	Insulation
Double layer (50 & 60 mm)	Cable Trays and Ladder	60	60
	Cables up to 21 mm diameter	60	60
	Cables 22mm – 80 mm diameter	60	45
	100mm diameter bundle telecommunication cables type F	60	60
	Unsheathed electrical cables up to 17mm diameter	60	30
	Unsheathed electrical cables 18mm-24mm diameter	60	15
	Steel or copper conduits up to 16mm diameter	60	15
	PVC conduits up to 16mm diameter	60	60
	*Steel or Copper pipes 40mm diameter 1.5mm-14.2mm wall <sup>1</sup>	90	60
	*Steel or Copper pipes 40mm – 159mm diameter 2.3mm-14.2mm wall <sup>2</sup>	60	60
<sup>1</sup> Insulated with 20mm thick continuous sustained foil faced glass wool insulation (min 80kg.m <sup>3</sup> ) <sup>2</sup> Insulated with 30mm thick continuous sustained foil faced glass wool insulation (min 80kg.m <sup>3</sup> ) *Sealed with 15mm deep x 15mm wide annulus ASTRO HPE Sealant to both faces			
<b>Maximum aperture:</b>	1200mm high by 730 mm. Multiple apertures must be separated by a minimum of 400 mm in drywalls and 240 mm in concrete/masonry constructions.		
<b>Walls</b>	The walls shall be a minimum of 100 mm thick. The minimum density for the concrete or brick of the wall is 780kg/m <sup>3</sup> and for walls made of concrete blocks is 600kg/m <sup>3</sup> . Partition drywalls will comprise at least 2 layers of 12.5 mm thick Type 'F' gypsum boards on each side of minimum 500 mm by 32 mm steel studs. All concrete, masonry or drywalls shall have at least the same fire rating as that required for the barrier.		
<b>Application Technique:</b>	<b>Concrete/masonry walls:</b> Boards tightly friction fitted into the aperture at mid-depth of the wall. Board joints and the board to aperture junction is sealed with Astro Batt or Astro Coat coating or Astro Intu Mastic. Apertures for penetrating items are to be tightly fitting and be sealed with Astro Batt or Astro Coat coating or Astro Intu Mastic and must be separated by at least 400 mm. <b>Drywalls:</b> As above		
<b>Service Coat-Back :</b>	Not required	<b>U Value:</b>	Not known
<b>Service Support Requirements:</b>	Services should be rigidly supported via steel angles, hangars or channels, not further than 250 mm from the surface of the sealing system on both faces.		

## CERTIFICATE No CF 614

### ASTROFLAME (FIRESEALS) LIMITED

#### Astro Batt & Astro Coat

#### Approval Matrix BSEN 1366-3: 2009 - Up To 120 Minute Walls

<b>Product Name:</b>	Astro Batt & Astro Coat		
<b>Coating / DFT:</b>	Astro Batt or Astro Coat/1mm thick		
<b>Density:</b>	140 kg/m <sup>3</sup> minimum		
<b>Barrier</b>	<b>Service</b>	<b>Integrity</b>	<b>Insulation</b>
Double layer (50 & 60 mm)	Cable Trays and Ladder	120	120
	Cables up to 21 mm diameter	120	120
	Cables 22mm – 80 mm diameter	120	90
	100mm diameter bundle telecommunication cables type F	120	120
	Unsheathed electrical cables up to 24mm diameter	120	120
All services insulated with ASTRO P40/40 stone wool 40mm thick (40kg/m <sup>3</sup> ) 200mm either side of the seal			
<b>Maximum aperture:</b>	1200mm high by 730 mm. Multiple apertures must be separated by a minimum 240 mm in concrete/masonry constructions.		
<b>Walls</b>	The walls shall be a minimum of 100 mm thick. The minimum density for the concrete or brick of the wall is 780kg/m <sup>3</sup> and for walls made of concrete blocks is 600kg/m <sup>3</sup> . All concrete, masonry walls shall have at least the same fire rating as that required for the barrier.		
<b>Application Technique:</b>	<b>Concrete/masonry walls:</b> Boards tightly friction fitted into the aperture at mid-depth of the wall. Board joints and the board to aperture junction is sealed with Astro Batt or Astro Coat coating or Astro Intu Mastic Apertures for penetrating items are to be tightly fitting and be sealed with Astro Batt or Astro Coat coating or Astro Intu Mastic and must be separated by at least 240 mm.		
<b>Service Coat-Back :</b>	Not required	<b>U Value:</b>	Not known
<b>Service Support Requirements:</b>	Services should be rigidly supported via steel angles, hangars or channels, not further than 250 mm from the surface of the sealing system on both faces.		



## CERTIFICATE No CF 614

### ASTROFLAME (FIRESEALS) LIMITED

#### Astro Batt & Astro Coat

#### Approval Matrix BSEN 1366-3: 2009 - Up To 120 Minute Walls

<b>Product Name:</b>	Astro Batt & Astro Coat		
<b>Coating / DFT:</b>	Astro Batt or Astro Coat/1mm thick		
<b>Density:</b>	16.0 kg/m <sup>3</sup> minimum		
<b>Barrier</b>	<b>Service</b>	<b>Integrity</b>	<b>Insulation</b>
Double layer (60 mm)	Cable Trays and Ladder	120	120
	Cables up to 21 mm diameter	120	120
	Cables 22mm – 80 mm diameter	120	90
	100mm diameter bundle telecommunication cables type F	120	120
	Unsheathed electrical cables up to 24mm diameter	120	120
All services insulated with ASTRO P40/40 stone wool 40mm thick (40kg/m <sup>3</sup> ) 200mm either side of the seal			
<b>Maximum aperture:</b>	1200mm high by 730 mm. Multiple apertures must be separated by a minimum 240 mm in concrete/masonry constructions.		
<b>Walls</b>	The walls shall be a minimum of 100 mm thick. The minimum density for the concrete or brick of the wall is 780kg/m <sup>3</sup> and for walls made of concrete blocks is 600kg/m <sup>3</sup> . All concrete, masonry walls shall have at least the same fire rating as that required for the barrier.		
<b>Application Technique:</b>	<b>Concrete/masonry walls:</b> Boards tightly friction fitted into the aperture at mid-depth of the wall. Board joints and the board to aperture junction is sealed with Astro Batt or Astro Coat coating or Astro Intu Mastic. Apertures for penetrating items are to be tightly fitting and be sealed with Astro Batt or Astro Coat coating or Astro Intu Mastic and must be separated by at least 240 mm.		
<b>Service Coat-Back :</b>	Not required	<b>U Value:</b>	Not known
<b>Service Support Requirements:</b>	Services should be rigidly supported via steel angles, hangars or channels, not further than 250 mm from the surface of the sealing system on both faces.		

**CERTIFICATE No CF 614  
ASTROFLAME (FIRESEALS) LIMITED**

**Astro Batt & Astro Coat**

<b>Air Permeability:</b> EN1026	Pressure (Pa)	Positive pressure (m <sup>3</sup> /h/m <sup>2</sup> )	Negative pressure (m <sup>3</sup> /h/m <sup>2</sup> )	<b>Weather Capability:</b>	Not evaluated by this approval
	50	0.8	1.5		
	100	1.4	1.8		
<b>Acoustic Rating:</b> BS EN ISO 10140-2:2010	<b>1 x 50mm thick</b>			<b>Movement Capability:</b>	Not evaluated by this approval
	R <sub>w</sub> (C;C <sub>tr</sub> )		22(0;-3)dB		
	D <sub>new</sub> (C;Ctr)		32(0;3)dB		
	<b>2 x 50mm thick</b>				
	R <sub>w</sub> (C;C <sub>tr</sub> )		28(0;-3)dB		
D <sub>new</sub> (C;Ctr)		38(0;3)dB			

**Further Information**

Further information regarding the details contained in this data sheet may be obtained from Astroflame Fireseals Ltd on 01329 844500.

Further information regarding CERTIFIRE certification and other approved products can be obtained from CERTIFIRE (Tel:01925 646777, website: [www.warringtoncertification.com](http://www.warringtoncertification.com))

