



## PRODUCT DESCRIPTION

iPASSIVE FR Acrylic is a fire-resistant sealant designed to prevent the spread of fire and smoke through joints and openings in fire rated walls and floors for up to 4hrs and beyond. iPASSIVE FR Acrylic cures to give a firm and flexible seal when subjected to atmospheric conditions. In exposure to fire, iPASSIVE FR Acrylic creates a fire seal by forming a robust intumescent char. iPASSIVE FR Acrylic will also maintain the acoustic performance in walls and floors.

iPASSIVE FR Acrylic can be used with a suitable backing material in order to ensure the correct seal depth and reduce shrinking of the sealant during curing.

## TECHNICAL INFORMATION

<b>Condition</b>	Ready for use, acrylic based filler
<b>Specific gravity</b>	1.56 - 1.60
<b>Flash point</b>	None
<b>Reaction to fire</b>	Class D-s1, d1
<b>Expansion in fire</b>	1 : 2-3
<b>Non-sticky</b>	Max. 75 minutes
<b>Film forming</b>	Max. 25 minutes
<b>Totally hardened</b>	3 to 5 days depending on thickness and temperature
<b>Flexibility</b>	12.5% according to ISO 11600
<b>Durability/service</b>	Class Z2
<b>BWR 3</b>	Use category IA1, S/W3
<b>Thermal conduct.</b>	0.845 W/mK (+/- 3%) @ 20mm depth
<b>Storage</b>	18 months stored in unopened cartridges. To be stored in temperatures between 10°C and 30°C
<b>Working life</b>	30 years
<b>Service temp.</b>	-20 to +70°C
<b>Application temp.</b>	+5 to +30°C
<b>Compatibility</b>	Suitable for use with most materials, but should not be used in direct contact with bituminous materials
<b>Limitations</b>	Should not be used in permanently damp areas or in joints with high movement
<b>Classification</b>	Sealant for fire rated joints and penetrations up to -/240/240
<b>Standard colours</b>	White
<b>Colour codes</b>	White: RAL 9002 / NCS S1002-Y
<b>Packaging</b>	Box containing 25 cartridges each 310 ml Box containing 12 foil packed each 600 ml Pallets 310 ml: 64 boxes per pallet equals 1600 pcs Pallets 600 ml: 91 boxes per pallet equals 1092 pcs

## FEATURES

- Fire sealing for all types of constructions and service penetrations
- Low emissions – environmentally & user friendly
- Up to 4hrs FRR
- Activates at 180°C
- Acoustic rating up to 62dB
- 12.5% movement
- No priming necessary for application to most materials
- Suitable for most surfaces including concrete, masonry, steel, glass, gypsum, plastics
- Tack free after 1hr
- 18 months storage time under correct conditions
- Suitable for copper/aluminium conductors & fibre optic cables
- 30yrs working life

## EMISSION INFORMATION

iPASSIVE FR Acrylic complies with the requirements of GEV. The results correspond to the EMICODE emission class EC 1<sup>PLUS</sup> which is the best possible environmental and indoor hygiene health protection mark.

Compound	Emission rate after 3 days	Emission rate after 4 weeks
TVOC	83 µg/m <sup>3</sup>	← 5 µg/m <sup>3</sup>
TSVOC	n.d.	← 5 µg/m <sup>3</sup>
VOC w/o NIK	n.d.	← 5 µg/m <sup>3</sup>
R Value	n.d.	← 1
Formaldehyde	← 3 µg/m <sup>3</sup>	n.d.
Acetaldehyde	← 3 µg/m <sup>3</sup>	n.d.
Sum for+ace	← 0.002 ppm	n.d.
Carcinogenic	← 1 µg/m <sup>3</sup>	← 1 µg/m <sup>3</sup>

n.d. or ← means not detected

## SOUND INSULATION

Description	Sound reduction
Single sided seal ≥ 12mm depth	62 dB
Double sided seal ≥ 12mm depth	> 62 dB

iPASSIVE FR Acrylic has been tested at EXOVA BM Trada (UKAS accredited); according to EN ISO 10140-2:2010. Usage of any backing material is optional, due to the tests being conducted with sealant only.

## SPECIAL CONSIDERATIONS

- Flexible walls may be reduced to a minimum thickness of 75mm with a single layer 13mm plasterboard lining, for a corresponding (reduced) FRR. Apertures are not required to be lined.
- Rigid walls may be reduced to a minimum thickness of 75mm for a corresponding (reduced) FRR.
- Rigid floors may be reduced to a minimum thickness of 60mm for a corresponding (reduced) FRR.

## TESTED STANDARD

Tested and assessed in accordance with AS 1530.4 and AS 4072.1.

## FIRE RESISTANCE RATINGS

### LINEAR SEALS

Construction	Seal position	Minimum seal depth	Backing material (min)	Maximum seal width	FRR
Flexible walls ≥ 75mm thick	Both sides against steel partition head track	12.5mm	None necessary	25 mm	-/60/30
Flexible walls ≥ 100mm thick	Both sides against steel partition head track	12.5mm	None necessary	25 mm	-/90/90
		12.5mm	12.5mm Stone wool	30 mm	-/120/120
		25mm	None necessary	30 mm	-/120/120
	Both sides against steel partition side track	12mm	None necessary	15 mm	-/90/90
	Both sides vertical seals	12mm	20mm Stone wool	30 mm	-/120/120
Rigid walls ≥ 150 mm thick	Single sided horizontal seals	25mm	20mm Stone wool	30 mm	-/240/60
		10mm	60mm Stone wool	50 mm	-/240/60
		25mm	48mm AES Mineral Fibre	30 mm	-/240/120
	Single sided vertical seals	10mm	60mm Stone wool	50 mm	-/120/120
	Double sided horizontal vertical seals	15mm	20mm Stone wool	30 mm	-/240/240
	Rigid floors ≥ 150 mm thick	Single sided soffit face	25mm	25mm AES Mineral Fibre	100 mm
Single sided top face		25mm	25mm AES Mineral Fibre	100 mm	-/180/180
		10mm	90mm Stone wool	100 mm	-/240/240
Double sided top and soffit		15mm	25mm Stone wool	100 mm	-/120/120
		15 mm	25mm Stone wool ≥140kg/m <sup>3</sup>	100 mm	-/180/180
		15mm	25mm Stone wool	30 mm	-/240/240

### CABLES

Construction	Seal position	Services	Min seal depth	Max seal	Backing Material	FRR
Rigid wall ≥ 150 mm thick	Single, any side	Single cable ≤ Ø21mm	25mm	300mmx300mm	48mm AES Mineral Fibre	-/240/60
			25mm	35mmx35mm/Ø36mm	48mm AES Mineral Fibre	-/240/120
	Both sides	single or bundled ≤ Ø80mm	25mm	300mmx300mm	25mm Stone Wool	-/240/60
	Both sides	single ≤ Ø21mm or bundled ≤ Ø 100mm	25mm	300mmx300mm	48mm AES Mineral Fibre	-/240/240
Flexible wall ≥ 75 mm thick	Both sides	single ≤ Ø21mm	12.5mm	150mmx150mm/Ø344mm	None	-/60/30
		single ≤ Ø21mm or bundled ≤ Ø 100mm	12.5mm	150mmx150mm/Ø344mm	None	-/30/30
Flexible wall ≥ 100 mm thick	Both sides	single ≤ Ø21mm or bundled ≤ Ø 100mm	25mm	300mmx300mm	20mm Stone Wool	-/120/120
		single ≤ Ø80mm or bundled ≤ Ø 100mm	25mm	300mmx300mm	25mm AES Mineral Fibre	-/120/60
Rigid floor ≥ 150 mm thick	Single, top side	single cable ≤ Ø21mm	25mm	300mmx300mm	48mm AES Mineral Fibre	-/20/90
	Both sides	single or bundled ≤ Ø21mm	25mm	300mmx300mm	25mm Stone Wool	-/120/120
		single or bundled Ø22mm-50mm	25mm	300mmx300mm	25mm Stone Wool	-/120/90
		single or bundled Ø51mm-80mm	25mm	300mmx300mm	25mm Stone Wool	-/120/60

### BLANK SEALS

Construction	Seal position	Min seal depth	Max seal	Backing Material	Fire Resistance
Rigid wall ≥ 150 mm thick	Single, any side	25mm	300mmx300mm	48mm AES Mineral Fibre	-/240/60
	Single, any side	25mm	35mmx35mm/Ø36mm	48mm AES Mineral Fibre	-/240/120
	Both sides	15mm	300mmx300mm	25mm Stone Wool	-/240/240
Flexible wall ≥ 75 mm thick	Both sides	12.5mm	150mmx150mm/Ø344mm	Any Material	-/60/30
	Both sides	12.5mm	300mmx300mm	20mm Stone Wool	-/120/120
Rigid floor ≥ 150 mm thick	Single, top side	25mm	300mmx300mm	48mm AES Mineral Fibre	-/240/240
	Both sides	15mm	300mmx300mm	25mm Stone Wool	-/240/240

## PIPES

Construction	Seal position	Services	Min seal depth	Min annular/ Max Seal size	Insulation	FRR
Rigid wall ≥ 150 mm thick	Single, any side	Copper ≤ Ø54mm/0.9-14.2mm wall	15mm	8-9mm	1000x20mm Stone wool 80kg/m <sup>3</sup>	-/240/180
		Alupex Ø75mm/7.5mm wall	15mm	30mm	600x25mm AES Mineral Fibre	-/120/120
		Mild/Stainless Steel Ø40-Ø219mm/1.5-14.2mm wall	15mm	6-18mm	1000x30mm Stone wool 80kg/m <sup>3</sup>	-/180/90
		Mild/Stainless Steel Ø40-Ø324mm/1.5-14.2mm wall (Cont. Insulation)	25mm	10mm	30-80mm Stone wool 80kg/m <sup>3</sup> backing	-/180/180
	Both sides	Mild/Stainless Steel Ø40-Ø219mm/1.5-14.2mm wall	15mm	300mm x300mm	1000x30mm Stone wool, 20mm Stone Wool backing	-/240/120
		Mild/Stainless Steel Ø40-Ø324mm/1.5-14.2mm wall (Cont. Insulation)	25mm	300x300mm/ Ø504mm	30-80mm Stone wool 80kg/m <sup>3</sup> backing	-/240/240
	Both sides	Mild/Stainless Steel Ø22-Ø114mm/2-14.2mm wall	25mm	10mm	13-25mm Elastomeric Insulation	-/120/90
		Plastic PP Ø32mm/2-4.4mm wall	25mm	10mm	25mm Stone Wool 35kg/m <sup>3</sup> backing	-/180/180
		Plastic PE Ø20-Ø32mm/2mm wall	25mm	10mm	25mm Stone Wool 35kg/m <sup>3</sup> backing	-/240/240
	Flexible wall ≥ 75 mm thick	Both sides	Mild/Stainless Steel Ø5-Ø22mm/0.7-11mm wall	12.5mm	10mm	None
Mild/Stainless Steel Ø40-Ø324mm/1-14.2mm wall			12.5mm	10mm	30mm Stone Wool 80kg/m <sup>3</sup> continuous sustained	-/60/30
Copper Ø12mm/1mm wall			25mm	10mm	9mm Elastomeric Insulation, 25mm AES Fibre backing	-/120/120
Copper Ø12-Ø54mm/1-1.2mm wall			25mm	10mm	9-25mm Elastomeric Insulation, 25mm AES Fibre backing	-/60/60
Copper ≤ Ø54mm/0.9-14.2mm wall			12.5mm	10mm	500x20mm Stone Wool 80kg/m <sup>3</sup>	-/120/120
Alupex Ø16mm/2.25mm wall			25mm	10mm	9mm Elastomeric Insulation, 25mm AES Fibre backing	-/120/120
Alupex Ø16-Ø75mm/2.25-4.7mm wall			25mm	10mm	9-25mm Elastomeric Insulation, 25mm AES Fibre backing	-/60/60
Alupex Ø16-Ø75mm/2.25-4.7mm wall			12.5mm	10mm	500x20mm Stone Wool 80kg/m <sup>3</sup>	-/120/120
Mild/Stainless Steel Ø22mm/3-10mm wall			25mm	10mm	No insulation, 25mm Stone Wool 35kg/m <sup>3</sup> backing	-/120/120
Mild/Stainless Steel Ø40-Ø165mm/1-14.2mm wall			25mm	10mm	13-19mm Elastomeric Insulation, 25mm AES Fibre backing	-/120/60
Mild/Stainless Steel Ø40-Ø324mm/1-14.2mm wall			12.5mm	10mm	30mm Stone Wool 80kg/m <sup>3</sup> , 12.5mm Stone Wool backing	-/120/90
Plastic PVC ≤ Ø32mm (max aperture Ø52mm)			25mm	10mm	None	-/90/90
Plastic PP ≤ Ø32mm (max aperture Ø90mm)			25mm	29mm	None	-/90/90

## PIPES CONT...

Construction	Seal position	Services	Min seal depth	Min annular/ Max Seal size	Insulation	FRR
Rigid floor ≥ 150 mm thick	Single, top side	Copper/steel Ø6-Ø15mm/0.7-7.5mm wall	25mm	10mm	No insulation, 48mm Stone Wool 33kg/m <sup>3</sup> backing	-/120/60
		Copper/steel Ø12-Ø54mm/0.9-14.2mm wall	25mm	10mm	20-80mm Stone Wool 80kg/m <sup>3</sup> , 48mm Stone Wool Backing	-/240/180
		Alupex Ø16-Ø20mm/2mm wall	25mm	10mm	20-80mm Stone Wool 80kg/m <sup>3</sup> , 48mm Stone Wool Backing	-/120/120
	Single, any side	Copper ≤ Ø54mm/0.9-14.2mm wall (min 1000mm insulation)	15mm	10mm	20mm Stone Wool 80kg/m <sup>3</sup> backing	-/240/240
		Copper ≤ Ø54mm/0.9-14.2mm wall (min 1000mm insulation)	25mm	300x300mm	20mm Stone Wool 80kg/m <sup>3</sup> backing	-/120/120
		Mild/Stainless Steel Ø40-Ø219mm/1-14.2mm wall	15mm	10mm	30mm Stone Wool 80kg/m <sup>3</sup> backing	-/240/90
		Mild/Stainless Steel Ø40-Ø219mm/1-14.2mm wall	25mm	≤100x1000mm /300x300mm	30mm Stone Wool 80kg/m <sup>3</sup> backing	-/120/90
		Mild/Stainless Steel Ø40-Ø324mm/1.5-14.2mm wall (Cont. Insulation)	25mm	10mm/300 x300mm	30-80mm Stone wool 80kg/m <sup>3</sup> backing	-/240/240
		Alupex Ø16-Ø75mm/2.25-4.7mm wall	25mm	10mm/300 x300mm	500x20mm Stone Wool 80kg/m <sup>3</sup> , 48mm AES Fibre Backing	-/240/240
Rigid floor ≥ 150 mm thick	Both sides	Copper ≤ Ø54mm/2-14.2mm wall	25mm	300x300mm	No insulation, 25mm Stone Wool 140kg/m <sup>3</sup> backing	-/120/120
		Mild Steel ≤ Ø16mm/1.5-7.5mm wall	25mm	300x300mm	No insulation, 25mm Stone Wool 140kg/m <sup>3</sup> backing	-/240/240
		Copper Ø12mm/1mm wall	25mm	300x300mm	9mm Elastomeric Insulation, 25mm AES Fibre backing	-/240/180
		Copper Ø12-Ø54mm/1-1.2mm wall	25mm	300x300mm	9-25mm Elastomeric Insulation, 25mm AES Fibre backing	-/90/60
		Alupex Ø16mm/2.25mm wall	25mm	300x300mm	9mm Elastomeric Insulation, 25mm AES Fibre backing	-/120/60
		Alupex Ø16-Ø75mm/2.25-4.7mm wall	25mm	300x300mm	9-25mm Elastomeric Insulation, 25mm AES Fibre backing	-/60/60
		Mild/Stainless Steel Ø40-Ø165mm/1-14.2mm wall	25mm	300x300mm	13-19mm Elastomeric Insulation, 25mm AES Fibre backing	-/60/60
		Mild/Stainless Steel Ø40-Ø219mm/1-14.2mm wall	15mm	≤100x1000mm /300x300mm	1000x30mm Stone wool, 30mm Stone Wool backing	-/240/120
		Plastic PP Ø40-Ø75mm/ 2.8-3mm wall	25mm	10-30mm	25mm AES Fibre backing	-/180/180
		Plastic PE Ø40mm/4mm wall	25mm	10-30mm	25mm Stone Wool 140kg/m <sup>3</sup> backing	-/240/240

## DISCLAIMER

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