BritChem Ltd
YOUR BRAND PARTNER

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TECHNICAL DATA SHEET

PRODUCT **BRITCHEM FR INTUMESCENT & ACOUSTIC ACRYLIC SEALANT (12.5%)**

DESCRIPTION

BritChem FR Acrylic is a halogen free, polymer emulsion-based sealant that swells when subjected to temperatures in excess of 125^{o}C and forms a char coat that restricts the passage of smoke and fire. It is easily applied and dries to a flexible and smooth surfaced material which provides movement capability in fire rated linear joint and penetration seals. It is readily over paintable. It has excellent adhesion to a wide range of substrates and will not harden or crack with age.

SPECIFICATION COMPLIANCE

BritChem FR acrylic (12.5%) has been independently tested to the following assessments:

-Fire tested to the requirements of BS EN 1366-3 and BS EN 1366-4 (linear gap and penetration seals) and also successfully tested to the requirements of ETAG 026 Parts 2 & 3 to demonstrate durability. (Appendix A)
-Classification of fire resistance data from test report FIRES-CR-199-16AUPE in accordance with EN13501-2 2007 +A1 2009 when tested as penetration seals round metal pipes and cables according to EN 1366-3 in a flexible wall.
-BS EN 1634-1 2014 + A1 2018 – FD30 & FD60

-BS EN ISO 10140-2. 2010 Measurement of Airborne Sound Insulation of Building elements.
University of Salford reports 2612-76;77 and 79 to 81. The sealant maintained the integrity of a plasterboard partition wall with a Sound Reduction Index of 55dB
-VOC test report classification – M1 and Indoor Air Comfort GOLD®

See Declaration of Performance attached.

APPLICATIONS

BritChem FR acrylic forms a fire and smoke seal in joints up to 35mm wide without slumping. It is ideal for sealing joints:

- in and around internal partitions where flexibility may be required.
- Linear gap seals. Vertical or horizontal at head or foot of wall
- Penetration seals around metal pipes.

If the sealant is to be overpainted, building regulations may require a fire resistant coating.

LIMITATIONS

BritChem FR acrylic (CE) is not suitable in joints where movement exceeds + or - 15% of joint width, or in external joints.

TECHNICAL DETAILS

Movement Accommodation:	±12.5% Conforms to ISO 11600 F 12.5P
Durability (ETAG 026-2&3):	Category $Z_{1\ (-10/+70^{o}C)}$ suitable for intended use at temperatures between -10^{o}C and +70^{o}C) internal use high humidity.
Skinning Time:	15 mins to 1 hour depending on conditions.
Cure time:	5 to 15 days for 15mm X 20mm bead.
Hardness Shore A:	35 – 45
Tensile Strength (100%):	0.2 MPa
Paintability:	With most paints when cured.
Application Temperature:	+5^{o}C to 40^{o}C
Cleaning:	Uncured sealant with water.
Shelf Life:	min. 24 months when stored in unopened containers as recommended.
Specific Gravity:	1.60 – 1.68

APPLICATION INSTRUCTIONS

To achieve a high quality joint, ensure surfaces are dry and free of all dirt, oil and loose material, using a wire brush if necessary. Non porous surfaces should be degreased using a suitable degreasing agent. Highly porous surfaces should be sealed with a suitable primer. For a cleaner finish, apply masking tape to each side of joint and gun sealant firmly into joint, smoothing off with a wetted spatula. Masking tape should be removed within 10 minutes of application.

COVERAGE

1 tube is sufficient to produce approx. 1m using a 20mm x 15mm bead.

AVAILABLE PACK SIZES

Available in:- 310ml, 400ml, 900ml Cartridges and 600ml Foil Packs,

STORAGE

Store in cool dry conditions. PROTECT FROM FROST.

HEALTH AND SAFETY

BritChem FR Acrylic (12.5%) sealant presents no known health hazards when used as recommended. Consult Health and Safety data sheet for further information. As with all chemical product, care should be taken during use and storage to avoid contact with foodstuffs, skin, eyes and mouth. If accidentally ingested, seek medical attention do not induce vomiting and give copious amounts of water to drink. **KEEP AWAY FROM CHILDREN AND ANIMALS.**

Further Information

These data are offered in good faith as typical values and not as a product specification. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate

DECLARATION of PERFORMANCE

DoP No. 04-2 2022-01

1. Identification code: Britchem FR Intumescent & Acoustic acrylic sealant (12.5%)
2. Batch Identification: By batch No. – see print on packaging.
3. Intended uses: Fire stopping and sealing linear gap joints and penetration seals
4. Manufacturer: BritChem Ltd, Unit 6, Beehive Business Park, Smithies Lane, Heckmondwike, West Yorkshire. England
5. Authorised representative: Not Applicable
6. System of assessment and verification of constancy System 3
7. Notified body: N/A
8. ETA (European Technical Assessment): N/A
9. Declared performance:

Essential characteristic	Declared performance	Harmonised standard
Reaction to fire	Class E	
Resistance to fire	BRE report 201709 Review3-1 BRE report P113222-1001A issue 1 Classification FIRES-CR-199-16AUPE	BS EN 1366 parts 3 & 4 BS EN 1634-1 2014+ A1 2018 EN 13501-2 2007 + A1 2009
Release of dangerous chemicals	None	See material safety data sheet (MSDS)
VOC emissions	Indoor Air Comfort Gold std & Scandinavian M1 Protocol	
Water Tightness & Air Tightness as determined by:		
Air permeability	NPD	
Slump	< 3mm	
Durability	Category $Z_{1\ (-10/+70^{o}C)}$ suitable for intended use at temperatures between -10°C and +70°C) internal use high humidity.	EAD 350005-00-1104 EAD 350454-00-1104 Originally ETAG 026-2 & 3

10. The performance of the product identified in points 1 & 2 is in conformity with the declared performance in point 9

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.



Trevor Jones
Technical Consultant

Supporting evidence for the tables A1 to A4 is given in BRE report CC201709-revision3 issue1

Table A1 - Vertical Orientation – Single Seals – block wall

Gap Size (mm)	Substrate	Seal Depth (mm)	Seal Location	Backing Strip	Integrity (min.)	Insulation (min.)
< or = 10	Concrete/Masonry/Non-combustible Board	6	Either Face	**	210	Unclassified
< or = 12	Concrete/Masonry/Non-combustible Board	20	Fire Face	55mm Mineral wool	240	150
11 to 15	Concrete/Masonry/Non-combustible Board	10	Either Face	**	240	30
16 to 20	Concrete/Masonry/Non-combustible Board	15	Either Face	**	240	30
21 to 35	Concrete/Masonry/Non-combustible Board	20	Either Face	**	240	----
12 to 35	Concrete/Masonry/Non-combustible Board	25	Either Face	**	240	150
12 to 35	Concrete/Masonry/Non-combustible Board	35	Fire Face	30mm Mineral Wool	120	120
< or = 10	Hardwood *	16	Either Face	Any (to 12mm gap)	60	----
< or = 25	Hardwood *	25	Either Face	**	60	30
12 to 25	Hardwood *	35	Either Face	**	60	60
< or = 25	Softwood ***	35	Either Face	**	60	60

*joints between two Hardwood sections fixed to the supporting construction
*** joints between two Softwood sections fixed to the supporting construction
** Combustible material (i.e. polyethylene foam)

Table A2 - Horizontal Orientation – Single Seals

Gap Size (mm)	Substrate	Seal Depth (mm)	Seal Location	Backing Strip	Integrity (min.)	Insulation (min.)
< or = 10	Concrete/Masonry/Non-combustible Board	6	Either Face	**	240	Unclassified
< or = 15	Concrete/Masonry/Non-combustible Board	10	Either Face	**	240	30
16 to 20	Concrete/Masonry/Non-combustible Board	15	Either Face	**	240	30
12 to 35	Concrete/Masonry/Non-combustible Board	25	Either Face	**	240	60
12 to 35	Concrete/Masonry/Non-combustible Board	35	Fire Face	30mm Mineral Wool	120	90
< or = 10	Hardwood *	15	Either Face	Any (to 12mm gap)	60	Unclassified
< or = 25	Hardwood *	25	Either Face	**	60	60
< or = 10	Softwood ***	35	Either Face	Any (to 12mm gap)	90	____
< or = 25	Softwood ***	35	Either Face	**	60	60

*joints between two Hardwood sections fixed to the supporting construction
*** joints between two Softwood sections fixed to the supporting construction
** Combustible material (i.e. polyethylene foam)

Table A3 - Vertical Orientation – Double Seals – block wall

Gap Size (mm)	Substrate	Seal Depth (mm)	Seal Location	Backing Strip	Integrity (min.)	Insulation (min.)
< or = 12	Concrete/Masonry/Non-combustible Board	10	Both Faces	25mm Mineral wool	240	240
< or = 15	Concrete/Masonry/Non-combustible Board	5 to 7.5	Both Faces	**	240	30
16 to 20	Concrete/Masonry/Non-combustible Board	8 to 10	Both Faces	**	240	30
12 to 20	Concrete/Masonry/Non-combustible Board	10	Both Faces	**	240	60
12 to 35	Concrete/Masonry/Non-combustible Board	12.5 to 17.5	Both Faces	**	240	150
12 to 35	Concrete/Masonry/Non-combustible Board	30	Both Faces	30mm Mineral Wool	240	240
< or = 10	Hardwood *	8	Both Faces	Any (to 12mm gap)	60	----
< or = 25	Hardwood *	12.5	Both Faces	**	60	30
12 to 25	Hardwood *	17.5	Both Faces	**	60	60
< or = 25	Softwood ***	17.5	Both Faces	**	60	60

*joints between two Hardwood sections fixed to the supporting construction
*** joints between two Softwood sections fixed to the supporting construction
** Combustible material (i.e. polyethylene foam)

Table A4 - Horizontal Orientation – Single Seals – Block wall

Gap Size (mm)	Substrate	Seal Depth (mm)	Seal Location	Backing Strip	Integrity (min.)	Insulation (min.)
< or = 12	Concrete/Masonry/Non-combustible Board	10	Both Faces	25mm mineral wool	240	240
< or = 15	Concrete/Masonry/Non-combustible Board	5.5 to 7.5	Both Faces	**	240	30
16 to 20	Concrete/Masonry/Non-combustible Board	8 to 10	Both Faces	**	240	30
12 to 35	Concrete/Masonry/Non-combustible Board	12.5 to 17.5	Both Faces	**	240	60
12 to 35	Concrete/Masonry/Non-combustible Board	30	Both Faces	30mm Mineral Wool	240	240
< or = 10	Hardwood *	7.5	Both Faces	Any (to 12mm gap)	60	Unclassified
< or = 25	Hardwood *	12.5	Both Faces	**	60	60
< or = 25	Softwood ***	17.5	Both Faces	**	60	60

*joints between two Hardwood sections fixed to the supporting construction
*** joints between two Softwood sections fixed to the supporting construction
** Combustible material (i.e. polyethylene foam)