

# Premfire FR IM - Intumescent & Acoustic FR Acrylic Sealant

## Product Description

Premfire FR IM is a halogen-free, polymer emulsion-based sealant that swells when subjected to temperatures in excess of 125°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 is readily over paintable. It has excellent adhesion to a wide range of substrates and will not harden or crack with age.

## Features

- Excellent adhesion to a wide range of substrates
- Will not harden or crack with age
- Readily over-paintable

## Typical Applications

- Smoke and fire seal in joints up to 35mm deep without slumping
- Sealing joints in and around internal partitions
- Sealing lap joints in fire-rated cladding
- Sealing between fire doors and fire-rated walls

## Approvals

- BS EN 1366-3: 2004 & BS EN 1366-4: 2006. Tested at Bodycote Warrington Fire, report no.173658A, achieving 4-hour integrity and insulation rating for a range of linear and penetration seals.
- An indicative fire test based on BS476: Part 20 – Warrington Fire Research achieved a 4-hour fire rating (integrity) for a range of vertical and horizontal joints up to 35mm wide between various non-combustible construction materials. A 1-hour fire rating (integrity) was achieved for a range of vertical joints up to 25mm wide between combustible timber materials.
- BS EN ISO 10140-2: 2010 Measurement of Airborne Sound Insulation of Building elements. University of Salford reports 2612 – 76, 77, 79 - 81. The sealant maintained the integrity of a plasterboard partition wall with a Sound Reduction Index of 55Db.
- 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.
- VOC test report classification – M1 and Indoor Air Comfort GOLD®

## Limitations

Not suitable in joints where movement exceeds  $\pm 7.5\%$  of joint width, or in external joints.

	Value
Adhesion	Excellent to a wide variety of substrates
Colour	White and Grey
Movement	± 7.5% Conforms to ISO 11600 7.5P
Hardness (Shore A)	40-50
Tensile Strength (100%)	0.2MPa
Specific Gravity	1.60-1.68
Skinning Time	15 min to 1 hour, depending on conditions
Cure Time	3mm per 24hrs depending on conditions
Service Temperature	-20°C to +60°C (intermittent)
Application Temperature	+5°C to +40°C
Shelf Life	18 months
Coverage	A 310ml tube is sufficient to produce a joint approx. 1m long of 20mm x 15mm

## Application Instructions

To achieve a high-quality joint, clean all surfaces, remove dust and ensure surfaces are dry. Non-porous surfaces should be degreased using a suitable degreasing agent. Highly porous surfaces should be sealed with a suitable primer. 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.

## Health and Safety

Premfire FR IM 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.

## Other information

Water based intumescent acrylic sealants are commonly used to seal gaps between Fire Door frames and the supporting wall. The fire resistance performance of the fire door, including the frame, glazing, hardware and any intumescent seals incorporated within the door and frame, is assessed by testing the system according to the principals of BS476 parts 20-22, and more recently to BS EN 1634. However, within these standards there is no specified requirement for the seal between the frame and the supporting wall.

To simulate a test of the fire resistance of Premfire FR IM Intumescent acrylic sealant when used to seal between certain types of timber fire door frame and supporting wall, the sealant was tested according to BS476 part 20 in linear gaps between sections of timber fixed in a solid wall. The performance data, which is shown below, is taken from Warrington Fire test report 59021 and assessed in BRE report CC201709.

Substrate	Backing Material	Seal Location	Gap width range(mm)	Sealant Depth mm	Integrity & Insulation
<b>SINGLE SEAL VERTICAL JOINTS IN 100MM TIMBER SOLID WALL</b>					
Hardwood/Hardwood	PE foam rod	Either face	< or = 25	25	EI30
Hardwood/Hardwood	PE foam rod	Either face	12 to 25	35	EI60
Softwood/softwood	PE Foam rod	Either face	< or = 25	35	EI60
<b>SINGLE SEAL HORIZONTAL JOINTS IN 100MM TIMBER SOLID WALL</b>					
Hardwood/hardwood	PE foam rod	Either face	< or = 25	25	EI60
Softwood/softwood	PE foam rod	Either face	< or = 25	35	EI60
<b>DOUBLE SEAL VERTICAL JOINTS IN 100MM TIMBER SOLID WALL</b>					
Hardwood/hardwood	PE foam rod	Both faces	< or = 25	12.5	EI30
Hardwood/hardwood	PE foam rod	Both faces	12 to 25	17.5	EI60
Softwood/softwood	PE foam rod	Both faces	< or = 25	17.5	EI60
<b>DOUBLE SEAL HORIZONTAL JOINTS IN 100MM TIMBER SOLID WALL</b>					
Hardwood/hardwood	PE foam rod	Both faces	< or = 25	12.5	EI60
Softwood/softwood	PE foam rod	Both faces	< or = 25	17.5	EI60

When installing fire doors as part of passive fire protection it is most important to check the specification of the fire door rating to ensure the perimeter frame seal gives the same degree of protection and also the recommendation of the fire door manufacturer and/or the specifier for the detail of the perimeter frame sealing method.

Please note: The above technical information is given as a guide and is based on recent test data obtained under laboratory conditions. Materials should be fully tested by the end user to establish suitability of the product for the intended application. September 2024

## Sealprem cartridge LM, MS Hi-Bond, FR and IM Storage and Transportation Advice

STORAGE TEMPERATURE: between 5 °C and 25 °C Ambient

TRANSPORT TEMPERATURE: between 5 °C and 25 °C Ambient

LOADING/UNLOADING TEMPERATURE: Ambient

STORAGE/TRANSPORT PRESSURE (kPa): Atmospheric

USUAL SHIPPING CONTAINERS: This product can be transported by shipping container. Where possible avoid any excessive heat and prolonged exposure. Continuous exposure may impact shelf life and product performance. Supplied in cardboard cartons.

MATERIALS AND COATINGS UNSUITABLE: None

STORAGE / HANDLING, GENERAL NOTES: Store in a cool, well-ventilated place. Do not store cartons of product near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Shelf life of 12 months in ambient conditions. However, this may be impacted due to extreme conditions outside of these parameters.

Storage temperatures between 5 °C and 25 °C would be advisable however storage outside of these temperatures is possible hence the terms cool and ambient.

IF STORAGE AND TRANSPORTATION IS BELIEVED TO BE BEYOND THESE CONDITIONS PLEASE CONTACT US TO DISCUSS A SPECIFIC PRODUCT FOR YOUR ENVIRONMENT.

OVER EXPOSURE MAY IMPACT ON THE LONGEVITY AND SUITABILITY FOR AN APPLICATION.