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# FIREBAN ONE

## ONE PART FIRE RATED POLYURETHANE SEALANT

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### DESCRIPTION

Fireban one is a fire rated intumescent, low modulus, one component Class A polyurethane sealant. When cured it will form a tough, flexible fire rated seal capable of cyclic expansion and compression movement of 50% ( $\pm 25\%$ ) of the original installed joint width. Bostik Fireban One is resistant to normal weathering conditions such as rain, sunlight, snow, sleet, ozone, atmospheric contamination and pollution. Its excellent weatherability enables it to retain its original properties after years of exposure. Refer to the CSIRO RILEM LONG-TERM SEALANT DURABILITY STUDY DBCE Doc. 97/196(M).

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### RECOMMENDED USES

Fire and acoustic rated sealing of joints in:

- Insitu concrete floors and walls
  - Precast and tilt up panels
  - Brickwork and blockwork
  - Rendered masonry
  - Plasterboard (fire rated and/or acoustic rated)
  - Fibre cement sheet (fire rated and/or acoustic rated)
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### FEATURES AND BENEFITS

- Fire rated up to 4 hours (AS1530.4-2005)
  - Acoustic rated
  - One component, no mixing required
  - Low modulus - 50% ( $\pm 25$ )
  - Excellent durability
  - Paintable (refer to limitations)
  - Non staining
  - Does not support fungal growth
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### APPROVAL STANDARDS

- Fire Test Certification to AS1530-4 (1990), AS4072-1 (1992) and BS476-20 (1987)
  - CSIRO RILEM LONG-TERM SEALANT DURABILITY STUDY DBCE Doc. 97/196 (M)
  - ISO 11600 – Class F-25LM
  - DIN 18540 and SNJF approval as a low modulus external joint sealant
  - ASTM C.920-87 and 97 as Type S, Grade NS, Class 25, Use NT, GMA M and O as an external joint sealant
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- AS4020 Potable water
  - AS1157-1972 Resistance to fungal growth
  - BOMBA Approved (Malaysia)
  - SISIR Approved (Singapore)
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## **APPLICATION INSTRUCTIONS**

### **Substrate preparation**

Clean and dry all surfaces by removing foreign matter and contaminants such as laitance, oil, dust, grease, frost, water, dirt, old sealants, curing agents and any protective coating. Dust and loose particles should be vacuum cleaned. Priming of all surfaces is recommended to achieve stated performance properties. Do not use methylated spirits or turps

### **PRIMING**

#### **Porous Substrates**

- Absorbent or porous substrates will allow a bead of water to easily soak into and wet out the surface of the substrate.
- For maximum performance on porous surfaces, and in all periodically immersed applications use Bostik N49 Primer, or one coat of Bostik MVP 525.
- Porous substrates not subjected to immersion or ponded water, e.g. vertical expansion joints in concrete or masonry structures, do not require priming if clean, dry and uncontaminated.
- Autoclaved aerated substrates e.g. Hebel require 1 to 2 coats of N49 primer or 2 coats of Moisture Seal to consolidate the substrate prior to sealant application.

#### **Non Porous Substrates**

- Non absorbent substrates will cause a bead of water to be retained on the surface of the substrate as a raised droplet. The droplet does not easily soak into the surface of the substrate.
- Bostik MVP525 is recommended for non porous or burnished/overworked concrete substrate as per the Bostik MVP525 Technical Data Sheet.
- Bostik N40 Primer is recommended for non porous plastic and metal substrates.
- Prime all plastic and metallic non porous substrates using Bostik N40 Primer using the two cloth method described below.
- E.g. UPVC outlets and pipework, brass, copper fittings, stainless steel trays and flashings

#### **Two cloth method – N40 Primer application**

- Dampen a clean and dry cloth with Bostik N40 Primer and spread evenly over the non porous substrate using a cleaning/rubbing action
- With a second clean and dry cloth, immediately wipe all primer residues off with a buffing action.
- Allow the substrate to dry for a minimum of 5 minutes before installing Bostik Fireban One
- Do not leave the primer longer than 4 hours before applying sealant/adhesive
- Clean and re-prime if the primed surface is contaminated before Bostik Fireban One is applied.

## **APPLICATION**

Bostik Fireban One should be dispensed from the sausage by means of a caulking gun, available from Bostik. Clip the end of the sausage and place in barrel gun. Screw end cap and nozzle on to barrel gun. Using the trigger extrude the sealant, to stop depress the catch plate. Apply Bostik Fireban One in a continuous bead using enough pressure to properly fill the joint. Tool off surface of sealant with an appropriate sized spatula or trowel. Apply sufficient pressure to leave a smooth. Consistent surface and ensure maximum contact with the interface of the joint.

## **JOINT SEALING HINTS**

- Always use backing rod for correct sealant geometry and contact with the substrate
- Prime prior to the installation of the backing rod

- Ensure maximum adhesion to bond face and depth to width ratio of 1:1 for 10mm joints and 1:2 for joints over 10mm up to 40mm and 3:4 for some joints in specialist applications (refer to Application manual BOS 5.02 for specific joint configurations).
  - Tool sealant to achieve concave shape
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## PRECAUTIONS

### Fireban One must not be:

- Used in chlorinated water such as swimming pools, spas etc.  
Used on any material containing bitumen.
  - Constantly immersed in salt water
  - Used for glazing applications
  - Applied to cement based substrates within 28 days of initial pour or set.
  - Used in trafficable joints
  - Applied at temperatures below 5°C or above 35°C
  - Exposed to water and/or alcohol before it has completely cured.
  - Finished using wet tooling techniques, such as soapy water
  - Applied less than 6mm in width
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- Bostik Fireban One must be applied as per Installation Manual BOS 5.02 to ensure correct fire rated joint design and certifications
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## PAINTABILITY

Bostik Fireban One can be painted after full cure. Coatings containing solvents such as enamels, oil based or other coatings may cause the surface of the sealant to react creating a tacky surface. Surface coatings may discolour in direct contact with cured Seal Bostik Fireban One. Surface coatings may crack and craze as a result of cyclical movement of supporting sealant joint. A field test is recommended to ensure compatibility of the coatings with Bostik Fireban One.

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## COVERAGE

The estimated quantity below is the approximate lineal metre yield, per pack size for recommended joint dimensions. No allowance for waste or irregular joint geometry.

Size	6mm x 6mm bead	20mm x 10mm	40mm x 20mm
600ML	6	3	0.75

Calculation formula:  $(W \times D \times L)/1000 = \text{Litres}$

W = Width (mm)      D – Depth (mm)      L = Length (metres)

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## PACKAGING

Bostik Fireban One is available in 600ml sausage, 20 per carton

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## PROPERTIES

Typical properties after 7 days cure at 25°C and 50% RH

Appearance	Non-sag thixotropic paste
Colour	Limestone Grey
Chemical type	Polyurethane (Moisture Cure)
Shore A hardness	30 approx.
Chemical Resistance	Resistant to dilute acids, alkalis and some solvents. Intermittent contact with diesel and petroleum
Rate of Cure	2mm/24hour on porous substrates
Full Cure	7 Days on porous substrates
Tack Free Time	6 - 12 hours
Tensile Strength	>1.3 N/mm <sup>2</sup>
In service temperature range	-40°C to + 70°C
Application temperature	+ 5°C to + 35°C
Elongation at Break	>900%
Specific Gravity	1.45 approx

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## **STORAGE**

Store between 5°C and 30°C. Shelf life is two years in original unopened sausage.

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## **CLEANING**

Clean up uncured Bostik Fireban One and equipment immediately after use with Bostik Hani Clean Towels. Do not use towels on skin. Cured Bostik Fireban One can be removed by mechanical abrasion. Aromatic solvent clean up is not recommended.

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## **HEALTH AND SAFETY**

- On contact, uncured sealant causes irritation. Gloves and protective goggles must be worn during application and use.
  - Avoid contact with skin, eyes and avoid breathing in vapour.
  - Wear protective gloves when mixing or using
  - If poisoning occurs, contact a doctor or Poisons Information Centre.
  - If swallowed, do not induce vomiting. Give a glass of water.
  - If skin contact occurs, remove contaminated clothing and wash skin thoroughly for a minimum of 15 minutes and see a doctor.
  - Full details are available on the product Safety Data Sheets. To ensure no harm is caused to persons using Bostik products, it is recommended that the appropriate Safety Data Sheets are read by all concerned. Visit [www.bostik.co.nz](http://www.bostik.co.nz) for copies.
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## **VERSION**

V1

5 March 2012

Localisation