



Technical Data Sheet

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SEAL 'N' FLEX FC

POLYURETHANE CONSTRUCTION SEALANT ADHESIVE

DESCRIPTION

Bostik Seal 'N' Flex FC is a high performance fast cure one component polyurethane sealant. When cured it will form a tough, flexible seal and bond capable of cyclic, expansion and compression movement. Joints or fabrications formed with this sealant can be expected to extend and compress a total of 50% ($\pm 25\%$) of original joint dimensions to **ASTM C719**. Bostik Seal 'N' Flex FC is virtually unaffected by normal weathering conditions such as rain, sunlight, snow, sleet, ultra-violet radiation, ozone, atmospheric contamination and pollution. Its excellent weatherability enables it to retain its original properties after years of exposure. Its physical properties remain relatively unchanged over a wide temperature range (-40°C to 70°C).

RECOMMENDED USES

- For sealing floor joints
- Granite, sandstone and marble pointing
- GRC, Fibreglass & Specialty panel systems
- Trafficable – Plats, stairs, roads, runways, aprons and pavements
- Vertical - Precast, Blockwork, aluminum, plasterboard, timber and most common building substrates.
- Pick resistant - Prison cells, schools and public amenities.
- Chemical resistant - Service stations, hangers, aprons and banded areas.
- Potable water tanks
- Sealing gaps and adhering most façade and cladding panels to various building materials
- Sealing construction and expansion joints
- Perimeter sealing of door and window framing
- For new construction and remedial applications
- Adhesive for wide range of building and construction applications
- For sealing of concrete joints in airport runways.

FEATURES & BENEFITS

- Fast tack free time and cure rate
- High bond strength
- A medium/high modulus product, which forms a resilient and permanently elastic seal
- Excellent adhesion to most materials including metals, concrete, brick, wood, plasterboard, GRC & CFC
- Paintable (refer paintability section)
- Non-slumping
- Resistant to fungal attack to AS1157.2
- Potable water approval to AS4020

Wellington Site (Factory & Admin)
Auckland Site

19 Eastern Hutt Road, Wingate, Lower Hutt
148 Pavilion Drive, Airpark II, Auckland Airport

Ph ++64 4 567 5119
Ph ++64 9 257 5847

Fax ++64 4 567 5412
Fax ++64 9 257 3588

www.bostik.co.nz

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- Excellent resistance against hydrolysis, ageing and a wide range of chemicals
 - One component, no mixing required
 - High movement accommodation ($\pm 25\%$) ASTM C719
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APPLICATION

SURFACE PREPARATION

Clean all surfaces by removing foreign matter and contaminants such as oil, dust, grease, frost, water, surface dirt, old sealants and any protective coating. Porous substrates should be cleaned by grinding, saw cutting or blast cleaning (sand or water). Dust, loose particles, etc should be blown out of joints with oil free compressed air or vacuum cleaned. Non porous and plastic surfaces should be cleaned by solvent or mechanical means. Cleaning solvents should not be allowed to air dry or evaporate without being wiped with a clean, dry cloth.

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.

Non Porous Substrates

- No 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 Seal 'N' Flex FC.
- 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 Seal 'N' Flex FC is applied.

APPLICATION

Seal 'N' Flex FC when used as an adhesive or sealant should be dispensed from either the cartridge or sausage sachet by means of a hand or air operated caulking gun designed for such application (available from Bostik). Cut the supplies nozzle to give the required angle and bead size. Pierce the membrane from the top of the cartridge and screw on the supplied nozzle. Place the cartridge in a suitable Bostik extrusion gun and press the trigger. For sausages, a barrel gun is required, this is available from Bostik. Clip the end of the sausage and place complete sausage with pierced end located at the top of the nozzle. Screw the nozzle and housing onto the barrel of gun. Using the trigger on the gun extrude product from the sausage. To stop product flow, use your thumb to depress the catch plate mechanism located at the very rear of the gun, directly above the trigger. Apply Seal 'N' Flex FC in a continuous operation using positive pressure adequate to properly fill and seal a cavity.

Construction Adhesive Applications

Seal 'N' Flex FC does not need to be applied to both surfaces to be bonded, but both surfaces must be prepared in accordance with preparatory work. Apply in beads or daubs to the prepared substrate. Materials being adhered can be bonded immediately or left open for up to 15 minutes after application

prior to bonding. If no mechanical fixing is to be used in conjunction with adhesive, clamping is necessary until full cure is achieved. Use only enough sealant to achieve adequate bond (dependant on surface texture). Excess sealant can be removed by dry cloth or solvent wipe before curing. If adhesive is to be exposed, smooth off with spatula or putty knife to flush finish.

Construction Sealant Applications

Seal 'N' Flex FC is especially suitable for vertical joint sealing or in flooring applications such as saw cuts jointing. More joint movement can be accommodated in a thin bead of sealant than in a thick bead. The ratio of joint width of sealant to depth should be 2:1. The use of a bond breaker prevents undesirable three-sided adhesion. Open cell polyurethane foam or closed cell polyethylene foam rod is the recommended back up material to control correct sealant geometry. Install back up material or joint filler, as specified. Apply Seal 'N' Flex FC continuously using positive pressure to properly fill and seal the joint. Tool the sealant with adequate pressure to spread the sealant against the back up material and onto the joint sides. Excess sealant should be wiped from all surfaces while still uncured. Remove any masking tapes prior to sealant curing

PAINTABILITY

Bostik Seal 'N' Flex FC can be painted as a minimum of 7 days after application using water borne coating and most epoxy flooring systems. Coatings containing high solvent contents such as gloss enamels or high oil based undercoats may cause the surface of the sealant to react creating a tacky surface. A field test is recommended to ensure compatibility. To obtain best appearance and performance the paint must approximate the elongation capabilities of the sealant. High build coatings with some elastomeric ability such as quality acrylic emulsions have the capability to absorb low movement without significant distortion of the paint film.

PRECAUTIONS

- Seal 'N' Flex FC is not recommended for use in sealing joints or bonding fabrications subject to constant immersion in seawater or where abrasion or physical abuse is encountered.
- Seal 'N' Flex FC should not be used in highly chlorinated areas such as swimming pools, spas etc without prior consultation with Bostik Technical Services.
- Seal 'N' Flex FC should not be used in glazing applications subject to UV light radiation or direct sunlight exposure without prior consultation with Bostik.
- Seal 'N' Flex FC should not be applied or finished with wet tooling techniques, using solvents, water or detergent/ soap solutions.
- Seal 'N' Flex FC sealant should not be applied to unpredictable absorptive surfaces such as marble, limestone or granite unless a standard of appearance has been agreed on as a result of testing for stain and/or discolouration.
- Seal 'N' Flex FC should not be applied onto or near any bitumen products.
- Do not use in interior or exterior structural sealing below the waterline in marine applications.
- Do not apply at temperatures below 5°C or above 35° C.
- Do not apply to surfaces with special protective or cosmetic coating such as mirrors, reflective glass or surfaces coated with Teflon, polyurethane or polypropylene.
- Will not adhere to polyethylene, polypropylene or PTFE.
- Bostik Seal 'N' Flex FC must not be applied less than 5mm in width
- Bostik Seal 'N' Flex FC must not be applied less than 6mm in depth
- For wider joints, Bostik recommends Seal 'N' Flex Trafficable (2 components polyurethane sealant)
- Seal 'N' Flex FC White may yellow or discolour if exposed to UV Light for prolonged periods of time.

PROPERTIES

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

Appearance	Non-sag smooth thixotropic paste
Cure System	Moisture Curing
Tack free time (minutes)	45 minutes
Rate cure in mm/24h	3.5
Hardness Shore A	50
Tensile Strength	2.5 – 3.0 N/mm ²
Service Chemical Resistance	Resistant to dilute acids & alkalis, some solvents and intermittent contact with diesel and petroleum
Elongation at break	400%
Application Temp	5°C to 35°C
Temp resistance	-40°C to +70°C
Colour	Grey, black and white
Full cure	7 days
Potable water approval	AS4020
Acoustic properties	Excellent
Paintable approx.	7 days after application

COVERAGE

The coverage below is approximate and is dependant on substrate conditions.

Pack Size	Lineal Metres	
	6mm Bead	20mm Bead
720gm sausage	19	4.4

CLEANING

Clean up uncured material and equipment immediately after using Bostik 9907 solvent. Do not use solvents on skin. For removal on skin, uncured sealant can be removed with Bostik Hand-Clean towels. Cured Seal 'N' Flex FC is difficult to remove via chemical means and mechanical means may be necessary.

STORAGE & PACKAGING

- Available in a 720gm sausage
 - Store between 5°C and 30°C. Shelf life is twelve months in original unopened sausage.
 - Seal 'N' Flex FC is non-flammable.
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HEALTH & SAFETY

- On contact, uncured sealant causes irritation. Gloves and protective goggles should be worn during application and use.
- Avoid contact with skin, eyes and avoid breathing in vapour.
- 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 for copies.

VERSION

V1 7 February 2012 Localisation