

technical data sheet

SEAL N FLEX IMMERSIBLE

Two Component Polyurethane Construction Sealant

PRODUCT

Seal N Flex Immersible is a high performance Immersible polyurethane joint sealant for water retaining structures.

DESCRIPTION

Two component gun grade elastomeric polyurethane joint sealant with high performance for use in submerged condition where chemical resistance and joint movement accommodation are paramount.

RECOMMENDED USES

- Suitable for use in joints subject to total immersion such as sewage plants, water treatment plants and marine installations.
- Digestion tanks.
- Water reservoirs.
- Seawalls
- Marine installations.
- Suitable for most building applications.
- Water retaining structures.
- Sealing constructions expansion joints.
- For vertical and horizontal applications.
- Accepting vehicle and foot traffic.
- Sealing joints in pre-cast concrete panels.
- Interior and exterior use.
- Fuel storage areas, secure station

FEATURES & BENEFITS

- $\pm 25\%$ joint movement
- Excellent resistance to sewerage and sea water.
- High abrasion resistance.
- Australian made.
- Excellent adhesion to primed substrates.
- Accepts foot and vehicle traffic.
- Heavy duty.
- High movement accommodation factor
- Paintable
- Potable water approval to AS 4020

PERFORMANCE PROPERTIES

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

Appearance	Gun grade uniform thixotropic paste
Stain & Colour Changes	None
Chemical Type	Two component polyurethane
Chemical Resistance	Excellent
Shore A Hardness	36
Tensile Strength (Elongation Modulus 100%)	103 N/ cm ²
Service Temperature	-29°C to 66°C
Application Temperature	+5°C to +45°C
Tool Working Time	Approx. 120 min at 20°C
Max. Joint Movement	$\pm 25\%$
Max. Joint Width	50mm

Elongation Modulus at (100%)	131 N/cm ²
Adhesion to Peel	26 N/cm ²
Colour	Grey
Pot life	Typical working life of 30 min
Tack Free Time	45 min at 25°C
Full Cure	7 days at 25°C
Chemical Resistance	Resistant to dilute acids and alkalis, sewage and some solvents.
Conforms to AS 1527, ASTM D412, ASTM C719, ASTM C793, ASTM D2240, ASTM D 4124	

PACKAGING

Seal N Flex Immersible is available in 6 litre kit

COVERAGE

The approximate linear metre sealant consumption per 6 litre unit can be estimated from the following recommended joint depth/width ration table. (Metal container containing Part A and Part B)

Joint Depth (mm)	Joint Width (mm)						
	6	10	12	15	20	25	30
10	100	60	50	40	30		
12			42	33	25		
15				26	20	16	14
20					15	12	10

APPLICATION INSTRUCTIONS

Joint Design

Joint width should be not less than 6mm. The joint depth must allow a sealant depth, after installation of bond breaker material, of a minimum of 6mm. Lap shear joints should have a bead width equal to, or greater than twice the anticipated movement. A conservative design practice, which uses a portion of the sealant's movement capability as a safety factor is recommended. Sealants are subject to cohesive failure when the actual movement is greater than their rated capability. For all applications requiring a high degree of dynamic movement the designed joint width should be at least four times the total anticipated joint movement.

JOINT PREPARATION

Ensure that joint dimensions are as specified and that anticipated joint movement is within the capability of the movement accommodation Factor of Seal N Flex. Concrete should have been allowed to cure at least 28 days.

Remove all dirt, dust, laitance and loose materials by vigorous wire brushing. Remove all rust scale and protective coating from metal surfaces and clean off any oil or grease using Bostik Solvent cleaner 5077. Joint faces must be sound, flat and free of surface irregularities and completely dry, clean and frost free. Any joint faces which

do not meet these requirements may require forming of a fresh joint surface by saw cutting or refacing with a suitable epoxy or cementitious mortar. For a particularly neat finish, cover the face edges of the joint with masking tape before priming. Prime joint as detailed below, inserting bond breaker and Bostik Backer Rod material when appropriate. This prevents undesirable three-sided adhesion.

PRIMING

Primer must be used with Bostik Seal N Flex Immersible two part grade sealants. Bostik N49 primer for masonry Bostik N 40 for aluminium, steel and non-porous building materials. Joints must be thoroughly dry before applying primer and sealant. If sealant is to be applied to a material with specially treated surfaces or particularly unusual surface characteristics, consult Bostik for primer recommendations.

Prior to any use, however it is always recommended that a bead of sealant be applied on the surface to test adhesion. See Pretested Adhesion to Substrate Program. Allow Bostik N 40 and N49 Primers a minimum of 30 minutes to dry prior to the application of sealant. Primed areas not sealed within hours should be re-prepared and re-primed.

MIXING

To facilitate proper mixing in cold water, it is recommended that Seal N Flex Immersible be stored for at least 12 hours at approximately 20°C prior to mixing. Thorough even mixing is essential to ensure proper cure. Mix only entire units to ensure correct proportions. During mixing ensure entire contents are fully mixed. Paying particular attention to the sides and bottom of the tin. Avoid air entrapment caused by fringing the blade too close to the surface. Transfer all of Curing Agent into the Base tin. Hold the tin firmly and mix thoroughly using a small spiral mixing paddle (item no. 149802) fitted into a heavy duty, low speed drill (300-500rpm) until sealant colour is uniform and streak free. Mix for a minimum 5 minutes. Incorrect mixing can adversely affect cure and final properties. Avoiding mixing air into sealant. **DO NOT OVER MIX.**

PLACING

- Loading Barrel Caulking-Gun
- Ensure that the surface of the sealant is reasonably concave to prevent air pockets. Place the Bostik Follower Plate (item no. 150818) on top of the sealant in the tin and load by direct filling of a Bostik Bulk Barrel Gun (item no. 222143)
- Install backer rod into the joints. Apply Seal N Flex Immersible sealant in continuous operation using a positive pressure adequate to properly fill and seal the joint. Tool Seal N Flex Immersible sealant with adequate pressure to spread the sealant against the back-up material onto the joint surfaces. A tool with a convex profile is recommended to keep the sealant within the joint.
- Excess sealant should be dry-wiped from all surfaces while still uncured, following with Bostik solvent (cleaner 5077). Should sealant should be allowed to progress through the initial cure or setup. It should be removed promptly by abrasion or other mechanical means.

CURED SEALANT IS USUALLY VERY DIFFICULT TO REMOVE WITHOUT ALTERING OR DAMAGING THE SURFACE TO WHICH THE SEALANT HAS BEEN INCORRECTLY APPLIED.

On completion of application of Seal N Flex Immersible in joint, remove masking tape if used.

PRECAUTION

- Should not be applied to unpredictably absorptive surfaces such as marble, limestone and granite as staining and discolouration may occur.
- May be used for joints subject to occasional Immersion provided Seal N Flex Immersible has achieved full cure (7days at 20°C) prior to immersion.
- Not recommended for use where in contact with bitumen.
- Bostik N 49 or N 40 is recommended on all surfaces prior to application of Seal N Flex Immersible.
- Do not apply Seal N Flex Immersible to any material containing bitumen. Do not allow bitumen to contact Seal N Flex Immersible
- On marble/natural stone or surfaces with special protective or cosmetic coating without prior testing or consultation with Bostik Technical Services.
- In totally confined or air free spaces.
- Cure rate of sealant will be inhibited when air or substrate surface temperature is below 5°C
- Bostik Seal N Flex Immersible sealant should not be applied with wet tooling techniques; using solvents, water or detergent/soap solutions is not recommended.
- Bostik Seal N Flex Immersible sealant should not be applied to surfaces with special protective or cosmetic coatings without prior consultation with the manufacturer. Such surfaces include, but are not limited to, mirrors, reflective glass, or surfaces coated with Teflon polyurethane or polypropylene.
- Bostik Seal N Flex Immersible cures by chemical means. The activator system used can be affected by water before or during cure. The sealant should not be stored, applied or cure in areas where unusually high humidity or free water are present during the application or initial cure.
- Bostik Seal N Flex Immersible sealant should not be used in highly chlorinated areas such as swimming pools, spas etc. without prior consultation with Bostik Technical Services.
- Bostik Seal N Flex Immersible sealant should be allowed to fully cure prior to subjecting to an intermittent or continuous head of water.

PAINTABILITY

Bostik Seal N Flex Immersible can be painted as early as 24 hours after application using water borne coating and most epoxy 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 to develop. 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 abilities such as quality acrylic emulsions have the capability to absorb low movement without significant distortion of the paint film. Please contact Bostik Technical Department if unsure of any paint system.

P.A.T.S (Pretested Adhesion To Substrate) Programme

Bostik offer a service in which a program has been established to eliminate potential field problems by pre-testing Bostik adhesives with samples of building materials to which the adhesive will be applied. This service is available on large projects where pre-application testing will aid in determining the proper surface preparation method to achieve optimum adhesion. Consult a Bostik representative for further information.

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.
- For more detailed information refer to Material Safety Data Sheet.

CLEAN-UP

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 Handi-Clean Towels. Cured Seal N Flex Immersible is difficult to remove via chemical means and mechanical means may be necessary.

STORAGE

Store between 5°C and 30°C. Shelf life is twelve months in original unopened container.

FIRE

Seal N Flex Immersible is non flammable.

SEAL N FLEX IMMERSIBLE

ITEM NO.	STOCK SIZE
214450	6 litre kit grey

ANCILLARY PRODUCTS

ITEM NO.	STOCK SIZE
227935	5077 Cleaner 1lt
229504	Bondflex 500ml
231436	N 40 Primer 1lt
151203	N 49 Primer 1lt
263362	Moisture Seal 8 litre kit
263370	Moisture Seal 20 Litre kit
045292	9907 Solvent 4lt
045454	9913 Solvent 4lt
222143	37cm Barrel Gun
171867	H.V. Cartridge Gun
257753	Handi Clean Towels
162353	P.E. Backer rod 13mm

The representations and recommendations regarding the products are based on tests which we believe to be reliable. However, no guarantee of their accuracy can be made because of the great range of field conditions and variations encountered in raw materials, manufacturing equipment and methods. Thus, the products are sold with a limited warranty only, and on the condition that purchasers will make their own tests to determine the suitability of the product for their particular purposes. Under no circumstances will Bostik Findley Australia Pty Ltd be liable to anyone except for replacement of the products or refund of the purchase price.

ALL SALES ARE EXPRESSLY LIMITED TO THE TERMS AND CONDITIONS OF SALE OF BOSTIK FINDLEY AUSTRALIA PTY LTD

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(ABN 79 003 893 838)

Product: Seal N Flex Immersible
Issue Date: September 2001
Issue No: 1
Division: Construction
Total Pages: 3