Fosroc® Thioflex® 600 Pouring Grade

FOSROC constructive solutions

Fuel Resistant, multi-component, pouring grade, polysulphide joint sealant for horizontal movement joints

Uses

Sealing horizontal movement joints in building and civil engineering structures, including roads, floors, airfields and subways.

Advantages

- Forms a tough, elastic, rubber-like seal
- Accommodates continuous and pronounced cyclic movement
- Excellent adhesion to most common substrates
- High resistance to ageing reduces physical damage due to climatic extremes

Description

A multi-component joint sealant, based on a liquid polysulphide polymer, which when mixed and applied, cures to form a tough, rubber-like seal. The cured sealant exhibits excellent adhesion to most primed surfaces including concrete, aluminium and stainless steel.

Thioflex 600 Pouring Grade for joints in horizontal surfaces is supplied in grey colour only in 4 and 16 litre packs with the base and curing agent in separate tins.

Thioflex 600 Pouring Grade is recommended for sealing expansion joints and stress relief joints in floors or other horizontal surfaces.

Design criteria

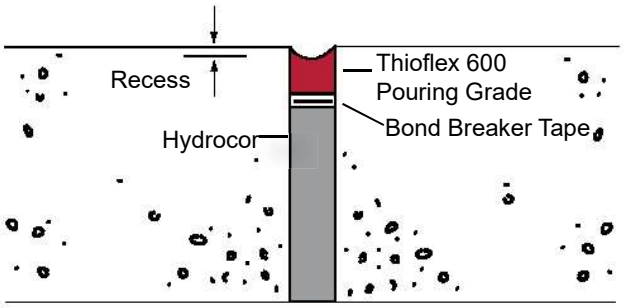
Thioflex 600 Pouring Grade may be applied to joints between 5 and 50 mm wide. Joints which are expected to experience cyclic movements should be designed to an optimum width:depth ratio of 2:1, subject to the overriding recommended minimum sealant depths set out below:

- 5 mm for metals and other non-porous surfaces;
- 10 mm for all porous surfaces;
- 20 mm for trafficable joints and those subject to hydrostatic pressures.

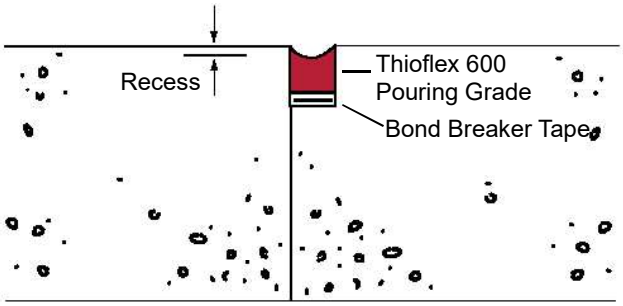
All joints subject to repeated movement should be designed and spaced so that the total movement in tension and compression does not exceed 50% of the joint width at the time of sealing. Total movement in shear should not exceed 50% of joint width at the time of sealing.

All movement joints shall be recessed 2 mm below flush so that during joint contraction the sealant does not protrude above the surface and so become susceptible to damage from traffic.

Typical expansion joint



Typical construction joint



A bond breaker tape is not required in expansion joints containing polyethylene foam joint fillers. For construction or contraction joints polyethylene bond breaker tape or back-up strip must be used.

Technical Support

Parchem offers a technical support package to specifiers and contractors as well as on-site technical advice from staff with experience in the construction industry.

Specification Clauses

Where marked on the drawings, joints shall be sealed using a two-component, polysulphide joint sealant. The sealant must be capable of reaching initial cure in 18 hours at 25°C and full cure in one week at 25°C.

The sealant must be capable of accommodating repeated cyclic movement of up to plus 25% and minus 25%. The sealant must provide an excellent bond to common masonry, metal glass and ceramic surfaces when used with the appropriate primer.

The sealant manufacturer must be accredited to ISO 9001 and the sealant must be installed by a pre-qualified contractor nominated by the supplier.

Such a product is Thioflex 600 Pouring Grade supplied by Parchem.

Maintenance

No special requirements, any damage identified during normal building inspections should be repaired or replaced as appropriate.

Fosroc® Thioflex® 600 Pouring Grade

Properties

Form:	Multi-part component Base: viscous liquid Curing agent: paste
Colour:	Grey
VOC content:	45g / litre
Density:	1.65kg / litre
Movement accommodation factor:	50% total (± 25%)
Physical/chemical change:	Chemical cure
Application life:	2 - 4 hours @ 25°C
Setting time:	72 hours @ 5°C: 36 hours @ 15°C: 18 hours @25°C
Cure time:	28 days @ 5°C: 14 days @ 15°C: 7 days @ 25°C
Application temperature:	5 - 50°C
Hardness shore 'A' @ 25°C:	15 - 23

Chemical resistance to occasional spillage:

Dilute acids	Resistant
Dilute alkalis	Resistant
Petrol	Resistant
Aviation fuels	Resistant
Diesel fuel	Resistant
Kerosene	Resistant
Lubricating oils	Resistant
Skydrol	Resistant
White spirit	Resistant
Chlorinated solvents	Not resistant
Aromatic solvents	Resistant
Dilute oxidising acids	Not resistant

Application Instructions

Joint Preparation

The joint surfaces must be thoroughly dry, clean and frost free. Remove all dust and laitance by rigorous wire brushing, grinding or grit blasting. Remove all rust, scale and protective lacquers from metal surfaces. Remove any oil or grease with Fosroc Solvent 10.

Any expansion joint filler must be checked to ensure it is tightly packed and no gaps or voids exist at the base of the sealing slot before positioning a bond breaker tape. A bond breaker tape is not required in expansion joints containing polyethylene foam joint fillers. For construction or contraction joints polyethylene bond breaker tape or back-up strip must be used.

Where a particularly neat finish is required, mask the face edges of the joint before priming and remove immediately after tooling is completed.

Priming

Primer 4: For use on metals and ceramics. It is a one-component chemically active clear liquid for brush or pad application. One thin coat should be applied and allowed to dry for a minimum of 5 minutes prior to sealant application.

Primer 7: A one-component chemically active straw coloured liquid for brush application to concrete, stone, brickwork, timber and unglazed edges of ceramic tiles. Apply an even coat of Primer 7 to the bonding faces of the joint. Excessively porous surfaces may need more than one coat – this is evident where applied primer does not give a smooth, glossy surface when dry. Allow final coat to become touch dry (approx. 1 hour) before application of Thioflex 600 Pouring Grade.

Any primed areas not sealed within 8 hours of primer application will need to be re-primed 1 hour prior to sealant application.

Priming surfaces subject to immersion

Joints subject to water immersion should be primed with Primer 13, a two-component epoxy primer with exceptionally good hydrolytic stability. Mix the two components of the primer by pouring the Hardener component into the Resin component, mix thoroughly for a minimum of one minute by stirring with a spatula, paint stirrer etc. paying attention to the product on the sides of the can.

Apply an even coat of primer by brush onto the bonding faces of the concrete, the base of the joint should have no primer residue present after the primer has been applied, then allow the primer to become touch dry before applying any sealant (typically 1 hour at 23°C). DO NOT APPLY SEALANT TO TACKY OR WET PRIMER. The sealant must be applied within 8 hours at normal temperatures - within 3 hours at elevated temperatures (above 30°C). The pot life (usable life) of mixed Primer 13 is 30 minutes @ 23°C and 20 minutes @ 30°C. Any unused mixed Primer 13 should be discarded after the pot life has expired. Allow Primer 13 to become touch dry (approx. 1 hour) before applying sealant.

Note: ceramic tiles with unglazed edges should have those edges primed as noted, except where they are to be permanently water immersed, they should be primed with Primer 13.

Important for all primers

Avoid over priming resulting in an excess of primer in the base of the joint or application beyond faces. **The mixed Thioflex 600 must be applied when the primer is tack free**, that is after the evaporation of the solvent but before the primer film has completely reacted. If joints are not sealed within 8 hours of primer application, they must be re-primed and allowed to become touch dry as previously stated.

Fosroc® Thioflex® 600 Pouring Grade

Mixing

Thioflex 600 Pouring Grade is supplied as a Base component (in a larger tin) and Curing Agent component which is either 1 x 300ml cartridge for the 4 litre unit, or all 4 x 300ml cartridges for the 16 litre unit. Transfer ALL of the Curing Agent component/s into the larger tin. Mix thoroughly using a heavy duty slow speed drill (300-500 rpm) fitted with a Spiral Stirrer for 5 minutes. Only thorough mixing, including material right at the bottom of the tin, will result in proper curing. In cold weather Thioflex 600 mixes more easily if stored overnight at room temperature. The pouring grade may be poured directly into horizontal joints. For application to horizontal joints less than 15 mm wide load into a suitable gun.

Finishing

Note: Thioflex 600 Pouring Grade is NOT a 'self levelling' material. Release of air bubbles from joints with rough or porous joint faces will be enhanced by tooling the sealant surface with a convex tool. Any masking tape should be removed immediately after tooling.

Cleaning

Clean equipment immediately after use with Fosroc Solvent 10. Cured sealant can only be removed mechanically or after soaking in Solvent 10.

Limitations

Over-painting of sealants is not recommended because of the inability of paint films to accept movement. However, if required, trials should be carried out to determine compatibility.

Thioflex 600 Pouring Grade should not be used in direct contact with materials containing pitch or bitumen.

Thioflex 600 Pouring Grade should not be used in joints in reservoirs or other water retaining structures which may be subject to high chlorination levels or biologically active conditions.

Estimating

Supply

Thioflex 600 Pouring Grade 4 litre pack:	FC920414-4L	
Base of 16 litre pack:	FC920416-14.8L	
Curing component of 16 litre pack:	FC920418-1.2L	
Primer 4 (250ml):	FC965207-250ML	
Primer 7 (1 litre):	FC965209-1L	
Primer 13 (250ml pack):	Base:	FC965229-125ML
	Hardener:	FC965230-125ML
Primer 13 (1 litre pack MTO):	Base:	FC965229-500ML
	Hardener:	FC965230-500ML

Guide to quantities

Joint size (mm)	Litres per metre run	Metre run per 4 litre pack
10 x 10	0.100	40.00
20 x 10	0.200	20.00
20 x 15	0.300	13.30
20 x 20	0.400	10.00
40 x 20	0.800	5.00
40 x 30	1.200	3.20
40 x 40	1.600	2.40
50 x 25	1.250	3.20
50 x 40	2.000	2.00
50 x 50	2.500	1.60

Primer coverage:

1 litre of Primer 4 to 100 litres of Thioflex 600 Pouring Grade.

1 litre of Primer 7 to 30 litres of Thioflex 600 Pouring Grade.

1 litre of Primer 13 to 30 litres of Thioflex 600 Pouring Grade

These are theoretical yields. No allowance has been made for variation in joint width or wastage.

Shelf life

Shelf life of 12 months in original containers when kept in dry conditions between 5°C and 27°C.

Parchem Construction Supplies Pty Ltd
7 Lucca Road, Wyong NSW 2259
Phone: 1300 737 787
www.parchem.com.au
ABN 80 069 961 968

Distributed in New Zealand by: Concrete Plus Ltd
23 Watts Rd, Sockburn 8042 Ph: 0800657 156