

# Thioflex 600 Gun Grade

**Fuel resistant, low modulus, high joint movement accommodation, tough, two-component polysulphide joint sealant**

## USES

Sealing high movement joints in building and civil engineering structures, including superstructures, floors, basements and subways.

## ADVANTAGES

- Forms a tough, elastic, rubber-like seal
- Accommodates continuous and pronounced cyclic movement (+/- 30%)
- Adheres to most common substrates
- High resistance to ageing reduces physical damage due to climatic extremes
- Easy mixing and application
- Safer lead free curing agent

## DESCRIPTION

Thioflex 600 Gun Grade is a two-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, glass, aluminium and stainless steel.

Thioflex 600 Gun Grade is ideal for general applications and is packed in a ready-to-mix pack consisting of the base and curing agent in the correct proportions.

Thioflex 600 Gun Grade is particularly recommended for use in civil structures, high rise buildings and other applications where access for subsequent maintenance will be difficult and the risk of early movement failure must be minimised. It is also suitable for sealing joints in brickwork, retaining walls, reservoirs, basements and subways.

## TECHNICAL SUPPORT

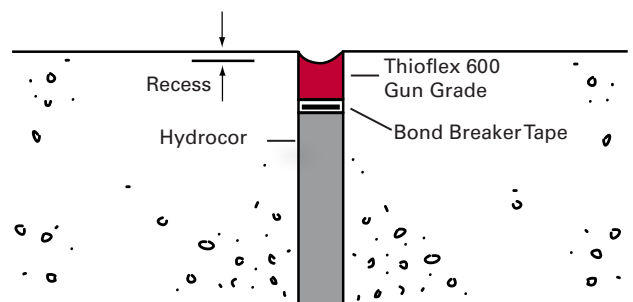
Parchem offers a technical support package to specifiers and contractors as well as on-site technical advice from staff with experience in the construction industry.

## DESIGN CRITERIA

Thioflex 600 Gun 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, glass and other non-porous surfaces
- 10 mm for all porous surfaces
- 20 mm for trafficked joints and those subject to hydrostatic pressures

All joints where repeated movement occurs should be designed and spaced so that the total movement in tension or compression does not exceed 30% (i.e.: 60% total) of the joint width at time of sealing. The total movement in shear should not exceed 50% of joint width at the time of sealing where continuous cyclic movement is expected.



Example of A sealed expansion joint in traffic surfaces

## PROPERTIES

<b>Form:</b>	Two-component, paste	
<b>Colour:</b>	Grey	
<b>Movement accommodation factor:</b>	Plus 30% and minus 30% (60% total)	
<b>Physical/chemical change:</b>	Chemical cure	
<b>Application life:</b>	2 hours @ 25°C	
<b>Initial cure:</b>	48 hours @ 15°C 24 hours @ 25°C	
<b>Full cure:</b>	3 weeks @ 15°C 1 week @ 25°C	
<b>Application temperature:</b>	5 - 50°C	
<b>Hardness shore 'A' @ 25°C:</b>	15 - 20	
<b>Water immersion:</b>	Thioflex 600 Gun Grade must be fully cured before permanent immersion in water	
<b>Chemical resistance to occasional spillage:</b>		
	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	not resistant
	Dilute oxidising acids	not resistant
<b>Solids content:</b>	100%	
<b>Density:</b>	1.47 kg / litre	

## MAINTENANCE

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

## SPECIFICATION CLAUSES

Where marked on the drawings, joints shall be sealed using a two-component, non-sag, polysulphide joint sealant. The sealant must be capable of reaching initial cure in 24 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 30% and minus 30%. 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 Gun Grade supplied by Parchem.

## 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 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.

Note: The use of 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 NON POROUS SURFACES

**Primer 4:** For use on metals, glass 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.

### PRIMING POROUS SURFACES

**Primer 7:** It is 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 Gun 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. 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 Gun Grade 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.

## MIXING

The base component and curing agent are supplied ready for mixing with the curing component packed in a separate container under the lid of the base component can. Mix thoroughly using a slow speed drill (300 - 500 rpm) fitted with a mixing paddle - Heavy Duty Mortars for 5 minutes. Only thorough mixing of the entire contents of the tin, including material right at the bottom of the tin, will result in proper curing. In cold weather Thioflex 600 Gun Grade mixes more easily if stored overnight at about 23°C.

Immediately after mixing, load the sealant into a Sealant Gun - Long Barrel Bulk by drawing the sealant up into the gun through a suitable follower plate, and apply to the joint.

## FINISHING

Thioflex 600 Gun Grade should be tooled to a smooth finish. The use of surface lubricants such as detergent solution is not recommended as this may adversely affect colour stability and weathering performance of the sealant. Any masking tape should be removed immediately after tooling.

## CLEANING

Clean equipment immediately after use with Solvent 10.

## CONTRACT APPLICATION

The designer or contractor may wish to use the services of a specialist sub-contractor for joint sealing work. Names of preferred sub-contractors are available from Parchem.

## LIMITATIONS

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

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

Thioflex 600 Gun 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

### PACKAGING

<b>Thioflex 600 Gun Grade:</b>	6 litre pack
<b>Primer 7:</b>	1 litre tin
<b>Primer 13:</b>	250 ml pack
<b>Primer 4:</b>	250 ml tin
<b>Solvent 10:</b>	4 and 20 litre drum

### GUIDE TO QUANTITIES

Joint size in mm	Litres per metre run	Metre run per 6 litre pack
10 x 10	0.100	60
20 x 10	0.200	30
20 x 15	0.300	20
20 x 20	0.400	15
40 x 20	0.800	7.5
40 x 25	1.000	6.0
40 x 30	1.200	5.1
40 x 40	1.600	3.6
50 x 25	1.250	5.1
50 x 30	1.500	3.9
50 x 40	2.000	3.0
50 x 50	2.500	2.4

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

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

1 litre of Primer 13 to 30 litres of Thioflex 600 Gun Grade.

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

## STORAGE

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

# Thioflex 600 Gun Grade



## ADDITIONAL INFORMATION

Parchem provides a wide range of complementary products which include:

- concrete repair – cementitious and epoxy
- grouts and anchors – cementitious and epoxy
- waterproofing membranes – liquid applied, cementitious and bituminous sheet membranes
- waterstops – pvc and swellable
- joint sealants – building, civil and chemical resistant
- industrial flooring systems – cementitious and epoxy
- architectural coatings
- filler boards – swellable cork, bituminous and backing rod
- ancillary products

For further information on any of the above, please consult with your local Parchem sales office.

## IMPORTANT NOTICE

A Material Safety Data Sheet (MSDS) and Technical Data Sheet (TDS) are available from the Parchem website or upon request from the nearest Parchem sales office. Read the MSDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

## PRODUCT DISCLAIMER

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.

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