

## Techno Seal 600

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### **Multi-component, gun and pouring grade, polysulphide sealant**

#### **Uses**

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

#### **Advantages**

- A high quality BSI product, meeting key, international standards
- 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

#### **Standards compliance**

British Standard BS 4254: 1983.

British Standard BS 6920:1988 (gun grade grey)

ASTM C 290-87, Type M, Class 25.

#### **Description**

Techno Seal 600 is 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 surfaces including primed concrete, glass, aluminum and stainless steel.

Techno Seal 600 is available in gun and pouring grades.

The gun grade is ideal for general application, and is available in a range of colours. It is packed in a ready to mix, two and a half liter tin containing the base and curing agent in the correct proportions.

The pouring grade for joints in horizontal surfaces is supplied in grey only in 4 liter packs with the base and curing agent in separate tins.

Techno Seal 600 is particularly recommended for use in high rise buildings and other applications where access for subsequent maintenance will be difficult and the risk of early movement failure must be minimized.

It is also suitable for sealing joints in brickwork, retaining walls, reservoirs, basements and subways.

Techno Seal 600 pouring grade is recommended for sealing expansion joints and stress relief joints in floors or other horizontal surfaces.

#### **Specification**

Joints shall be sealed using M.T.C. Techno Seal 600 two part, Polysulphide sealant, manufactured by M.T.C. to BS 4254:1983, and ASTM C 920 -87

Joints shall be prepared and the sealant mixed and applied in accordance

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## **Modern Technologies for Construction Chemicals**

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with the manufacturer's current data sheet.

### **Design criteria**

Techno Seal 600 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.  
To ensure that the sealant remains within its stated movement capacity (25% MAF), sealing slot widths should be designed in accordance with the recommendations of BS 6093. The use of a surface primer is always required on porous surfaces.  
On non-porous surfaces a primer is not normally required except where glass or glazed surfaces are to be permanently immersed in water.

### **Instructions for use**

#### 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  
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.

**Note:** The use of a bond breaker is not required in expansion

#### Joints containing

Polyethylene expansion joint fillers. For construction or contraction joints a bond breaker tape or back-up strip should be used Where hydrostatic pressure exists, only bond breaking tapes must be used not foamed back-up strips

#### Porous surfaces

Techno Prime 7 It is a one part chemically active clear liquid for brush application to Prime all concrete, stone, brickwork, timber and unglazed edges of ceramic tiles with Techno primer 7, a one part chemically active clear liquid . Apply one thin coat using a clean, dry brush, ensuring complete coverage. Avoid over priming resulting in an excess of primer in the base of the joint or application beyond faces. The mixed Techno Seal 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.

After 3 hours @ 20°C, or 90 minutes @ 35°C the surfaces must be re-primed before applying the sealant.

#### Steel surfaces

Iron and steel must be protected with an anti-corrosion primer prior to sealing.

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### Mixing

The base component and curing agent are supplied ready for mixing in a single tin. Mix thoroughly using a slow speed drill for 5 minutes. Only thorough mixing, including material right at the bottom of the tin will result in proper curing. In cold weather Techno Seal 600 mixes more easily if stored overnight at room temperature. Immediately after mixing, load the sealant into and apply to the joint.

### Finishing

Techno Seal 600 should be tooled to a smooth finish. A minimum of surface lubricant such as dilute detergent solution may be used to assist the process. Any masking tape should be removed immediately after tooling.

### Properties

Form	Multi-part, paste compound
Colors	grey
Movement accommodation factor (BS 6093)	25% butt joints 50% lap joints
Physical or chemical change	Chemical cure
Pot life	2 hours @ 25°C 1 hour @ 35°C
Setting time	72 hours @ 5°C 36 hours @ 15°C 18 hours @ 25°C 12 hours @ 35°C
Cure time	4 weeks @ 5 °C 2 weeks @ 15°C 1 week @ 25°C 4 days @ 35°C
Application temperature	5 to 50°C
Hardness shore 'A' 25°C	20 to 25
Water immersion	Techno Seal 600 must be fully cured before permanent immersion in water.

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Biological resistance	Techno Seal 600 has been evaluated in microbiologically active situations and has been shown to have resistance to aerobic conditions.
Solids content	100%
Density	1.65 Kg/liter
Flash point	Over 65°C
Flammability	Burns but does not readily

#### Chemical resistance to

Occasional spillage :	
Dilute acids	resistant
Dilute alkalis	resistant
Petrol	resistant
Aviation fuels	resistant
Diesel fuel	resistant
Kerosene	resistant
Lubricating oils	resistant
White spirit	resistant
Chlorinated solvents	not resistant
Aromatic solvents	not resistant
Dilute oxidizing acids	not resistant

#### Cleaning

Clean equipment immediately after use with Techno Solvent Maintenance

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

#### Limitations

- Over-painting of sealants is not recommended because of the inability of paint films to accept movement. However, if definitely required, trials should be carried out to determine compatibility
- Techno Seal 600 should not be used in direct contact with materials containing pitch or bitumen

#### Estimating

##### Supply

Techno Seal 600	:	4.5 liter packs.
Techno solvent	:	4 liter packs.

#### Coverage

4.5 liters of Techno Seal 600 to 12m length of 10 x 20mm joint.

4.5 liters of Techno Seal 600 to 25m length of 10 x 10mm joint.

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

**Storage**

Techno Seal 600 has a storage life of 12 months when kept in original containers and stored in dry conditions between 5°C and 27°C.

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