

## Techno Seal 700

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

#### **Uses**

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

Techno Seal 700 is a multi-component joint sealant, based on a liquid polyurethane 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 700 is available in gun and pouring grades.

The gun grade is ideal for general application, and is available in a range of colors. It is packed in a ready to mix. The base and curing agent in separate tins.

Techno Seal 700 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 700 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 700 two parts, Polyurethane sealant, manufactured by M.T.C.

Joints shall be prepared and the sealant mixed and applied in accordance with the manufacturer's current data sheet.

#### **Design criteria**

Techno Seal 700 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),

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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.

#### Joints containing

Polyurethane 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 117 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 117, 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 700 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.

### **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 700 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.

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### Properties

Form	Multi-part, paste compound
Colors	Any color
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 700 must be fully cured before permanent immersion in water.
Biological resistance	Techno Seal 700 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

### Cleaning

Clean equipment immediately after use with Techno Solvent 102.

### Maintenance

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

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**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 700 should not be used in direct contact with materials containing pitch or bitumen.

**Estimating****Supply**

Techno Seal 700 : 4.0 Kg packs.

**Coverage**

4.0 Kg of Techno Seal 700 to 8m length of 10 x 20mm joint.

4.0 Kg of Techno Seal 700 to 16m length of 10 x 10mm joint.

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

**Storage**

Techno Seal 700 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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