



## TufSeal CP 1

### Surface Applied Capillary Waterproofing System

#### Uses

**TufSeal CP 1** is an economical cementitious coating system designed for water proofing concrete against positive or negative hydrostatic water pressure in a wide variety of structures such as:

- Sewage treatment and water treatment plants
- Water tanks
- Concrete pipes
- Manholes

#### Typical Applications & Advantages

- Ensures a permanent waterproofing solution, by capillary action the products becomes an integral part of the structure. It cannot delaminate or debond.
- The capillary is reactivated on contact with water. If applied as a protective measure the crystals will only become active once water is present.
- Designed for use against positive (retaining) and negative (excluding) water pressure.
- Non toxic, provides protection against corrosive waterborne salts.
- Active protection for the life of the structure.

#### Standards Compliance

**TufSeal CP 1** complies with the requirements of the following standards:  
BS 6920:1996 Part 1

#### Product Description

**TufSeal CP 1** is cement based waterproofing system, which provides a permanent solution to water leakage, ingress or seepage in concrete structures or any cementitious substrates. Applied as a surface treatment, **TufSeal CP 1** provides a deep seal penetration and protects against fresh and salt water under pressure.

**TufSeal CP 1** penetrates into the pores of the substrate by capillary action and is channeled to the lower depths of the concrete by the moisture that is present, this occurs even in the smallest pores and capillaries. The reaction between moisture and the active **TufSeal CP 1** chemicals creates a continuous barrier of insoluble crystals. The crystal formation follows the water back as far as it is present in the structure. The capillaries

are permanently blocked to the passage of water however vapour may pass allowing the structure to breathe.

Rate and penetration of crystal formation depends on the presence of free lime and the density of the concrete. Old concrete may have no free lime present and these needs to be determined prior to application. Seek advice prior to waterproofing old structures.

**TufSeal CP 1** is applied as slurry directly to the concrete substrate. This is used for general waterproofing of tanks, tunnels, basements and reservoirs. It is also used in powder form on horizontal construction joints and pile caps. Repair uneven surfaces after the application of **TufSeal CP 1**.

#### Typical Properties

Density	: 1550 kg/m <sup>3</sup> @ 25±2°C
Appearance	: Grey powder

#### Technical Support

GIC provides a comprehensive technical support service to specifiers, end users and contractors and is able to offer on-site technical assistance.

#### Instructions for Use

**New construction:** In new construction water leakage normally only occurs at the construction joints. Costly resin injection work can be avoided by a slurry or powder application of **TufSeal CP 1** onto the joint surfaces prior to concreting.

**Pile caps and blinding concrete:** In areas of high water table or deep excavation **TufSeal CP 1** should be applied to the pile caps and blinding concrete. This will prevent premature water ingress into the excavation during the construction period. If required additional waterproofing can be applied to the foundation concrete after casting.

**Existing structures:** As with all repair programs the cause of the leakage must be determined. Dynamic cracks will required either injection





**TufBond**

and/or provision to be made for further movement.

**Surface Preparation:** Surfaces to be treated must be free from dust, dirt, oil, grease, paint, curing compound or any previous surface treatment that will impair adhesion or inhibit penetration of the system. Remove any laitance and provide an open pored slightly rough surface. Make good any areas of weak or unsound concrete. Dry concrete must be saturated for 24 hours prior to application. Surfaces should be damp at the time of application.

**Mixing:** Mixing should be carried out using a forced action mixer such as a Cretangle or similar. Add the **TufSeal CP 1** to the mixer and introduce clean water at the ratio of 1 part water to 2.25 - 2.50 parts **TufSeal CP 1** by volume. Thoroughly mix to achieve a brushable consistency. Mix only sufficient material that can be used in 20 minutes. Do not re-temper with water.

**Application:** **TufSeal CP 1** should be applied to the surface in contact with the water wherever possible. This will result in accelerated penetration and crystal formation. **TufSeal CP 1** should be applied to the damp, prepared substrate by brush or spray at the rate of 1.0 kg/m<sup>2</sup> per coat. Apply the slurry in two coats, the second at right angles to the first. Second coat application should be 3-4 hours after the first dependant on temperature. It is recommended that treated tanks and other water retaining structures are filled with water 24 hours after application of the second coat. Structures should remain filled for at least 7 days to facilitate crystal growth, which is accelerated by water pressure.

**Curing:** **TufSeal CP 1** should be prevented from drying out too rapidly and should be kept damp by mist spraying with water and covering with polyethylene for 5-7 days. Keep protected from weathering, sun and wind for a similar period. Curing compounds are not recommended.

### Packaging & Storage

**TufSeal CP 1** is supplied in 25 kg bags and it has a minimum shelf life of 12 months provided it is stored under cover, out of direct sunlight

### Health & Safety Precautions

**TufSeal CP 1** does not fall into the hazard classifications of current regulations. However, it should not be swallowed or allowed to come into contact with skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately – do not induce vomiting.

For further information refer to the Material Safety Data Sheet available for this product.

### Important note

GIC endeavors to ensure that the technical information contained herein is true, accurate and represents our best knowledge and experience. No warranty is given or implied, as GIC has no control over the conditions of use and the competence of any labor involved in the application are beyond our control.

**As all GIC technical data sheets are updated on a regular basis it is the customer's responsibility to check that the product is suitable for the intended application, and that the actual conditions of use are in accordance with those recommended.**

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