TufGrout 410 PHT

High Strength Impermeable Epoxy Grout for Pile Head Water Proofing

Uses

Used as a high performance non-shrink, solvent-free, free flowing epoxy grout where the mechanical properties, low permeability and chemical resistance of the hardened grout are of the highest order. Typical applications include:

- Heavy duty support to large structural elements.
- Supporting dynamic or mobile loads
- Pile head waterproofing

Typical Applications & Advantages

- Very low permeability ensures integrity as part of a waterproofing system
- Simple mixing followed by high early strength allows minimum down time and early commissioning of plant.
- Withstands attack by a wide range of chemicals, acids and alkalis, as well as water and frost.
- High compressive, flexural and tensile strengths ensure durability and long term service life.
- High flexural strength and adhesion to substrate ensures excellent performance under dynamic operating conditions.

Standard Compliance

TufGrout 410 PHT complies with the requirements of the following standards:
BS EN 12390 Part8 : 2000
ASTM C109-99
ASTM C307
BS 6319-90

Product Description

TufGrout 410 PHT solvent free epoxy resin grout is designed for grouting of gap widths of 20–150 mm. It is supplied as a three component system consisting of Part A, Part B & Part C. The components are supplied in the correct mix proportions designed for whole pack mixing on site and no other materials should be added.

Typical Properties

Appearance of Part A	**:** Clear viscous liquid
Appearance of Part B	: Brown liquid
Appearance of Part C	: Grey powder
Mixed density @25 ºC	: 2100 kg/m³

Compressive strength: >90 N/mm² (2days)	
Flexural strength	**:** 19 N/mm² (2 days)
Tensile strength	**:** 12 N/mm² (2 days)
Depth of water penetration	**:** Nil
Rapid chloride permeability	**:** Nil
Yield	**:** 14.3 litres

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

Concrete preparation and sealing: With all epoxy applications the quality of surface preparation has a direct effect on the performance and durability of the system. Concrete surfaces should be sound, dimensionally stable, clean, and free from laitance, paint, grease, mould release agent and residual curing compound. The concrete surface should be chipped so that large aggregate is exposed to ensure removal of all laitance and weak surface material. The concrete surface must be clean and dry when the grout is poured. The concrete areas to be grouted should not be primed or sealed.

Pile Top Treatment: Pile top surface should be chipped to reach pile cut off level to remove all loose and soft concrete. The chipped/broken pile top should be re-profiled to a horizontal surface by a suitable non-shrink repair mortar, before applying **TufGrout 410 PHT**.

Under plate Grouting: The unrestrained surface area of the grout must be kept to a minimum. Generally the gap between the perimeter form work and the plate edge should not exceed 75mm on the pouring side and 25mm on the opposite side. Form work on the flank sides should be kept tight to the plate edge. Air pressure relief holes should be provided to allow venting of any isolated high spots.

Formwork: The form work should be constructed to be leak proof as **TufGrout 410 PHT** is a free flow grout. This can be achieved by using form rubber strip or mastic sealant beneath the constructed formwork and between joints.

Foundation Surface: This must be free from oil, grease, or any loosely adherent material. If the concrete surface is defective or has laitance, it must be cut back to a sound base. Bolt holes or fixing pockets must be blown clean of any dirt or debris.

Mixing: The entire contents of Part B should be poured in to the base container and mixed until homogeneous. Place the mixed Part A and Part B into a forced action mixer making sure that the entire volume is poured in. Add Part C for 2 to 3 minutes until uniform color and consistency is achieved.

Placing: Place the grout within the pot life of the material. After this time, unused material would have stiffened and should be discarded. Continuous grout flow is essential. Sufficient grout must be available prior to starting and the time taken to pour a batch must be regulated to the time taken to prepare the next one. Pouring should be from one side of the void to eliminate air entrapment. The hydrostatic head must be maintained at all times so that a continuous grout front is achieved.

Watch Points

- Do not apply **TufGrout 410 PHT** when the contact surfaces are less than 10^0c. If the ambient temperature is less than 10^0c then artificial heating may be used.
- Grouts should not be placed in any unrestrained situation, i.e. base plate plinths, etc. Failure to comply may lead to crack development in the grout.
- For temperature above 35^0c, special procedures need to be adopted. Please consult GIC in this case.

Equipment Care

Clean all equipment promptly using suitable solvents and the cured material will have to be mechanically removed.

Packaging & Storage

TufGrout 410 PHT is available in factory, pre-weighed units of 30kg and it has a minimum shelf life of 12 months provided it is stored under cover, out of direct sunlight.

Health & Safety Precautions

TufGrout 410 PHT 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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TufBond

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