

TEKNODURE HS

Ultra-High Strength Grout

DESCRIPTION

TEKNODURE HS is a ultra-high strength grout based on a special blend of cement and polymers and hybrid admixtures to produce an extremely high performance grout. It is a single component product which is mixed with water to produce a shrinkage compensating grout with plasticising agents to produce an extremely fluid grout at a low water content. The product may be placed in critical load situations to provide exceptional structural support and resistance to dynamic loads. TEKNODURE HS is chloride free making it suitable for use in contact with steel reinforcement. The cured grout offers excellent resistance to the effects of freeze-thaw action due to its low water content it has low water absorption rates and is resistant to oil and sea water. The product maybe supplied in under water grade which consists of special anti-washout agents for placement under water.

USES

TEKNODURE HS is typically used in critical applications, including bridge bearings, critical load base plates, wind turbine bases, crane rail tracks and other applications where a grout with extremely high mechanical properties is required.

ADVANTAGES

- Extremely high compressive strength.
- Independently tested by UKAS Laboratory for compliance with D.o.T Highways Agency Spec. 2601 for "Bedding Mortars"
- Excellent flow characteristics
- Chloride free
- High Fluidity meaning it can be pumped or poured
- Good resistance to dynamic load.

Property	Value
Colour	Grey
Flexural Strength @ 20°C	5MPa @ 1 Day 6.5MPa @ 3 Days 9.2MPa @ 7 Days 10.3MPa @ 28 Days
Tensile Strength @ 20°C	3MPa @ 1 Day 6.5MPa @ 3 Days 8.5MPa @ 7 Days 9.5MPa @ 28 Days
Density	2260kg/ m ³
Compressive strength @ 20°C	35MPa @ 1 Day 65MPa @ 7 Days 80MPa @ 28 Days 92MPa @ 90 Days
Coefficient of Thermal Expansion	9 x 10 ⁻⁶ / °C
Compressive Modules	30 kN/m ²
Initial Set Time	165mins
Final Set Time	210mins

PROCEDURE

Surface Preparation: Formwork should be constructed around the area that is to be grouted. The form work should be created with a head to ensure that the grout will flow beneath the unit that is being grouted without any voids. Large base plates may require vent holes to be drilled at appropriate intervals to prevent the any trapped air which would result in voids forming beneath the base plate. The substrate should be thoroughly saturated with water prior to the application of



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the grout. This will ensure that the freshly placed grout remains fluid and excessive water suction does not occur. However, it is important to ensure that no surplus water is remaining prior to placement of the grout.

Mixing: TEKNODURE HS should be mixed with approximately 4.4ltrs of clean water per 20kg. The water should be added to a suitable mixing vessel before slowly adding the TEKNODURE HS powder to the water whilst continually mixing with a suitable paddle mixer. Care should be taken to ensure that the paddle mixer is set to a slow speed to prevent the grout from being mixed to fast which may result in loss of fluidity. The grout should be mixed until a uniform consistency is achieved. TEKNODURE HS may be mixed with a 6mm round aggregate to bulk out the grout for use in applications thicker than 100mm.

Application: TEKNODURE HS should be placed within 15 mins of mixing. Continues placement to a pre-saturated substrate is important pouring from just one side of the form work, to prevent any air entrapment occurring.

Curing: Exposed sections of TEKNODURE HS should be cured using PREMCRETE CUREAID 1000 in accordance with good concrete practice.

Equipment Cleaning: Clean tools and equipment immediately using clean water.

PACKAGING & COVERAGE

Pack Size: 20Kg pack

Yield: 20kg pack will yield approximately 12 litres of mixed grout.

STORAGE & SHELF LIFE

TEKNODURE HS should be stored in dry clean conditions between 8°C and 30°C. When stored in unopened bags Teknodure HS will have a shelf life of 12 months.

HEALTH & SAFETY

See separate material safety datasheet.



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www.premcrete.com | 02380 276166 |
sales@premcrete.com | 44 Macadam Way, West
Portway, Andover, Hampshire, SP10 3XW