TECHNICAL DATA SHEET

TEKNODURE TS-F

Rapid-Setting Thick-Section Cementitious Grout



PREMCRETE

TEKNODURE TS-F



UK CA

UK CONFORMITY

25 YEARS

PRODUCT WARRANTY

DESCRIPTION

TEKNODURE TS-F is a rapid setting, non-shrink, high-strength cementitious grout specifically developed for applications where rapid reinstatement and early return to service are critical.

The product possesses excellent flow characteristics, enabling the grout to penetrate voids effectively whilst providing high early strength development, zero shrinkage and no bleed characteristics. Once cured, TEKNODURE TS-F forms a durable, high-strength grout suitable for structural applications requiring rapid load transfer and dimensional stability.

The grout may be poured or pumped into position and is suitable for both internal and external applications, including environments subject to marine exposure and tidal conditions.

USES

TEKNODURE TS-F has been specifically designed for fast-track grouting and repair applications where high early strength is required.

Typical applications include:

- Anchor bolt fixing
- Base plate grouting
- Precast concrete unit installation
- Structural concrete repairs
- Bridge bearing grouting
- Crane rail grouting
- Machine base grouting
- Highway and airport repair works
- Marine and tidal zone applications
- Applications requiring rapid return to service

The grout develops excellent bond strength to both concrete and steel substrates and is suitable for use in demanding structural environments.

TEKNODURE TS-F

ADVANTAGES

- Rapid return to service
- High early strength development
- High ultimate compressive strength
- Non-shrink formulation
- No bled characteristics
- Chloride free
- Excellent bond to concrete and steel
- High flow properties
- Suitable for pumping or pouring
- Suitale for marine and tidal environments
- Can be bulked out with aggregate for deeper sections
- Suitable for structural applications

TECHNICAL & PERFORMANCE PROPERTIES

Property	Test Method	Value
Setting Time (Initial)	N/A	10 Minutes
Setting Time (Final)	N/A	15 Minutes
Water / Solid Ratio	N/A	0.15
Compressive Strength @ 1 Hour	N/A	12 MPa
Compressive Strength @ 1.5 Hours	N/A	20 MPa
Compressive Strength @ 2 Hours	N/A	25 MPa
Compressive Strength @ 24 Hours	N/A	40 MPa
Compressive Strength @ 7 Days	N/A	52 MPa
Compressive Strength @ 28 Days	N/A	70 MPa

INSTALLATION PROCEDURE

Surface Preparation

All surfaces to receive the grout should be structurally sound, clean and free from dust, dirt, oil, grease, laitance and any other contaminants that may impair bond performance.
Concrete substrates should ideally be saturated with clean water for several hours prior to grouting in order to minimise substrate suction. Any standing water should be removed immediately prior to grout placement.
Formwork should be watertight, adequately braced and capable of withstanding the hydrostatic pressure generated during grout placement.

Mixing

TEKNODURE TS-F should be mixed using cool, clean water.
For optimum results, mixing should be carried out using a high-shear grout mixer or a suitable paddle mixer drill.
One 25kg bag of TEKNODURE TS-F should be mixed with approximately 3.75 litres of clean water.
The powder should be added gradually to the water whilst mixing continuously until a smooth, fluid and homogeneous grout consistency is achieved.
Small quantities may be mixed by hand provided the water content is accurately measured.
Once mixed, the grout should not be re-tempered and additional water should not be added.

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Application

TEKNODURE TS-F may be placed by either pumping or pouring techniques.
Due to the rapid setting characteristics of the grout, placement operations should be carried out promptly following mixing, particularly during warm weather conditions.
For optimum results, grout should be placed immediately after mixing and maintained under sufficient head pressure to ensure complete filling of the void.
When using gravity placement techniques, a minimum hydrostatic head of 50mm is recommended.
The grout should be introduced from one side only wherever possible to minimise air entrapment and ensure complete displacement of air from the void.
For deep sections, TEKNODURE TS-F may be bulked out by up to 35% using clean 6–10mm aggregate.
The product may be placed at thicknesses between 20mm and 100mm as supplied. When bulked out with aggregate, sections up to 300mm may be achieved.

The minimum application thickness is:

- 20mm unfilled.
- 35mm when bulked out with aggregate.

Curing

Freshly placed grout should be protected from rapid drying, wind exposure and direct sunlight.
Exposed grout surfaces should be treated with a suitable wax-free curing compound immediately following placement. Where low temperatures are anticipated during early strength development, the grout should be protected using hessian, insulation blankets or other suitable protective materials.
For cold weather concreting operations, reference should be made to BS 8110 Part 1 Section 6.

Equipment Cleaning

All tools and equipment should be cleaned immediately after use using clean water.
Hardened material can only be removed by mechanical means.

PACKAGING & COVERAGE

Pack Size

TEKNODURE TS-F is supplied in nominal 25kg moisture-resistant bags.
The product is palletised and shrink wrapped for protection during transportation and storage.



Yield

One 25kg bag of TEKNODURE TS-F will produce approximately 12 litres of mixed grout.
Actual yield may vary slightly depending upon mixing efficiency and site conditions.

STORAGE & SHELF LIFE

Store in dry, cool conditions clear of the ground and protected from moisture.
Pallets should be stored under cover and stacked no more than two pallets high.
Stock should be rotated on a first-in, first-out basis. Store between 8°C and 30°C.
When stored in unopened original packaging under recommended conditions, TEKNODURE TS-F has a shelf life of 12 months from the date of manufacture.

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HEALTH & SAFETY

TEKNODURE TS-F contains Portland Cement and may contain trace levels of Chromium (VI), which may cause an allergic reaction in susceptible individuals.
Appropriate personal protective equipment including gloves, eye protection, protective clothing and dust masks should be worn during handling, mixing and application.
Avoid contact with skin and eyes.
In the event of contact with eyes, rinse immediately with plenty of clean water and seek medical advice.
Contaminated clothing should be removed immediately and washed before reuse.
Keep out of reach of children.
Refer to the separate Material Safety Data Sheet for full health and safety information.

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