TamCrete HF

High Flow, High Strength Cementitious Grout

CONSTRUCTION CHEMICALS

TECHNICAL DATA SHEET

DESCRIPTION

TamCrete HF is a non-shrink, cement based, which is specially formulated for use in critical grouting operations where positive expansion and non-staining characteristics are required. A high strength free flowing cementitious grout based on non-reactive aggregate, low alkaline shrinkage compensated Portland Cements with selected admixtures which produce a chloride-free grout. TamCrete HF contains a maximum size aggregate of 2 mm and is suitable for grouting thickness of between 5 mm and 75 mm.

KEY BENEFITS

- Exhibits controlled expansion and is non-shrink
- Excellent early compressive and flexural strengths
- Resistant to vibration and impact
- Material can be poured, pumped, vibrated or rodded.
- Excellent bond strength to both steel and concrete
- Requires only the addition of clean water
- Resistant to oil and water
- Excellent flowability and placement characteristics

TYPICAL APPLICATIONS

- Production of bridge bearing plinths
- Crane rail bedding and alignment
- Grouting of starter bars, holding down bolts etc.
- Bedding of pre-cast concrete beams
- Repairs to spalled and cracked concrete
- Grouting of machinery and turbines etc.

TECHNICAL DATA

TamCrete HF	
Compressive strength @ 24 hours @ 3 days @ 28 days	 30 MPa 55 MPa 70 MPa
Initial set	2 - 3 hours
Typical density	2150 - 2300 kg/m^3
Cement content	> 400 kg/m^2
Chloride content	< 0.1%
Free water/cement ratio 16 parts of water to 100 parts of TamCrete HF by weight	0.39
Expansion ASTMC827	0.3 - 1.0%
Flow trough DTp spec cl 2601 (6th edition)	450 mm in 6 sec
Flow cone DTp spec cl 2601 (7th edition)	30 - 40 sec
Note: Strengths based on 16 parts of water to 100 parts of TamCrete HF by weight.	

All technical data stated herein is based on tests carried out under laboratory conditions.

APPLICATION GUIDELINES

Surface Preparation

Surfaces should be clean and free from loose and unsound material. Oil and grease should be removed using a degreaser. Surfaces should be thoroughly wetted for a period of 2 hours and any surplus water removed before placement. Allow the surface to dry thus obtaining a saturated surface dry condition.

Mixing

Mixing may be carried out in a standard free fall type barrel mixer or pan type paddle mixer of a size suitable for the quantity to be prepared for use at one time. The mixing of part bags of materials is not recommended. The mixer should be of a type that will thoroughly mix the material and water without leaving residual, unmixed material or 'balling'.

- The contents of each bag of TamCrete HF requires mixing with clean water only, no other ingredients are required.
- The mixer drum should be clean and free from the remains of previous mixes.
- Thoroughly wet the inside of the mixer drum and drain off any excess water.
- Measure out a quantity of clean water into a suitable container, 18.0 - 19.2 parts of water to 100 parts of TamCrete HF by weight. Water ratio may vary depending on consistency required. Place two thirds of this in the mixer drum.
- With the mixer rotating, add full contents of dry mix to drum and allow to mix for 1 minute.
- Add remainder of water and allow to mix for up to 4 minutes depending on the type of mixer used.
- Pour mix into container(s) and allow to de-aerate for 2 - 3 minutes. Use mix as required.
- TamCrete HF may also be mixed into a trowelable consistency although the water addition is critical needing careful control. The addition rate is approximately 15.2 - 17.2 parts of water to 100 parts of TamCrete HF by weight.

Application Instructions

- The mixed material should be placed by pouring or pumping, remembering that flowability decreases with time and temperature. Always mix sufficient material to complete placing in one uninterrupted pour.
- Place the product from one side only so as to avoid entrapped air and ensure continual free flow of the material.
- When pumping, the addition of excess water is not necessary as this could cause segregation of the mix and inhibit pumping.

Low Temperature Working

Grouting should not take place in temperatures below 5°C unless steps have been taken to protect the grouted area in these conditions.

At temperatures below 10°C the TamCrete HF should be maintained in storage at 15°C to 20°C for a minimum of 24 hours and the mixing water should be between 20°C and 25°C.

Curing

The placed material must be cured immediately after finishing using good concrete practice. The preferred method is to apply TamCrete CCA directly onto the grouted area. If this is not possible then the grout should be protected with polythene sheeting which is taped down to form a draught proof area.

PACKAGING

TamCrete HF is supplied in 20 kg and 25 kg bags. Packaging size may vary subject to local regulations and requirements.

STORAGE

TamCrete HF should be stored at room temperature (min 10°C and max 38°C), kept dry and out of direct sunlight. If these conditions are maintained and the product packaging is unopened, then a shelf life of six months can be expected.

HEALTH & SAFETY

TamCrete HF should only be used as directed. We always recommend that the Safety Data Sheet (SDS) is carefully read prior to application of the material. Our recommendations for protective equipment should be strictly adhered to for your personal protection. The Safety Data Sheet is available upon request from your local Normet representative.