

Ultrafine Injection Cement

DESCRIPTION



TamCrete UFC range of ultrafine cements incorporate selected granulated blast furnace slag and Portland Cement as an activator. TamCrete UFC cements are ideally suited for permeation grouting into soils due to their fine particle size or injection into tight rock formations.

Our range includes:

UFC Fine: 95% PSD smaller than 16 μm , mainly used for grouting coarse sands and soils (0.63 - 2 mm) or tight rock formations.

UFC Ultra: 95% PSD smaller than 9.6 μm , mainly used for grouting medium sands and soils (0.2 - 0.63 mm).

UFC Xxtra: 95% PSD smaller than 6 μm , mainly used for grouting fine sands and soils (0.063 - 0.2 mm).

All our TamCrete UFC materials are quality assured by the Cement Industry Quality Assurance Scheme, independently monitored by the British Standards Institute (BSI QAS 2420/47).

Production and quality control in accordance to EN 197-2 and ISO 9001.

KEY BENEFITS

- › Standard cement injection equipment can be used
- › Superior penetration into soils
- › High stability
- › High resistance against chemical attack
- › Better working environment and no hazardous components
- › Durable
- › Economical solution

TYPICAL APPLICATIONS

- › Soil consolidation and stabilisation
- › Increasing soil bearing capacity
- › Rock fissure grouting
- › Forming water cut off barriers in soil
- › Concrete or masonry repair
- › Underpinning

TECHNICAL DATA

Product	UFC Fine	UFC Ultra	UFC Xxtra
Grain Density (kg/dm ³)	2.95	2.95	2.95
PSD d ₅₀	< 5	< 3.5	< 2.5
PSD d ₉₅	< 16	< 9.5	< 6
PSD d ₉₉	< 20	< 15	< 10

UFC Ultra available in slag or OPC grades.

Product	UFC Fine	UFC Ultra	UFC Xxtra
Slurry Density (kg/dm ³)	1.48	1.48	1.48
RunOut Time (sec/DM ₃) (Marsh Cone)	< 33	< 33	< 33
Bleeding, 2 hours (Vol-%)	2	2	2
CS, 3 days (MPa)	3	3	3
CS, 7 days (MPa)	13	13	10
CS, 28 days (MPa)	20	20	15

All technical data stated herein is based on tests carried out under laboratory conditions. Slurry was prepared with a high colloidal mixer (2 litre batches). All mix designs incorporated TamCem admixtures. For further information on specific UFC versions and mix design, please contact your local Normet representative.

Whilst any information and/or specification contained herein is to the best of our knowledge, true and accurate, we always recommend that a trial be carried out to confirm suitability of the product. Please note regional climatic conditions may cause a variation in the performance of the product. No warranty is given or implied in connection with any recommendations or suggestions made by us or our representatives, agents or distributors. The information in this data sheet is effective from the date shown and supersedes all previous data. Please check with your local Normet office to confirm that this is current issue.

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APPLICATION GUIDELINES

Mixing

Water/Cement ratio (by weight) shall normally be between 1.0 - 2.0.

- › Fill the mixer with water and superplasticizer.
- › Add Cement. Mix for 2 - 3 minutes.
- › Add HCA. Mix for 1 minute (if required).
- › Transfer to agitator tank ready for injection.

For efficient mixing and dispersion of TamCrete UFC, a high speed colloidal mixer is recommended. Minimum stirring rate shall be 1500 rpm. Note: Mixing time should be kept to a maximum of 4 minutes.

Pot Life

The mix shall be kept under constant agitation prior to injection. Do not keep grout in agitator for longer than 30 minutes, unless the open time has been extended accordingly with the use of TamCem HCA hydration control admixture.

Injection

The grout should be injected within 20 - 60 minutes. Longer open times can be achieved with TamCem HCA.

Hardening

TamCrete UFC will have set sufficiently after 2 hours gel time and 4 - 5 hours hardening time, subjected to ambient and water temperature.

PACKAGING

TamCrete UFC is supplied in 20 kg bags or 1000 kg bulker bags. Packaging size may vary subject to local regulations and requirements.

STORAGE

TamCrete UFC products should be stored at room temperature (min 10°C and max 45°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 UFC 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.