



Vetocrete FC803

High strength structural fine shotcrete

Uses

- It is ideal for large vertical and overhead structural repairs.
- It is used for supporting columns and beams.
- It is ideal for new construction projects.
- Ideal for the polystyrene sandwiching and paneling.

Product Description

Vetocrete FC803 is a single component polymer modified fibered cementitious structural repair fine shotcrete product applied pneumatically, ready to use, and only requires the addition of water on site. Once mixed, the product becomes a pumpable, sprayable fine concrete suitable for structural repair while being compatible with most concrete. Vetocrete FC803 is composed of a blend of hydraulic cement, carefully selected and graded aggregates, fibers, and special additives to give it its unique properties.

Advantages

- Easy to use, a single component product.
- High physical and mechanical properties.
- Extremely low permeability where it provides reinforcement protection against corrosion and resistance to ingress of contaminants.
- Non-Shrink properties ensure dimensional repair stability.
- Suitable for internal and external applications.
- It is breathable and compatible with host concrete.
- Thixotropic properties allow high build up in vertical and overhead repairs.
- Very low sag.

Standards Compliance

- ACI 506

Technical Data

Vetocrete FC803	Typical Values
Drying Shrinkage ASTM C157	0.006% @28 days
Water Penetration DIN 1048	<5 mm
Fresh Mixed Density	Approximately 2.0 kg/ltr
Compressive Strength ASTM C109	@ 1 day ≥ 15 MPa @ 3 days ≥ 35 MPa @ 28 days > 48 MPa
Flexural strength ASTM C580	> 6 MPa@ 28 days.
Tensile Strength ASTM C307	> 2.0 MPa @ 28 days
Rapid Chloride Permeability ASTM C1202	<500 Columbs
VOC Content ASTM D2369	<10 gm / Liter (LEED Compliant)

Usage Instructions

Surface Preparation

Cut back all damaged and weak concrete to reach sound concrete and/or to a minimum depth of at least 10mm.

Grit blasted corroded steel reinforcement to remove all rust traces. In case of significant loss in the steel reinforcement cross-section, replace the steel. Remove all concrete forms around the exposed steel reinforcements to a thickness of 25mm. Saw cut the perimeters of the repair area to a minimum depth of 10mm. Clean the prepared area thoroughly by using a brush and/or compressed air.

For new construction, prepare a steel reinforcement and pump the material until reaching the desired thickness. Use a suitable high to medium pressure pneumatic pump.

Priming

In repair work, and to accept Vetocrete FC803, prime all grit blasted steel reinforcements within 2 to 4 hours of application by applying one or two coats of corrosion inhibitor for steel reinforcement Vetoprime CP436.

Soak the areas to be repaired with Vetocrete FC803 with clean water before applying the repair mortar. Remove all excess water before the application, and apply one coat of acrylic bonding agent Vetobond AB432.

Allow Vetobond AB432 to become tacky before applying the repair mortar Vetocrete FC803.

For new construction, clean the substrate and steel reinforcement from dirt, rust, or anti-adhering materials.

Mixing

To ensure proper mixing, use a mechanically powered mixer or a drill fitted with a suitable paddle. Add 10-13 liters of clean water to a clean container. Then slowly add the powder to the water while mixing continuously with a low-speed mixer/drill (400-600 rpm). Continue mixing for 5 minutes until obtaining a uniform consistency.

For large quantities, use a large mechanical drum mixer. Add water to fill 2/3 of the mixer capacity. While mixing, add the powder and follow it by gradually adding the rest of the water until reaching the desired consistency.

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Placing and Finishing

Apply Vetocrete FC803 pneumatically using a suitable pump to ensure good adhesion with the steel reinforcements and the substrate. Initially, Finish and level the surface by using an aluminum rod or steel trowel. Use steel float for the final finishing.

Finish the applied material surface within one hour, as the material sets faster than regular concretes and mortar.

Curing

Vetocrete FC803 is a cementitious based material; therefore, cure it similarly to concrete by continuous watering and covering the surface with polyethylene sheets.

Cleaning

Clean all tools immediately after application by using freshwater. Clean hardened materials mechanically.

Limitations

Apply Vetocrete FC803 in a single application for sections up to 20mm thick in overhead applications

Packaging & Coverage

Product	Pack Size	Yield
Vetocrete FC803	50kg Bag	28 Liters

Stated consumption data are for general guidance. Actual consumption depends on the nature of substrate, method of application, and wastage.

Shelf Life & Storage

The original sealed bag of Vetocrete FC803 has a shelf life of 12 months, provided it is stored clear of the ground, in a dry and shaded temperature-controlled place, at temperatures between 5-35 °C.

Health & Safety

Vetocrete FC803 contains reins, which may cause sensitization by skin contact. Avoid contact with skin and eyes and inhalation of vapor. Wear suitable protective clothing, gloves, and eye/face protection. Barrier creams provide additional skin protection. Should accidental skin contact occur, remove immediately with a resin removing cream, followed by soap and water. Do not use solvent. In case of contact with the eye, rinse immediately with plenty of clean water, and seek medical advice. If swallowed, seek medical attention immediately. Do not induce vomiting. Vetocrete FC803 is non-flammable.