



ReforceTech MiniBars™

TECHNICAL DATA GUIDE

High performance FRP composite macrofiber for concrete reinforcement.

DESCRIPTION

ReforceTech MiniBars™ are trademarked and manufactured by ReforceTech™ AS and are distributed in North America by Phoscrete Corporation. These high-performance fiber-reinforced-polymer (FRP) composite macrofibers are based on an acid- and alkali-resistant glass or basalt fiber and engineered to provide high post-cracking strength to concrete while increasing toughness, impact, and fatigue resistance of concrete. ReforceTech MiniBars™ macrofibers can be used as secondary and/or as primary reinforcement. ReforceTech MiniBars™ fiber disperses quickly and evenly throughout the concrete matrix, due to their similar specific gravity to concrete. This promotes uniform performance throughout the concrete mass.



PROVEN APPLICATIONS

- ▶ Admixture for Phoscrete Formula 3 MPC Concrete Materials
- ▶ Blended in Phoscrete Formula 1-HC Dry Mix bags.
- ▶ MiniBars™ are designed to reduce or replace secondary and/or primary steel reinforcement in many structural applications requiring flexural tensile and post-crack performance (wall panels, pipes, water tanks, tunnel segments, marine structures, raft foundations, etc.)
- ▶ Can be used with ready mix concrete – contact Phoscrete for recommended MiniBar length and dosage for your application.

ADVANTAGES

- ▶ Improves post-cracking mechanical properties of concrete.
- ▶ Fast and uniform dispersion during mixing.
- ▶ Does not affect concrete pumpability when following recommended practices.
- ▶ Allows for high dosages with minimum effect on processability.
- ▶ Does not corrode.
- ▶ No additional water demands.
- ▶ Easy to handle.

TECHNICAL CHARACTERISTICS

- ▶ Material: AR Glass or Basalt + thermoset resin
- ▶ Fiber Length (mm): 24, 33, 43, 55
- ▶ Fiber Diameter: 0.70 mm
- ▶ Specific Gravity: 2.1
- ▶ Modulus of Elasticity: 43 GPa
- ▶ Tensile Strength: >1200 MPa

Packaging (24/33 mm)

Admix Bag: 0.275 lbs.

Bulk Box: 44 lbs.

Full Pallet: 12 boxes, 492 lbs.

Mixing

Add [1] MiniBar Admix bag into pail with Phoscrete Activator. Then add Dry Mix bag and mix until material is fully wetted out.

Always add liquid first. Do not extend with sand or aggregate.

Storage

Store in clean, dry conditions in unopened, original packaging.

Shelf Life

60 months
(When properly stored)

VOC Content

0 g/L: Less exempt solvents



MECHANICAL PERFORMANCE

The fundamental mechanical performance of fiber reinforced concrete can be obtained from a three-point bending test performed on a prismatic beam of 150×150×550mm (6×6×22in.) including a notch at mid-span (EN 14651). The displacement-controlled testing system introduces a specific deflection rate, and records load and displacement up to a CMOD limit of 3.5 mm (0.14 in). The fiber reinforced concrete performance is evaluated by means of residual flexural strength values at 0.5, 1.5, 2.5, and 3.5mm (0.02, 0.06, 0.10, and 0.14in.) of CMOD, namely fR1, fR2, fR3 and fR4, respectively.

According to the fib Model Code 2010, the constitutive law of the material in tension is defined by means of the tensile stresses fFts and fFtu, calculated from fR1 and fR3 for service and ultimate limit state, respectively.

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HEALTH, SAFETY, AND ENVIRONMENTAL

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