

FibreCrete®

Technical data sheet

1.0 Identification

FibreCrete – Fibre-reinforced concrete

Uniclass: Pr_20_31_16_68 Proprietary concretes Primary

CAWS: E10/132 Designed concrete

1.1 Product overview

Fibre-reinforced concrete that enhances tensile strength, reduces cracking, and improves durability.

Available in three variants:

- **FibreCrete Micro:** consists of non-structural synthetic fibres that comply fully with European and British standards. They are suitable for almost all conventional concrete mixes and applications.
- **FibreCrete Macro:** consists of structural fibres manufactured from high-strength, high-modulus synthetic plastic. This product is designed to replace welded mesh and light reinforcement bars in concrete applications.
- **FibreCrete Steel:** consists of structural steel fibres available in a range of grades, shapes and sizes to suit most concrete flooring applications. FibreCrete Steel improves tensile strength and delivers reliable performance in demanding environments.

1.2 Key benefits

- Minimizes plastic shrinkage cracking
- Reduces settlement and bleeding in deeper sections
- Enhances surface durability and finish quality
- Improves cohesion of fresh concrete for easier placement
- Provides greater flexural and shear strength
- Increases load capacity and ductility
- Offers superior abrasion resistance
- Improves fire resistance
- Supports potential CO₂ reduction through optimised reinforcement

1.3 Applications

FibreCrete can be used internally and externally as a replacement for steel mesh reinforced concrete. It is extremely versatile, and can be used in residential, industrial, commercial and agricultural projects.

Suitable for use in:

- Concrete slabs
- External paving
- Deep sections greater than 500 mm
- Strip footings
- Foundations
- Suspended floors
- Roof elements
- Large-scale industrial floors
- Lightweight structures
- Architecturally sensitive buildings
- Complex geometric elements
- Sprayed concrete applications
- Heavy-duty industrial paving
- Industrial ground-bearing slabs
- Jointless ground-bearing slabs
- Suspended slabs on piles
- Impermeable concrete slabs

2.0 Technical Data

2.1 Product overview

Colour: Grey

Finish: Smooth

Shape: Formless

Length / width / height: Bespoke

2.2 Standards and Accreditations

RMC producer third party accreditation: Currently certified by a body accredited by UKAS (PAS 2080)

Third party accreditation: Proof that the concrete conforms to Quality Scheme for Ready-Mixed Concrete (QSRMC).

Standards: to BS EN 206 and BS 8500, fibres to BS EN 14889

2.3 Specification data

Structural Fibres: to BS 14889

Compressive Strength, 28 days - BS EN 12390-3:
Specify requirements

Compressive Strength class: any

Flexural strength, 28 days - BS EN 12390-5:
Specify if required

Density - BS EN 12390-7:

Normal Weight to EN 206 (2000-2600kg/m³)

Consistency class: As required by contractor, suggested minimum S3 to ensure compaction

Workability period: Specified to BS 8500-1

Aggregates nominal size (max): Dmax 10mm or 20mm

Aggregates colour: Specify if required

Aggregates texture: Specify if required

Use of recycled aggregates: Permitted, compliant with BS8500 requirements

Source of recycled aggregates: BS EN 12620 Compliant

Binder: Manufacturer's standard

Reaction to fire - BS EN 13501-1: Non-combustible

3.0 Sustainability

Contains Red List materials: No

Primary country of material origin: United Kingdom

Country of product manufacture: United Kingdom

A1-A3 Production stage: A1-A3 GWP Data provided upon request

Recyclability As defined in BS EN ISO 14021: 100% recyclable

Expected Life: To specified BS8500 Design Life

Macro fibre reinforcement has been shown to reduce the embodied carbon associated with reinforcement by as much as 90% when compared to A-Grade mesh.

EPD available: Yes, contact

concrete.technical@heidelbergmaterials.com

4.0 Installation procedures

Minimum depth: Project specific, typically >100mm

Maximum depth: na

Follow standard concrete site practice.

Further information

enquiries@uk.heidelbergmaterials.com