

PowerCrete®

Technical data sheet

1.0 Identification

PowerCrete – Heat-conducting concrete

Uniclass: Pr_20_31_16_68 Proprietary concretes Primary

CAWS: E10/132 Designed concrete

1.1 Product overview

High-performance, heat-conducting concrete alternative for bedding and infill in high voltage and ultra-high voltage cable installations.

1.2 Key benefits

- Offers superior thermal conductivity enabling efficient heat dissipation
- Reduces magnetic field strength
- Increases power capacity
- Supports smaller conductor sizes
- Allows use of aluminium conductors
- Helps prevent hot-spots
- Provides an upgrade over traditional backfill materials

1.3 Applications

For use within the energy sector, improving the efficiency of power cables by effectively dissipating heat.

Suitable for use in:

- On/off-shore wind
- Solar farms
- Nuclear power plants
- Data centres
- Substations
- Battery storage facilities
- Subsurface power infrastructure

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: ENA TS 97-1 compliant

2.3 Specification data

Thermal resistivity 0.35 (K.m)/W
Thermal conductivity: >2.5 W/(m.K)
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:
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, <20% imported by volume
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 Live
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