

## EnviroCrete Ironwork Bedding Mortar

### Rapid Setting Mortar

#### Description


A pre-packed shrinkage compensated, cementitious bedding mortar characterised by its rapid strength gain which enables work to be carried out with the minimum of disruption. Ideally suited for the bedding and raising of manhole frames, fixing of street furniture and as a general purpose rapid setting repair mortar. Envirocrete Ironwork Bedding Mortar has been designed to comply with the requirements of EN1504 Part 3 Class R4.

#### Advantages

- Rapid setting characteristics.
- Low water/cement ratio.
- Shrinkage compensated.
- Excellent adhesion to dense concrete and steel.
- Simple to use, only requires the addition of clean water.
- Excellent workability and finishing properties.
- May be used down to 0°C.
- Resistant to freeze/thaw cycle.
- Free from chloride additives.
- Low chromate (Cr (VI) <2ppm).
- Manufactured under BSI QA Scheme, ISO 9001, EN29001.
- Complies with HD27/04 Chapter 3 part 11.

#### Applications

- Bedding and raising of manhole frames.
- Fixing of street furniture.
- Rapid setting of posts, railings, lamp standards.
- High strength repair mortar
- Bedding for copings.

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EN 1504—3 Concrete repair product for structural repair CC Mortar (based on hydraulic cement)	
Compressive strength	Class R4 (>45 MPa)
Chloride ion content	≤0.05%
Adhesive bond strength	>2.0 MPa
Adhesion after freeze/thaw (50 cycles with salt)	>2.0 MPa
Elastic modulus	>20 GPa
Reaction to fire	Class A1
Dangerous substrates	Complies with 5.4

#### Technical Information

Water addition	2.2-2.6 litres per 25kg pack					
Density	2350 kg/m <sup>3</sup> Yield					
Yield	Approximately 12 litres per 25kg pack					
Maximum aggregate size	4mm					
Temp	Usable Life	Compressive Strength, MPa				
20°C	12 Mins	1 hour	2 hours	4 hours	1 day	7 days
		8	30	40	50	65

Tested in accordance with EN12190.

## Technical Properties of Eviocrete Bedding Mortar.

Properties	Standard	Performance Requirement	Declared Value
Appearance			Grey Powder
Mixing water			2.2-2.85 Litres per 25kg
Chloride-ion content	EN1015-17	≤ 0.05%	≤ 0.05%
Maximum aggregate size			4mm
Water/cement ratio			0.36 @2.85 Litres per 25kg
Cement content			>600kg/m <sup>3</sup>
Layer minimum thickness			10mm
Density			Approx. 2350 kg/m <sup>3</sup>
Working time			10-15 Minutes
Temperature for application			3°C to 35°C
Compressive Strength @ 2.5 Litres per Pack	EN 12190	≥ 45 MPa	8 MPa @ 1 Hour 30 MPa@ 2 Hour 40 MPa@ 4 Hour 50 MPa@ 24 Hour
Tensile Strength	EN12390-6		>3.0 MPa
Flexural Strength	BS6319-3		10 MPa
Modulus of Elasticity, In Flexure	BS6319-3		>20 GPa
Modulus of Elasticity, In Compression	EN13412	≥ 20 GPa	> 20 GPa
Adhesion - Concrete	EN1542	≥ 2.0 MPa	> 2.0 MPa
Adhesion after freeze/thaw (50 cycles with salt)	EN13687-1	≥ 2.0 MPa	> 2.0 MPa
Adhesion after thunder shower (30 cycles)	EN13687-2	≥ 2.0 MPa	> 2.0 MPa
Adhesion after dry cycling (30 cycles)	EN13687-4	≥ 2.0 MPa	> 2.0 MPa
Skid Resistance	EN13036-4		Class 1
Carbonation resistance	EN13295	dk ≤ ref. concrete	dk ≤ ref. concrete
Capillary absorption	EN13057	≤ 0.5 kg/m <sup>2</sup> /Hr <sup>0.5</sup>	≤ 0.5 kg/m <sup>2</sup> /Hr <sup>0.5</sup>

Technical data shown are statistical and do not correspond to guaranteed minima.

Tolerances are those described in appropriate performance standards.

1 N/mm<sup>2</sup> = 1 MPa

1 kN/mm<sup>2</sup> = 1 MGPa

## Surface Preparation

The substrate must be clean and sound, hence all grease, oil, dust and laitance must be removed by scarifying. Thoroughly moisten surface but ensure no free water remains.

## Mixing & Placement

Envirocrete Ironworks Bedding Mortar should be mixed using a forced action mixer. The mixing drum should be pre-wetted and any remaining water drained away. Add the water to the mixing drum and gradually add all of the powder component whilst the drum is turning. Continue mixing for two minutes to produce a hydrated and cohesive mortar which is ready for immediate use.

Place the mixed mortar to the desired thickness, allowing for compaction and bed the component. Minimum bed thickness 10mm. Finish as required and clean all equipment immediately with water.

## Packaging

Envirocrete Ironworks Bedding Mortar is available in 25kg units.

## Storage

Envirocrete Ironworks Bedding Mortar should be stored in cool, dry conditions and protected from damp.

## Health & Safety

Envirocrete Ironworks Bedding Mortar does not present any undue hazard and is non-toxic. However, as it is alkaline, gloves should be worn and any material should be washed from the skin and eyes before it dries with clean water.

The normal standards of hygiene should be observed and the use of a barrier cream is advisable.

## Limitations

The minimum application thickness should be 10mm. Minimum application temperature is 3°C. For low temperature applications ensure the substrate has not frozen. Please contact PDS technical department for advice.

## Technical Support

Through our technical department and laboratories we can offer a comprehensive service to specifiers and contractors. Technical representatives are available to provide further information and arrange demonstrations.

