

# ENVIROCRETE Ironwork Bedding Mortar

## Rapid Setting Ironwork Bedding 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 repair mortar. Envirocrete 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) <2 ppm)
- Manufactured under BSI QA Scheme, ISO 9001, EN 29001
- 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, etc.
- High strength repair mortar
- Bedding for copings

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Pipeline & Drainage Systems Limited, 361-365 Coleford Road, Darnall, Sheffield, S9 5NF, UK 13 - 086-CPD-594215	
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 substances	Complies with 5.4

### Technical Information

Water addition	2.2-2.85 litres per 25k g pack
Density	2350 kg/m <sup>3</sup>
Yield	Approx. 12 litres per 25k g pack
Maximum aggregate size	4 mm

Temp	Usable life (min)	Compressive Strength, MPa					
		1 hour	2 hour	4 hour	1 day	7 day	28 day
20°C	12	13	24	32	41	61	72

Tested in accordance with EN12190



## Technical properties of Envirocrete Ironwork Bedding Mortar

Properties	Standard	Performance Requirement	Declared Value
Appearance			Grey Powder
Mixing water			2.2-2.85 litres per 25 kg
Chloride-ion content	EN1015-17	≤0.05 %	≤0.05 %
Maximum aggregate size			4 mm
Water/cement ratio			0.36 @2.85 litres per 25 kg
Cement content			>600 kg/m <sup>3</sup>
Layer minimum thickness			10 mm
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	13 MPa @ 1 hour 24 MPa @ 2 hours 32 MPa @ 4 hours 41 MPa @ 24 hours 61 MPa @ 7 days 72 MPa @ 28 days
Tensile strength	EN 12390-6		>3.0 MPa
Flexural strength	BS 6319-3		10 MPa
Modulus of elasticity, In flexure	BS 6319-3		>20 GPa
Modulus of elasticity, In compression	EN 13412	≥20 GPa	> 20 GPa
Adhesion to concrete	EN 1542	≥2.0 MPa	> 2.0 MPa
Adhesion after freeze/thaw (50 cycles with salt)	EN 13687-1	≥2.0 MPa	> 2.0 MPa
Adhesion after thunder shower (30 cycles)	EN 13687-2	≥2.0 MPa	> 2.0 MPa
Adhesion after dry cycling (30 cycles)	EN1 3687-4	≥2.0 MPa	> 2.0 MPa
Skid resistance	EN 13036-4		Class 1
Carbonation resistance	EN 13295	$d_k \leq \text{ref. concrete}$	$d_k \leq \text{ref. concrete}$
Capillary absorption	EN 13057	$\leq 0.5 \text{ kg/m}^2/\text{h}^{0.5}$	$\leq 0.5 \text{ kg/m}^2/\text{h}^{0.5}$
Cracking tendency	Coutinho Ring Test		No cracking after 180 days

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

Tolerances are those described in appropriate performance standards.

$$1 \text{ N/mm}^2 = 1 \text{ MPa}$$

## Surface Preparation

The substrate must be clean and sound, hence all grease, oil, dust and laitance must be removed by scarifying. The edges of the repair must be recessed at least 10 mm. Thoroughly moisten surface but ensure no free water remains.

## Mixing & Placement

Envirocrete Ironwork 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 Ironwork Bedding Mortar is available in 25 kg units.

## Storage

Shelf life of Envirocrete Ironwork Bedding Mortar is 6 months when stored in cool dry conditions and in sealed packaging.

## Health & Safety

Product Safety Data Sheets (SDS) are available from PDS. SDS sheets are provided to help customers satisfy their safe handling, use and disposal needs as well as assist with any conformance requirements made locally by health and safety regulations.

SDS are continually updated to provide the very latest information to our customers. We therefore recommend contacting our head office to obtain the most recent and accurate SDS before handling and using any product.

## Disclaimer

The information contained herein is to the best of our knowledge true and accurate and is given in good faith but without warranty. The user will be deemed to have satisfied themselves independently as to the suitability of our products for their own particular purpose. In no event shall PDS be liable for consequential or incidental damages.

Users must always refer to the most recent issue of the Technical Datasheets, copies of which will be supplied on request.

## Limitations

If applying at 3°C or below 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.