



Envirobed HA104®

High Performance Bedding Mortar

Applications

Ultracrete Envirobed HA104®, (part of the Ultracrete BBA/HAPAS Approved Ironwork Reinstatement System), specifically formulated for the bedding of ductile ironwork conforming to the Highways Agency Design Manual for Roads and Bridges: Mortars for Bedding Ironwork, HA104/02, part 5, clause 6.1 and is particularly suitable for use in wet weather conditions. With superior compressive, tensile and flexural strengths reached after just 3 hours. Ultracrete Envirobed HA104® provides all the performance but none of the environmental hazards of traditional resinous materials, such as hazardous waste disposal.

Technical

Ultracrete Envirobed HA104® is supplied as a two-component system which contains a blend of special cements, polymer graded aggregates and recycled glass. The combined components provide a high performance mortar, which can accommodate depths of 10-50mm in one pass. If necessary, greater depths can be achieved by using the layer-upon-layer method.

Preparation

All surfaces should be free from oil, grease, dust or any other visible contaminants. Remove all loose particles and work on a sound substrate. Pre-soak the area with clean water prior to application to aid bond. Remove ponded water before applying the product.

Mixing

Ultracrete Envirobed can be mixed by a forced action mixer or by drill and paddle.

Mixing by drill and paddle: When mixing with a drill and paddle, we recommend that a mortar mixing paddle is used with a slow speed drill (around 300-400rpm), using a wide based mixing vessel such as a 'Gorilla' tub to give optimum performance, which will allow for the product to be worked on rapidly for at least 3 minutes. Note: Insufficient mixing will seriously reduce the performance of the product.

Mechanical Mixing: Pour contents of liquid bottle into mixing tub, leaving a small amount in bottle as indicated. Mix for 2 minutes, check consistency and add remainder of liquid if needed. This allows a change in consistency without affecting performance.

Placing

Apply the high performance bedding material over a pre-soaked area. Once mixed, Ultracrete Envirobed HA104® should be applied to the supporting structure within 4 minutes. Firm well into position using a float and allowing a 5mm excess thickness. Place the frame onto the bedding mortar ensuring it is fully supported. Check that the frame does not overhang the mortar at any point (use suitable lifting equipment when positioning the frame). Care must be taken to prevent voids in the bedding material under the frame, especially in the cover seating area. The frame should then be tamped into place ensuring the correct level is obtained. Any holes within the frame should be in-filled and the flanges of the frame enveloped by a minimum thickness of 10mm of the bedding material. Exposed surfaces of the bedding material should be float finished, ensuring voids are filled. Remove loose materials and point the inside surface to a smooth finish. Once the bedding material has reached its initial set, the backfill material Ultracrete QC10 concrete can be placed.

Cleaning

Ultracrete Envirobed HA104® should be removed from tools and equipment with clean water immediately after use. Cured material can also be removed mechanically.



Features & Benefits

- Part of the Ultracrete BBA/HAPAS Approved Ironwork Reinstatement System
- Can be used in wet weather conditions
- Contains recycled glass
- Can be used at temperatures as low as 1°C
- Environmentally friendly no requirement for hazardous waste disposal
- Can accommodate depths from 10-50mm in one pass
- Conforms to the Department of Transport Design for Roads & Bridges: Mortars for Bedding Ironwork, HA104/02
- Early tensile strengths provide significant resistance to heavy trafficking (5.8 N/mm² tensile strength after 3 hours)



Related Products

- Ultracrete PY4 Polyester Resin Fast Setting Bedding Mortar
- Ultracrete M60 Rapid Strength Bedding Mortar
- Ultracrete QC10 Fast Set Rapid Strength Concrete
- Ultracrete SCJ Spray Applied Bitumen Cold Joint Sealer
- Ultracrete IRR Cold Lay Macadam

continued



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Physical Properties

Test Age	Compressive Strength* (N/mm ²)	Tensile Strength* (N/mm ²)	Flexural Strength* (N/mm ²)
1 hour	30.0	3.30	–
3 hours	50.0	5.80	9.80
24 hours	55.0	6.40	11.4
7 days	63.0	6.90	12.6
28 days	65.0	7.10	13.8
Bond Strength	3.50		
Workability	15 minutes *		
Setting time	30 minutes *		

*Depending on temperatures – test carried out at 20°C. Cool temperatures retard, warm temperatures accelerate product performance.

Design Manual for Roads & Bridges – Volume 4, Section 2
Complies with Highways Agency Document HA104/02 Part 6.1, HA104/02 Chamber Tops & Gully Tops for Road Drainage and Services.
Which States:
The material should be non-shrink.
The materials should have a minimum workable life of 15 minutes.
The compressive strength should exceed 30N/mm² in 3 hours.
The tensile strength should exceed 5N/mm² in 3 hours.

Health & Safety

Operatives should wear protective clothing and work in well-ventilated conditions. This product contains Portland cement which, when mixed with liquid is alkaline and may in some cases cause skin irritation. If product enters the eyes, wash thoroughly with water and seek medical advice. In common with all powder products, the material should be mixed carefully, avoiding the raising of dust. For a full updated Material Safety Data Sheet please visit www.instarmac.co.uk

Product Details

Unit/Packaging	20kg paper bag & 2.5L plastic bottle or 18kg plastic tub containing 2x 8kg powder and 2x 1L liquid. These are delivered on shrink-wrapped pallets
Storage	Ultracrete Envirobed HA104[®] bag & container: Store in closed original bags at temperatures between 5°C and 30°C. Avoid frost and sunlight. This product must be stored in unopened bags, clear of the ground in cool dry conditions and protected from excessive drafts. If stored correctly and used within 6 months of the date shown on the bag, the activity of the reducing agent will be maintained and this product will contain, when mixed with water, no more than 0.0002% (2 ppm) soluble Chromium (VI) of the total dry weight of the cement. Ultracrete Envirobed HA104[®] liquid additive: Store in closed original containers at temperatures between 5°C and 25°C. Protect from frost & sunlight
Shelf Life	6 months in above conditions. Please note: The use of this product after the end of the declared storage period may increase the risk of an allergic reaction. High temperatures and high humidity will lead to a reduced shelf life
Density	2298kg/m ³
Coverage	Approximately 1 x 400mm x 400mm Standard Ironwork Cover and Frame @ 20mm, dependant on bed depth, brickwork and substrate.
Yield	Bag and bottle: 9.86 litres, 102 bags/m ³ for the two component pack Plastic container: 8 litre for the entire unit
Colour	Light Grey

Contact Us

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