CALPLUG MORTAR

TECHNICAL DATA SHEET

USES

For the filling of tie-holes formed by formwork bolts in new construction, particularly where a rapid setting, durable, waterproof mortar is required. Can also be used for sealing grout holes and voids around fixings in pre-cast elements as well as general concrete repairs.

ADVANTAGES

USER FRIENDLY:	Materials are pre-packaged and only require mixing with clean water on site.
LOW SHRINKAGE:	Maintains high bond strength to substrate and ensures monolithic performance of the repair.
RAPID SETTING:	Sets in 30 minutes at 20°C, yielding a durable, high strength mortar.
WATERPROOF:	Can withstand 10bar pressure after 72 hours curing.
POLYMER MODIFIED:	Ensures enhanced adhesion and low permeability, giving excellent protection from acid gases, moisture ingress and chlorides.
INNOVATIVE:	Incorporates the latest proven cement chemistry, polymer and fibre technology.
FIBRE REINFORCED:	Improved tensile and impact strength. Excellent low sag properties.
SAFE:	Non-toxic when cured.

DESCRIPTION

Calplug Mortar is a single component, polymer modified, fibre reinforced, Portland cement-based repair compound, which exhibits unique hydraulic properties to produce a rapid curing mortar with enhanced polymer properties.

The product is supplied as a single component system requiring only the addition of clean water to give a rapid setting, yet durable high strength mortar. It is ideally suited for the filling of voids particularly in new construction which need to be rapidly put into service, such as tie-holes, grout holes and voids around fixings.

TECHNICAL DATA

Mixed Colour:	Concrete Grey
Mixed Density:	2150kg/m³
Minimum Application Thickness:	5mm
Maximum Application Thickness:	50mm in vertical and soffit situations
Minimum Application Temperature:	5°C
Maximum Application Temperature:	35°C
Working Life:	20 minutes at 20°C
Bond Strength (BS 6319: Part 4)-Slant Shear Method:	
28 Days	51.0N/mm²
Water Permeability:	
8.75mm of Calplug Mortar = 100mm of typical concrete	

COMPRESSIVE STRENGTH AT 20°C

1 hour	8.5N/mm²
2 hours	15.0N/mm²
4 hours	25.0N/mm²
1 day	39.5N/mm²
7 days	51.0N/mm²
28 days	59.5N/mm²

CE 0086

EN1504-3: Concrete repair product for structural repair
PCC mortar (based on hydraulic cement polymer modified)

Compressive Strength:	Class R4 ≥ 45 MPa
Adhesive Bond:	Class R4 ≥ 2.0 MPa
Chloride Ion Content:	≤ 0.05%
Carbonation Resistance:	Passes
Elastic Modulas:	R4 ≥ 20 GPa
Thermal Capability Part 1:	Class R4 ≥ 2.0 MPa
Capillary Absorption:	≤ 0.5 kg.m^{-2}.h$^{-0.5}$
Dangerous Substances:	Complies with 5.4
Reaction to Fire:	Euroclass A2-s1,d0

APPLICATION & PREPARATION

The areas to be repaired must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth. Smooth surfaces should be roughened, all loose material and surface laitance removed.

Calplug Mortar does not use a separate primer system. It is only necessary to ensure the hole/repair area is thoroughly saturated with clean water, removing any excess surface water prior to filling or commencing a repair. If the concrete to be treated is new (hours old), use warm water to prevent thermal shock.

For the treatment of tie-holes formed by through-ties, any remaining plastic tube should be cut back and removed to approximately 40-50mm from the concrete face. Additionally, to eliminate the possibility of water tracking around the plastic tubes, a CalSealed Collar should be placed around the centre of each tube when installing the tube.

MIXING

Mix only sufficient Calplug Mortar as can be used within the working life of the material. Using the mixing scoop provided, proportion the material using the guide mix ratios as follows, an 8kg pack requires 850ml of clean water:

Initial Mixing Ratio
Calplug Mortar:water 9.4:1 by weight
Calplug Mortar:water 6:1 by volume

Always add powder to water. Small quantities, i.e. less than 2kg, can be mixed by hand. Larger quantities should be mechanically mixed in a clean drum using a slow speed drill and paddle. A normal mixer is NOT suitable. Mix together thoroughly for 1-2 minutes to produce a cohesive thixotropic mortar. If necessary, when volume batching, the consistency can be adjusted by the minimum addition of extra powder or water. Use without delay.

PLACING

For normal applications, Calplug Mortar should be compacted, using a placing technique to remove entrapped air, in layers not exceeding 50mm in vertical or soffit situations, or 100mm deep in pockets. For repairs which require multi-layer applications it is important to ensure that the previous layers are well keyed and stable but not fully set (usually 30-45 minutes dependent upon temperature) prior to the application of subsequent layers.

CURING

Calplug Mortar used in small repairs does not normally require curing, however, for large repairs, screeds, or its use in hot climatic conditions, normal concrete curing techniques are recommended, i.e. damp hessian or white polythene sheet.
All tools should be cleaner with water immediately after use.

PACKAGING AND TRANSPORT

Calplug Mortar is supplied in 8kg tubs.
Yield is 4 litres per 8kg pack.
Not Regulated for Road Transport.

STORAGE AND HANDLING

Calplug Mortar in manufacturer's sealed tubs requires no special storage facilities. Shelf life is 12 months in dry, frost free conditions with unopened containers at 20°C.

HEALTH & SAFETY

Refer to separate material safety data sheet. Copies available by request.

Cementaid (UK) Ltd
1 Baird Close
Crawley
West Sussex
RH10 9SY

T: 01293 653900
F: 01293 447880
W: www.cementaid.co.uk
E: info@cementaid.co.uk
CR: 2769568