

# Drybase Universal Mortar

## Product Description

**Drybase Universal Mortar** is a cementitious, ready-mixed waterproofing and repair mortar.

**Drybase Universal Mortar** is applied in layers of 6 to 12 mm thickness in one working cycle. This material is substantially resistant to abrasion and de-icing salt. Due to its composition, based on cement, graded quartz sand, and selected additives, **Drybase Universal Mortar** is waterproof. It is durable and resistant to frost after setting, and at the same time vapour permeable. **Drybase Universal Mortar** is tested for use in contact with drinking water.



### Accreditation



EN 1504-3:2005/ZA.1a

## Areas of Application

- Substrates: concrete, masonry and natural stonework
- Repairs, levelling and reprofiling
- Fillets for wall-floor junctions
- Drinking water structures

## Benefits

- For use against positive or negative water pressure
- Horizontal and vertical surfaces, including overhead
- Resistant to frost and de-icing salts
- Use for external applications

## Coverage

Approx. 2 kg/m<sup>2</sup> **Drybase Universal Mortar** is required to produce a layer thickness of 1 mm.

Type of water impact	Recommended overall application rate	Total layer thickness (approx.)
Pressureless water	12 – 16 kg/m <sup>2</sup>	6 – 8 mm
Water under pressure	16 – 24 kg/m <sup>2</sup>	8 – 12 mm

## Application Information

### Preparation

#### Concrete Substrates

The substrate to be treated must be sound and even, open pored, roughened and its surface free from voids, large cracks or ridges. Any adhesion reducing substances like bitumen, oil, grease, remains of paint or laitance must be removed by suitable means, such as sandblasting, scabbling etc. Construction joints and shrinkage cracks exceeding 0.3 mm should be routed out to a minimum depth of 20 mm. Shutter tie holes should be roughened.

Water leaks must be stopped with Drybase Waterproof Plug. Thoroughly moisten the substrate. It must be damp but not wet at the time of application. Any surface water on horizontal surfaces must be removed.

#### Brick and Blockwork Substrates

Any remaining plaster, render or other substances that could inhibit bonding must be removed back to the substrate. Gypsum, remains of wood or other foreign material should be removed by appropriate means. Loose pointing must be routed out and the substrate cleaned thoroughly.

Water leaks must be stopped using Drybase Waterproof plug. thoroughly moisten the substrate. It must be damp but not wet at the time of application.

Any surface water on horizontal surfaces must be removed.

### Mixing

Mix 25 kg of **Drybase Universal Mortar** with 3 – 4 litres of tap water in a clean container for at least 3 minutes to a lump-free, homogeneous consistency. Use a mechanical mixer.

## Application

**Drybase Universal Mortar** is applied with trowel or suitable spray equipment.

Apply a minimum of 6 mm (approx. 12 kg/m<sup>2</sup>) and a maximum of 12 mm (approx. 24 kg/m<sup>2</sup>) in one working cycle.

For small areas such as coves, fillets, local repairs and shutter tie holes **Drybase Universal Mortar** may be applied in layer thicknesses exceeding the above value.

Pour **Drybase Universal Mortar** over horizontal surface, then compact and strike off. After initial hardening it can be trowelled or given a 'brushed' finish to provide a non-skid quality.

Apply **Drybase Universal Mortar** to vertical surfaces like normal render. If several coats are required it is recommended to apply the next coat whilst the previous coat is still damp at the surface.

The waiting time before applying the following coat depends on local climatic conditions such as humidity, temperature, etc.

The previous coat must be textured by suitable means (such as a soft brush) whilst still plastic to form a key.

To maintain workability of the material do not add water, simply re-stir the mixture.

Do not apply at temperatures below 5 °C, or to a frozen substrate.

## Trowel Application

Apply a scratch coat first for maximum adhesion to the substrate. Ensure that all cavities in the substrate are filled in order to exclude any trapped air.

## Spray Application

**Drybase Universal Mortar** can be applied with a suitable mortar spraying device.

For maximum spray pattern it should be possible to adjust volume of product as well as air pressure and volume. The nozzle diameter is approx. 10 mm.

The first layer of Drybase is applied in a circular motion with the spray nozzle held at a 90° angle to the substrate. The material is then flattened and trowelled or keyed for a further layer.

## Curing

Keep damp for at least 5 days and provide suitable protection against extreme weather conditions (e.g. sun, wind, frost) while setting. The freshly treated surfaces should be protected from rain for a minimum period of 24 hours.

## Plastering/Coating

Surfaces treated with Drybase products which are to be coated or painted should be left to cure for 4 weeks. When a plaster or render finish is required on top of a Drybase treatment it is essential to apply a rough cast of sand and cement on the final Drybase coat while it is still tacky. On hardened Drybase surfaces apply an appropriate bonding agent, such as SBR before rendering. Coatings on top of a Drybase treatment have to be alkali resistant. Decorative coatings applied on the negative water pressure side should be water vapour permeable.

## Properties

All data is averaged from several tests under laboratory conditions. In practice, climatic variations such as temperature, humidity, and porosity of substrate may affect these values.

<b>Appearance</b>	Grey Powder
<b>Size(s) &amp; Packaging</b>	25 kg PE-lined paper bag
<b>Storage</b>	Store in a dry place
<b>Shelf Life</b>	12 months in unopened, undamaged original packaging
<b>Aggregate size d<sub>max</sub></b>	2 mm
<b>Density of wet mix</b>	Approx. 2.1 kg/l
<b>Workability at 20 °C</b>	Approx. 45 min
<b>Setting time at 20 °C</b>	Approx. 5 – 6 h
<b>Compressive strength 28 d</b>	Approx. 40 MPa
<b>Bending tensile strength 28 d</b>	Approx. 6 MPa
<b>Static modulus of elasticity 28 d</b>	Approx. 24 GPa
<b>Capillary absorption</b>	0.08 kg/m <sup>2</sup> ·h <sup>0.5</sup>

## Technical Data

<b>Compressive strength</b>	class R3 ≥ 25 MPa	
<b>Chloride ion content</b>	≤ 0.05 %	
<b>Adhesive bond</b>	≥ 2.0 MPa	
<b>Carbonation resistance</b>	passed	
<b>Modulus of elasticity</b>	≥ 20 GPa	
<b>Reaction to fire</b>	class A1	
<b>Dangerous substances</b>	complies with 5.4	
<b>Thermal compatibility</b>	Part 1: Freeze thaw with de-icing salt immersion	≥ 2.0 MPa
	Part 4: Dry thermal cycling	≥ 2.0 MPa
<b>Capillary absorption</b>	≤ 0.5 kg/m <sup>2</sup> ·h <sup>0.5</sup>	

## Other Information

For health and safety information see the Safety Datasheet (available upon request).

**Drybase Tanking Slurry** has been tested in accordance with:  
EN 1504-3:2005/ZA.1a  
CC repair mortar for structural repair  
(based on hydraulic cement)

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