Drybase® Crystalline Active Slurry

Product Description

Drybase® Crystalline Active Slurry is a cementitious, ready mixed, in-depth waterproofer for concrete surfaces only. It consists of grey Portland cement, specially treated quartz sand and a compound of active chemicals.

When **Drybase® Crystalline Active Slurry** is applied to a concrete surface the active chemicals combine with the free lime and moisture present in the capillary tract, to form insoluble crystalline complexes. These crystals block the capillaries and minor shrinkage cracks in the concrete to prevent any further water ingress (even under pressure).

Drybase® Crystalline Active Slurry is tested for use in contact with drinking water.

Accreditation	
CE EN 1504-3:2005/ZA.1a	BBA APPROVAL INSPECTION TESTING CERTIFICATION CERTIFICATE 18/5549

For use as a Type A system, in compliance with:

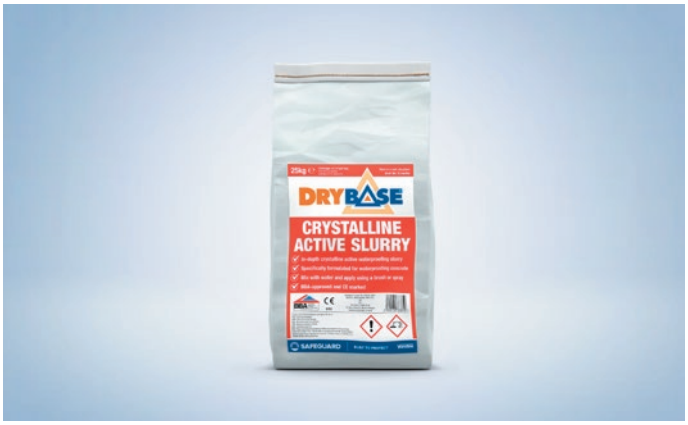
- BS8102
- NHBC Chapter 5.4

Areas of Application

- Concrete substrates
- Basements / below ground structures
- Foundations, slabs, retaining walls etc.
- Drinking water structures
- Sewage treatment plants
- Swimming pools

Benefits

- In depth waterproofing and protection slurry
- Permanently active
- For positive and negative water pressure
- Approved for drinking water structures
- BBA approved



Coverage

Structural Element	Type of Impact	Type of Application	Coverage
Concrete slab	Positive or negative water pressure	Dry sprinkle, brush or spray in 1 coat	1.2 kg/m²
Concrete slab	Moisture/no water pressure	Brush or spray in 1 coat	0.8 kg/m²
Concrete walls	Positive or negative water pressure	Brush or spray in 2 coats	1.5 kg/m² (2 × 0.75kg/m²)
Construction joints (horizontal and / or vertical)	Water pressure	Brush in 1 coat	1.5 kg/m²

Substrate and application conditions have to be observed. Depending on surface roughness, consumption may vary.

Application Information

Preparation

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 have to be removed by suitable means, such as sand blasting, 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 e.g. with Drybase® Waterproof Plug.

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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. Make localised repairs using Drybase® Universal Mortar.

Mixing

Mix by volume 5 parts of **Drybase® Crystalline Active Slurry** with approx. 2 parts of tap water (25 kg + approx. 7 – 8.5 litres water) in a clean container for at least 3 minutes to a lump-free, homogeneous consistency of thick oil paint. Use a mechanical mixer.

Application

Drybase® Crystalline Active Slurry is applied with brush, suitable spray equipment or by dry sprinkling.

Brush Application

Ensure that all cavities in the substrate are filled. Apply in alternate directions, vertically from bottom-up, then horizontally.

Spray Application

Drybase® Crystalline Active Slurry can be applied with a suitable fine 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. 4 mm. The first layer of **Drybase® Crystalline Active Slurry** is applied in circular motion with the spray nozzle held at a 90° angle to the substrate. The final layer can be left as a spray finish or for further advice refer to the section on 'Plastering/Coating'.

Apply subsequent coat whilst previous coat is still damp at the surface. The waiting time before applying the following coat depends on local climate conditions such as humidity, temperature, etc. The previous coat must not be damaged during application of the following coat.

Mix only as much material as can be used within 20 minutes and stir the mixture frequently.

If the mixture starts to set do not add more water, simply re-stir to restore workability.

Dry Sprinkle and Power Trowel Application

The concrete is poured and vibrated and as usual. The concrete should reach initial set and be able to take the weight of person, leaving imprints no deeper than 2 mm. There should be no surface water. The specified amount of **Drybase® Crystalline Active Slurry** is dry-distributed by hand using a sieve (mesh size of 1 mm) or by suitable spreader on to the concrete surface. The powder is then hand or power trowelled into the substrate until coverage is uniform.

Dry Sprinkle Application on Blinding Concrete

The blinding concrete is poured and screeded as usual. The layer thickness should be a minimum of 10 cm. The **Drybase® Crystalline Active Slurry** is applied just before pouring the concrete. It is sprinkled dry over the surface with a sieve, such as a flour type mesh of 1 mm or by suitable spreader onto the concrete surface. The concrete slab is poured and vibrated as usual.

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

Curing

Drybase® Crystalline Active Slurry is cement-based and will cure and harden in the same way as ordinary concrete. Setting and hardening will depend on the surrounding temperature and humidity. The freshly treated surface should be protected from rain for a minimum period of 24 hours. Keep damp for at least 5 days and provide suitable protection against extreme weather conditions (e.g. sun, wind, frost) while setting. Careful post watering should be carried out at intervals, starting the day following the application. Alternatively, the surfaces can be covered with plastic sheeting, wet mats or moist sand.

If necessary, cover with insulation mats in cold conditions.

In enclosed spaces and deep pits, suitable air circulation should be provided for 24 hours following the **Drybase® Crystalline Active Slurry** treatment.

The use of curing compounds is not recommended.

Backfilling

Backfilling can be carried out 3 days after completion of the Drybase® treatment.

Plastering/Coating

Surfaces treated with Drybase® products which are to be coated or painted should be left to cure for 4 weeks.

At the end of the curing period, prior to the application of coatings or paints, the surfaces should be saturated with water and neutralised with diluted hydrochloric acid (1:8 / approx. 3.5 %). Observe precautionary measures. Following this, the area must be thoroughly rinsed with water

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When a plaster or render finish is required on top of **Drybase® Crystalline Active Slurry** treatment, it is essential to apply a rough cast of sand and cement on the final **Drybase® Crystalline Active Slurry** coat while it is still tacky.

On hardened **Drybase® Crystalline Active Slurry** surfaces apply an appropriate bonding agent before rendering such as Drybase® SBR (not PVA)

Coatings on top of a **Drybase® Crystalline Active Slurry** treatment have to be alkali resistant. Decorative coatings are recommended to be water vapour permeable.

Filling of Water Retaining Structures

Filling can take place when the surface treatment has hardened sufficiently, usually not less than 14 days after application. However, if earlier filling is specifically required, filling may be considered after not less than 7 days, provided the surface is thoroughly checked for hardness.

A careful cleaning and disinfection prior to the first operation is essential. Observe national laws and regulations.

Additional Information

Drybase® Crystalline Active Slurry is not a decorative surface. Discolouration of the treated surface may occur as a result of chemical reactions. This does not detract from the waterproofing performance.

Properties

Appearance	Grey Powder	
Packaging	25 kg PE-lined paper bag	
Storage	Keep in dry conditions in unopened, undamaged original packaging	
Shelf Life	12 months	
Workability at 20 °C	approx. 30 min	
Setting time at 20 °C	approx. 1 – 2 h	
Compressive strength	class R3 ≥ 25 MPa	
Chloride ion content	≤ 0.05%	
Adhesive bond	≥ 0.8 MPa	
Carbonation resistance passed	no performance determined	
Modulus of elasticity	≥ 20 GPa	
Reaction to fire	class A1	
Dangerous substances	complies with 5.4	
Thermal compatibility	Part 4: Dry thermal cycling	≥ 0.8 MPa
Capillary absorption	≤ 0.5 kg/m²·h^{0,5}	

Other Information

Product Application guide also available.

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

Drybase® Crystalline Active Slurry is produced in accordance with ISO 9001 and ISO 14001 quality and environmental management systems.

EN 1504-3:2005/ZA.1a
CC fine mortar for non-structural repair
(based on hydraulic cement)

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