



## HYDROPHOBIX CONCENTRATE

Whitson's Hydrophobix has been specifically developed for use as a water-repellent agent for lime-based finishes. Due to special modifications, it also offers far superior stain resistance and stain release properties when compared to typical water-repellent agents sold for use with lime plasters (see Performance Testing below). Treated surfaces exhibit long lasting water-repellent and oil-repellent properties, without altering the water vapour permeability of the substrate. This makes Hydrophobix ideal for both interior and exterior protection, and is particularly suited for the preservation of finishes in showers and wet rooms.

Where the very best stain resistance is required, we recommend the use of Whitson's Hydrophobix Extra. Please note that this product is supplied as a concentrate, so must be diluted as instructed prior to use. Where smaller areas are to be treated, we suggest you consider using our pre-diluted product Whitson's Hydrophobix Ready to Use.

### PREPARATION

For long lasting water and oil repellancy, it is essential that the substrate is fully dry before the application of Hydrophobix. The properties imparted by Hydrophobix are a result of a chemical reaction which will only occur with completely dry plaster. For this reason, plaster to be treated should be allowed to dry for at least three days before application of Hydrophobix. Please remember that where there is poor airflow or high humidity, plaster will take longer to fully dry. Where a moisture resistant backing board has been used, the drying of the plaster will be further retarded, and this must be considered when determining drying time.

### APPLICATION

Dilute 1 Part Hydrophobix Concentrate with 8 Parts Clean Tap Water by volume and mix well. In hard water areas we recommend that distilled or deionised water is used. The product can then be applied by brush, roller or spray. During application, ensure the product is spread uniformly over the surface. To ensure the best performance, the product should be applied in two or three wet-on-wet layers to make sure that the surface is fully treated. The total recommended application quantity is 250g/m<sup>2</sup>, however this will vary substantially depending on porosity of the substrate. We suggest that the product is applied from the bottom of the wall, working up to avoid splashing on untreated plaster. During application, avoid runs and pooling on the surface. Do not allow the product to come into

contact with any other surface other than that being treated as this may cause damage.

The water and oil repellent properties will develop over the next 48 hours. During this time, it is essential that the surface is not exposed to any liquids or elevated humidity. Ensure good ventilation whilst drying.

After the Hydrophobix has been allowed to dry fully, the rest of the chosen Top Coat system can be applied, ensuring the best aesthetic and functional finish.

### PHYSICAL PROPERTIES

Colour:	Transparent
Finish:	Slight Sheen
Specific Gravity:	1.000
Theoretical Spreading Rate:	250g/m <sup>2</sup> * 4m <sup>2</sup> /litre*
Flash Point:	n/a
VOC:	<0.01g/litre

\*Spreading rate is quoted in diluted form, and will vary substantially depending on the porosity of the substrate

### CLEANING

All equipment should be cleaned immediately after use with water.

It is advisable that equipment should be cleaned/flushed during the course of application, the frequency of which will depend on the volume of material used and timescale over which applied. Ensure all waste materials (including packaging) are disposed of in accordance with local regulations.

#### STORAGE

Store in a cool dry place and out of reach of children.  
Keep away from extremes of temperature.  
Shelf life 12 months in unopened packs.

#### HEALTH, SAFETY & ENVIRONMENTAL

Use only in accordance with the Material Safety Data Sheet supplied by Whitson's.  
Ensure good ventilation during application and drying.  
Avoid contact with eyes and skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of contact with skin, wash immediately with plenty of soap and water (do

not use any solvents). When sanding avoid inhalation of dust and wear a suitable face mask.

The user must observe local health, safety and environmental regulations when using this product.

#### DISCLAIMER

It is the responsibility of the user to test the product on the intended surface to ensure it is suitable for their requirements.

All orders are accepted subject to our Standard Terms and Conditions of Sale which can be viewed on our website.

## PERFORMANCE TESTING

### Sample Preparation

A sample of un-tinted (white) Tadelakt was applied to a substrate and allowed to dry for three days. After this, the substrate was divided into sections, and each treated as follows:

Section A – Untreated

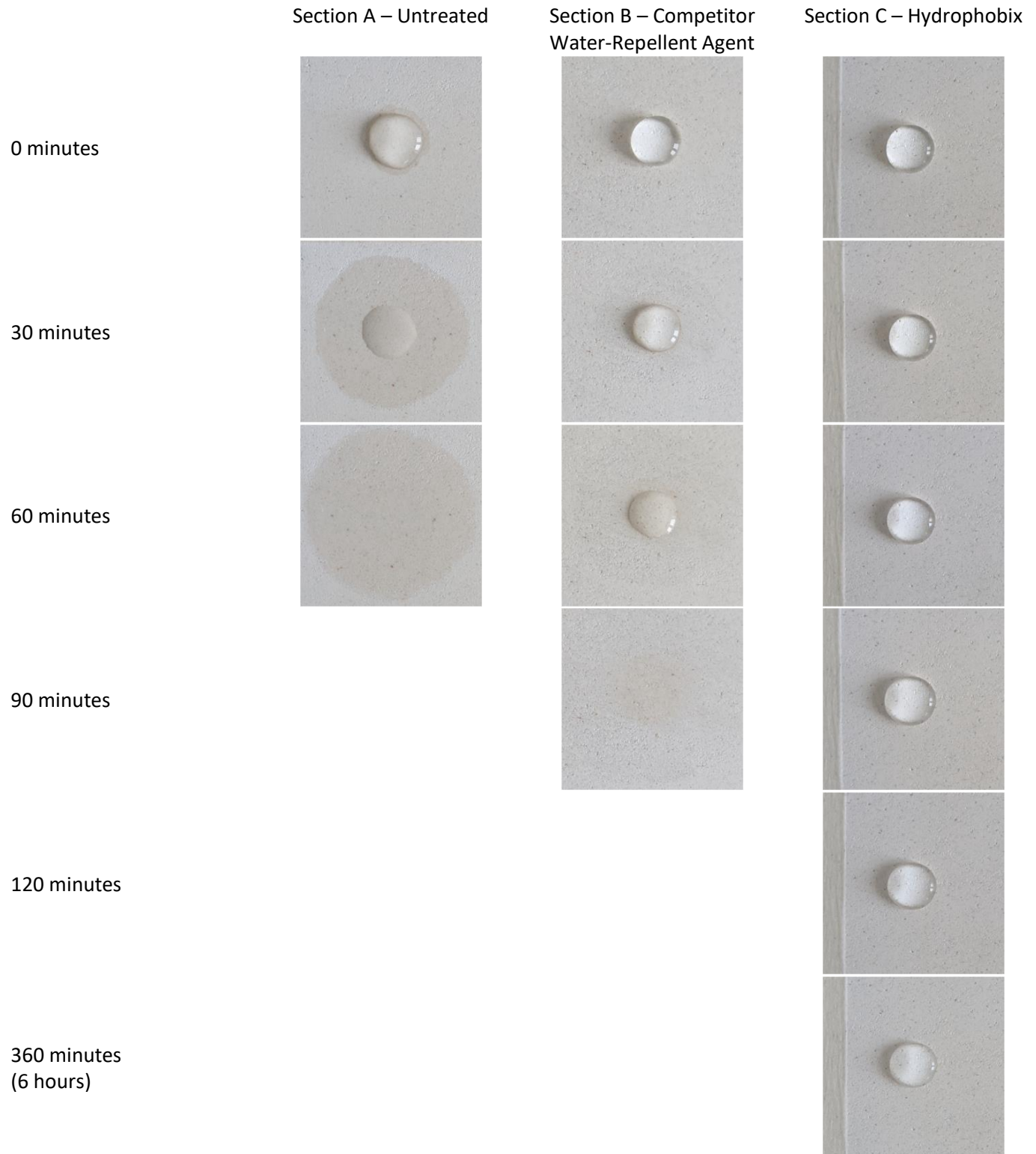
Section B – Competitor Water-Repellent Agent

Section C – Hydrophobix

Both the Competitor Water-Repellent Agent and Hydrophobix were brush applied in two wet-on-wet layers at a total rate of 250g/m<sup>2</sup> each. During application of the agents, the substrate was placed vertically so that there was no pooling of the agents. The samples were then allowed to dry for five days.

## Water Repellency

The substrate was placed horizontally, and 0.5ml of water applied by pipette to each of the three sections. Photographs of the samples were then taken every 30 minutes for 6 hours or until the water had been completely absorbed by the substrate.



On Section A (Untreated) there is penetration of the substrate by water almost immediately, with complete absorption within 60 minutes.

On Section B (Competitor Water-Repellent Agent) there is penetration of the substrate by water within 30 minutes, with complete absorption within 90 minutes.

On Section C (Hydrophobix) there is zero penetration of the substrate by water over the full test time of 6 hours.

## Stain Resistance

The substrate was placed horizontally, and the following applied by pipette to each of the three sections:

Coffee

Tomato Ketchup

Red Wine

Balsamic Vinegar

Olive Oil

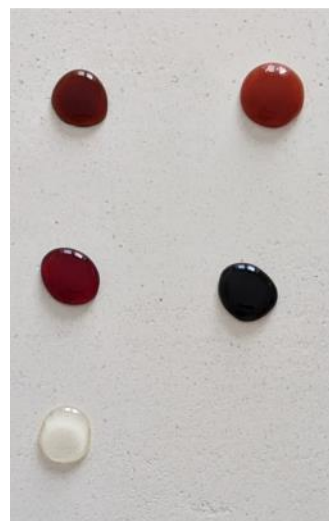
Immediately After Stain Application



Section A  
Untreated

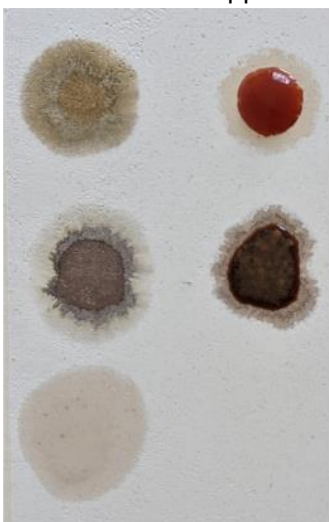


Section B  
Competitor Water-Repellent Agent

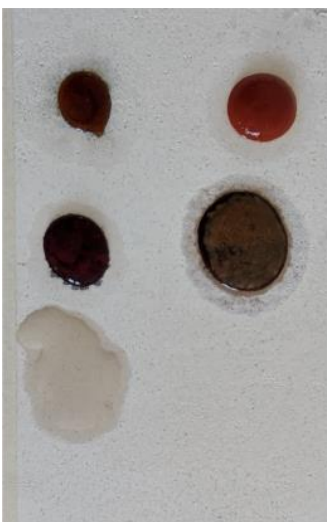


Section C  
Hydrophobix

30 Minutes After Stain Application



Section A  
Untreated



Section B  
Competitor Water-Repellent Agent

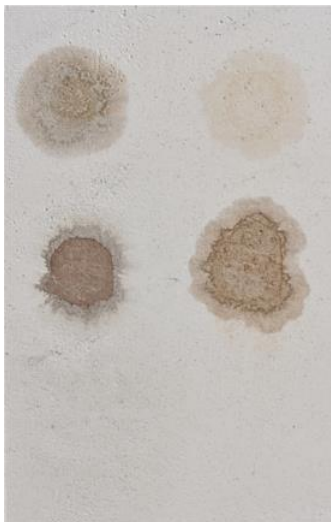


Section C  
Hydrophobix

After 30 minutes exposure, it is clearly visible that there is a substantial reduction in the uptake of all stain agents in Section C where Hydrophobix was used.

The remnants of each test stain were then pipetted off the substrate, and each of the sections wiped with a damp cloth. The substrate was then allowed to dry overnight before further comparison was made.

24 Hours After Stain Removal



Section A  
Untreated



Section B  
Competitor Water-Repellent Agent



Section C  
Hydrophobix

Colour measurements were recorded by spectrophotometer from each stained area so that accurate comparisons could be made. The results can be found below. Note that where stain resistance was made worse, the difference is highlighted in red, whereas where stain resistance was improved, the difference is highlighted in green:

Treatment	Stain	Change vs Untreated Surface
Competitor Water-Repellent Agent	Coffee	6.91% Increased Staining
Competitor Water-Repellent Agent	Tomato Ketchup	23.19% Reduced Staining
Competitor Water-Repellent Agent	Red Wine	1.02% Increased Staining
Competitor Water-Repellent Agent	Balsamic Vinegar	3.64% Increased Staining
Competitor Water-Repellent Agent	Olive Oil	64.15% Increased Staining
Hydrophobix	Coffee	55.29% Reduced Staining
Hydrophobix	Tomato Ketchup	60.99% Reduced Staining
Hydrophobix	Red Wine	32.88% Reduced Staining
Hydrophobix	Balsamic Vinegar	44.86% Reduced Staining
Hydrophobix	Olive Oil	95.48% Reduced Staining

As can be seen, the Competitor Water-Repellent Agent actually made stain resistance worse with coffee, red wine, balsamic vinegar and olive oil.

Hydrophobix offered substantial improvements in stain resistance in all instances.