

AQUASHIELD Ultimate

An innovative water repellent superhydrophobizing product based on the latest nanotechnology (lotus effect), for facades and other vertical substrates. It offers higher additional water repellency to facade construction products. AQUASHIELD Ultimate prevents water absorption from porous substrates and is suitable for both internal and external applications. Due to its highly innovative composition the substrate benefits from full breathability as well as from a natural appearance. It also protects against major diseases caused by the action of water and moisture (efflorescence, leaks, growth of microorganisms or premature deterioration of building materials). AQUASHIELD Ultimate is invisible with no additional brightness, modification to tone, or colour. Surfaces are kept clean for longer as the product allows the facade to self-clean. AQUASHIELD Ultimate is highly resistant against UV rays and may be applied as often as desired without prior cleaning off of previous applications.



Mixing

Ready to use - do not dilute.

Application

Apply under dry, frost-free weather conditions. Apply by suitable (airless) spray application device, brush or roller. Application by spray gun is the most efficient and economical method due to the optimal and fast distribution of the product over large surfaces. Apply in either a single layer containing the recommended total amount of product (see TOTAL-ml/m²), or in two layers, each layer using the recommended dosage per application (see PER APPLICATION-ml/m²). Two coats of product are preferable to obtain optimal results. The minimum period of time between both applications is 2 hours. For optimal results it is recommended to divide the surface to be treated into smaller sections. Apply AQUASHIELD Ultimate at the same distance from the surface and at a constant velocity, to prevent lump formation. The optimum effect will be achieved after a full drying time of 24 hours. The application of the product must be carried out in a well-ventilated area. AQUASHIELD Ultimate contains Isopropanol - a volatile solvent.

Benefits

- Does not alter appearance or texture of substrate
- No film formation on the surface
- Allows self-cleaning of facades
- Allows the substrate to breathe
- Compatible with all mineral substrates
- Total resistance against UV radiation
- Easy application
- Prevents growth of moss, algae and mildew
- No dilution required
- Over 10 years durability

Substrate

Suitable for application onto all mineral based facade substrates i.e. lime/cement based renders, natural hydraulic lime based renders, marble, limestone, granite, ceramics, sandstone, brick, concrete, alabaster and gypsum.

Preparation

Ensure substrates are dry prior to application. Detergents and cleaning products must be completely removed. The surface must be completely clean (dust, solid particles, etc.) and dried before application. SHAKE THE CONTAINER BEFORE USE. It is recommended to repair fissures and cracks before treatment.

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Practical Advice

The high water repellent effect shown from the first time (superhydrophobicity – contact angle of the water drops with the surface > 150°) decreases in those surfaces exposed to continuous abrasion, particularly in wet conditions, although protection against water is still maintained.

It is advisable to perform an initial test on painted surfaces to avoid discoloration caused by the solvent in the product.

Possible future applications of water-based paints, reconstructions with different mortars or other products on the treated surfaces may be affected by the hydrophobic effect.

This product is not suitable for medical or pharmaceutical use.

Disposal Considerations

Disposal: P501 Dispose of contents/container according to the local, regional, national and international directives. Removal of substances: Proper disposal according to state and local regulations on environmental protection. Empty containers should be disposed of via a licensed waste officer.

Storage

When stored in the original sealed containers at temperatures between 5°C and 30°C, the product has a shelf life of 12 months. Avoid exposure to direct sunlight and keep away from heat and open flames and avoid freezing. The contents may settle, thus shake well before use.

Certification

UNE-N 15802: Static Contact Angle
 UNE-E 772-11: Liquid water absorption by capillary
 UNE-EN 15803: Water vapour permeability
 Accelerated Aging

Video Demonstrations

<https://www.youtube.com/watch?v=eoWt1Vbtvj0>

<https://www.youtube.com/watch?v=dHBKjIXnaN8>

Safety

The product is a nanoparticle isopropanol-based dispersion treated with active agents. Before using this product, read the Tecnan Material Safety Data Sheet (available from SMET) for further detailed information. Use PPE, goggles, gloves and protecting cream. Do not ingest. Labelling according to European Directive 67/548/EEC as amended. Pictograms of danger: F Highly flammable; Xi Irritant.

Risk Phrases:

R 11 Highly flammable.
 R 36 Irritating to eyes.
 R 67 Vapours may cause drowsiness and dizziness.

Safety Phrases:

S 7 Keep container tightly closed.
 S 16 Keep away from flame or spark source. No smoking.
 S 24/25 Avoid contact with skin and eyes.
 S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Hazard Statements:

H225 Highly flammable liquid and vapour.
 H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.

Precautionary Statements:

Note: The information corresponding to the precautionary statements are based on manufacturer's judgment following the instructions on the Regulation (EC) No 1272/2008 (CLP).

Prevention: P210 Keep away from heat/sparks/open flames/hot surfaces.- No smoking.

Response: P303+361+353 IF ON SKIN (or hair): Remove/ Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P304+340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage: P403+233 Store in a well-ventilated place. Keep container tightly closed.

Disposal: P501 Dispose of contents/container according to the local, regional, national and international directives.

Approx. application depending on the substrate porosity:

MATERIAL	PER APPLICATION (ml/m ²)	TOTAL (ml/m ²)	TOTAL (m ² /litre)
Marble and low porous limestone, terrazzo, polished concrete	62 - 75	125 - 150	6.7 - 8
Granite, brick, non-polished concrete, tiles	100 - 125	200 - 250	4 - 5
Sandstone, high porous concrete, high porous limestone	150 - 200	300 - 400	2.5 - 3.3

Technical Information

Dilution	none required
Colour	Clear
Active ingredients	<3%wt
Volatile Organic Content (VOC)	>80%
Density	0.79 g/ml
Viscosity	5 cP
Boiling Point	82.5°C
Flash Point	11.85°C
Solvent	Isopropanol
Amount per application	aprox. 100 - 250 ml/m ² (depending on the porosity of the substrate)
Complete drying time	24 hours
Operating temperature	between 5 and 30 °C is recommended; not exposed to direct sunlight
Storage temperature	between 5 and 30 °C; protected from direct sunlight, store in original container tightly closed
Tools and Cleaning	It is important to keep the equipment in good conditions, avoiding saturated or clogged nozzles (clean even after an application).
Packaging	Available in 1, 5 and 25L containers