AQUASHIELD ACTIVE
Hydrophobic and antimicrobial product based on nanoparticles for porous building materials

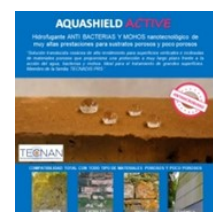|	
Product description	**Hydrophobic product and inhibitor of microorganisms (such as bacteria, mould, moss, etc.)** based on nanoparticles of very high-performance. **Transparent, non-visible, breathable, high-performance protector**, mainly designed to protect porous and low porous building materials from the action of water in facades and other vertical surfaces.
Uses	The active compound that produces the water repellency are ceramic nanoparticles dispersed in an organic media (isopropanol), therefore **AQUASHIELD ACTIVE** is compatible with any porous building material. Designed to be applied as a water repellent by means of surface treatment on all types of porous surfaces, with special application on **natural stone** (marble, slate, granite, limestone, sandstone). Also suitable for the protection of concrete, facing brick, prefabricated, monolayer mortars, etc. Used as a facade protector in restoration, rehabilitation and new construction. CONCRETE BRICK STONE CERAMIC
Features and advantages	▪ It reduces the absorption and accumulation of water on the treated surface as well as the proliferation of microorganisms and moss, preventing/delaying their growth on the treated surface. ▪ It does not form film, does not cross-link**,** allowing the complete breathability of the substrate. ▪ Fully transparent, respecting the natural colour of the original material. ▪ Total UV resistance. ▪ Unlike most conventional products, it allows for complete re-application without the need to remove previous product remains. ▪ The active compounds do not react with the treated surface, keeping the substrate unaltered. ▪ Thanks to its high water repellency and its limiting effect on the growth of bacteria, moulds and moss, it keeps surfaces cleaner for longer than if they were untreated. Treated surfaces must have been cleaned and all fungi, bacteria, lichen, etc. must have been removed beforehand.
Product information. Composition and physicochemical properties.	▪ **Colour:** translucent pinkish liquid**.** ▪ **Packaging:** 1L, 5L and 25L (larger volumes on request) ▪ **Storage:** 12 months from the date of manufacture in the original sealed containers at temperatures between 5°C and 30°C. ▪ **Volatile Organic Content (VOC)** >80% wt ▪ **Density:** 0,79 g/ml ▪ **Viscosity:** 5 cP ▪ **Boiling point:** 82,5°C ▪ **Flash point:** 11,85°C ▪ **Solvent:** Isopropanol

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![TECNAN logo] TECNAN TECNOLOGÍA NAVARRA DE NANOPRODUCTOS, S.L.	**DATA SHEET**	**Version: nº4** **Edition: 11/03/2022**

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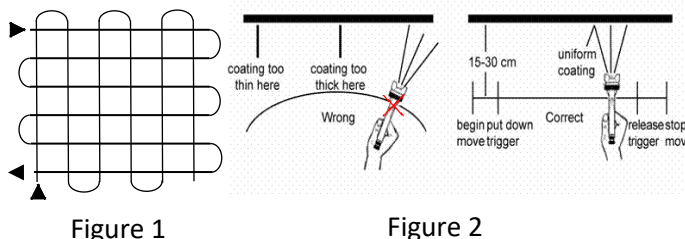| **Surface preparation**	Before application, clean the surface and remove all traces of detergents and cleaners. The surface must be completely clean. Avoid the presence of fissures or cracks in the substrate. It is recommended, if possible, to remove them beforehand. Pay special attention also to materials with high porosity that may have transport pores or open pores of a considerable size as this may influence the final amount of product to be applied. For this purpose, it is recommended to carry out a preliminary test as described in the section "Yields and storage". In case of presence of microorganisms (moulds, algae, etc.) it is recommended to remove them thoroughly before the application of the product.
Application information	SHAKE THE CONTAINER BEFORE ITS USE. ■ The product is applied directly on the surface preferably by spraying (airless, turbines, backpacks or hand-held sprayers), brush or roller. Two applications are recommended (each application is a cross coat, as in Figure 1). The second application can be made on the substrate still wet from the previous application, waiting for a while or after the substrate is completely dry. **Graphic description:** **Application (2 coats):** Figure 1 Figure 2 ■ Working tools: After use, clean with a compatible solvent.
Yields and storage	■ Dilution: none ■ Yield: Always apply the required amount of product, which will depend on the quality and porosity of the material. It is recommended to carry out a preliminary test before application in order to determine the proper yield in each case. The following is a reference table with generic yields, although there can always be exceptions, so it is advisable to test beforehand to ensure the necessary quantity: **TOTAL YIELDS (for guidance only)**<table><tr><th>MATERIALS</th><th>m²/litre</th></tr><tr><td>Marble and low porous limestone, terrazzo, polished concrete</td><td>9</td></tr><tr><td>Granite, non-polished concrete</td><td>7-8</td></tr><tr><td>Sandstones, porous limestones, facing bricks, monolayer mortar, rough concrete</td><td>5-6</td></tr><tr><td>Very porous limestones and sandstones</td><td>4</td></tr></table> ■ Complete drying time: 24 hours (the protective effect can appear within a few hours). ■ Operating temperature: between 5°C and 30°C. ■ Storage temperature: between 5 and 30°C; protect from direct sunlight; store in original container tightly closed.

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Observations	- The high water repellent effect it exhibits from its first moments (superhydrophobicity – contact angle of water droplets with the surface > 150°) decreases on surfaces subjected to continuous friction, especially in humid conditions, although the water protection is still maintained. - AQUASHIELD ACTIVE works by reducing the growth of microorganisms. Therefore, it is recommended to eliminate them beforehand by means of a biocide treatment. - It is recommended to apply at temperatures between 5°C and 30°C. - Carry out an initial test on painted surfaces to avoid the appearance of discoloration caused by the solvent contained in the product (isopropanol). - In case of future applications of water-based paints, reconstructions with different mortars or other products on the treated surface may be limited by the existing hydrophobic effect. - This product is not suitable for medical or pharmaceutical uses.
Handling precautions	Product information necessary for safe use is not included in this document. Before handling the product, read the material safety data sheets and package labels for safe use and for information on physical and health hazards. Material safety data sheets are available and supplied by TECNAN. The product must be applied in a well-ventilated area. It contains volatile solvent (isopropanol).
Limited warranty information	**Please read it carefully:** The information and recommendations in this document are given in good faith on the basis of TECNAN's experience and knowledge when stored, handled and applied correctly and under normal conditions within its useful life. However, because the conditions, types of materials to be treated and methods of use of our products are beyond our control, this information must be used correctly, verifying in preliminary tests that the product, the performance to be applied, the aesthetic finish and its purpose are suitable, even if other recommendations or advice have been received. TECNAN reserves the right to modify the properties of the product. TECNAN's only guarantee is that the product will comply with the sales specifications in force at the time of dispatch. Confirmation of payment and/or order implies acceptance of the product properties by the customer. TECNAN only guarantees the replacement of the product in the event of a manufacturing defect, and declines any other type of responsibility for the product, its application, as well as any additional damage it may cause. TECNAN specifically disclaims any other express or implied warranty of fitness for a particular purpose or merchantability. TECNAN declines responsibility for any damage caused accidentally or in case of incorrect use. Users must be familiar with the latest updated version of the Technical Data Sheet and for that TECNAN will provide a copy on request.

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