

## **TECHNICAL SHEET**

Version: nº2

Edition: 21/01/2018

## **TECNADIS SOLIDUS**

Surface hardener for the restoration of natural stone and other porous materials.

Product description	Surface hardener designed for natural stone and other porous materials. <b>Monocomponent</b> . This product consolidates the stone materials thanks to its easy penetration until reaching the healthy nucleus of the material to be treated, where it reacts with the ambient humidity and acts as a binder.
Composition	Formed principally by Ethyl Ester of Silicic Acid in dissolution. Specific for stone materials. Fully compatible with the nanotechnology-based water repellents of TECNAN.
Applications	Surface hardener designed to be applied on all types of absorbent materials such as sandstone, tuff, trachyte, brick, earth materials, casts, etc. which degrade easily due to atmospheric agents. For a correct application, the surface to be treated must be absorbent and be clean and dry.  It is recommended that the application temperature is as minimum 10°C and as maximum 25°C.
Features and advantages	<ul> <li>Mono-component product, non-toxic, safe and easy to use.</li> <li>Very good penetration into the stone material to be treated.</li> <li>Total drying, without formation of sticky substances.</li> <li>It is created a mineral binder stable to UV rays, unaffected by atmospheric agents.</li> <li>Complete impregnation without forming film and with a good water vapour permeability.</li> <li>No chromatic changes in the treated stone material.</li> <li>The binding effect is achieved when the product reaches the healthy nucleus of the material, where after a reaction with the atmospheric humidity, changes are produced in the siliceous part, constituting the agglutinating substance that consolidates the treated material.</li> </ul>
Product information. Composition and physico-chemical properties.	<ul> <li>Color: From transparent to straw yellow</li> <li>Ethyl silicate content: 70%</li> <li>Solvent content: 30%</li> <li>Formats: 1, 5 y 25 kg</li> <li>Storage: 6 months from the date of manufacture in the original sealed containers at room temperature.</li> <li>Viscosity: 3,3 CST at 25°C</li> <li>Specific weight: 0,970 at 15°C</li> <li>Flash point: &lt;23°C</li> </ul>
Substrate preparation	It is important not to expose the surface to direct sunlight to avoid a high crystallization speed. In the case of dirty surfaces, it is essential to provide a precise cleaning with demineralized water and then a complete drying of the substrate. It is recommended not to use acids, alkaline salts or salts containing water that may form efflorescences. In the case of very damaged surfaces that tend to crumble, it is suggested to do a preconsolidation before cleaning.  Due to the heterogeneity of the existing stone materials, it is recommended to carry out preliminary tests on the material to be treated in order to verify:  The level of consolidation achievable;  The dosage of the product, which can vary (according to the material absorption) from 3 to 10 m <sup>2</sup> /l. This dosage could be higher if treatment is by immersion.  The absence of chromatic changes in the treated stone material;  The effectiveness of the treatment to be performed.



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How to use	It is not recommended to apply under 10°C temperature. It is recommended to apply the product by spraying or low pressure (0,5 bar maximum). It can be also applied by dip coating. The material to be treated must be completely saturated with product (until it is rejected), to facilitate its penetration into the healthy nucleous of the stone. One application is usually enough, but sometimes it is necessary to repeat the treatment after 2 or 3 weeks.  For optimal results wait 4 weeks, at an ambient temperature of 20 ° C, and a relative humidity of 40 - 50%.  Once consolidation is completed, it is essential to apply a water-repellent treatment based on nanoparticles, such as the TECNADIS range of water-repellent and oil-repellent products for vertical and horizontal surfaces (AQUASHIELD ULTIMATE, AQUASHIELD FORTE, TECNADIS PRS PERFORMANCE). It is recommended to wait 4 - 7 days before apply TECNAN hydrophobic products.  Before this time, TECNADIS SOLIDUS consolidant can present hydrophobic properties by its intrinsic reactions, and it could be a problem with mortars, paitns, etc. adhesion. After that time, its own hydrophobic properties will dissapear.
Yields and storage	<b>Yield:</b> It can vary (according to material absorption), from 3 to 10 m <sup>2/</sup> l. It is recommended to carry out a previous test to determine in each case and with the specific material to treat, its concrete performance. Keep containers in a cool and dry place. Protect from sources of heat and sunlight.
Handling precautions	<ul> <li>Due to the flammability of the solvents contained in the product, it is forbidden to smoke or use free flames during the application of the surface hardener.</li> <li>The product reacts with atmospheric humidity; therefore, it is necessary to keep the containers tightly closed after use.</li> <li>If more than the right amount is used, it can be removed, of course before hardening, by using buffers dampened with mineral solvents.</li> </ul>
Limited warranty information	Please read carefully: The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should be used properly, verifying in preliminary tests that the product is suitable for its intended use. Suggestions of use shall not be taken as inducements to infringe any particular patent. The only guarantee of TECNAN S.L. is that the product will meet the sales specifications in effect at the time of shipment. Your exclusive remedy for breach of this warranty is limited to the refund of the purchase price or replacement of any product that is not warranted. TECNAN S.L. specifically disclaims any express or implied warranty of fitness for a particular purpose or marketing. TECNAN S.L. disclaims responsibility for any damage caused accidentally.