

This report issued by GEOARTEC TECHNICAL SOLUTIONS S.L., a Spin-Off of University of Zaragoza, has been made by Ion Ander Somovilla De Miguel (geologist). Both teams document the following:

PRODUCT TECHNICAL SHEET: TECNADIS PRS PERFORMANCE – hydro/oleo repellent based on nanoparticles for porous substrates.

Water/Stony materials high contact angle. The contact angle of treated substrates is 143°.
Capillary absorption coefficient or water absorption speed is reduced 98.39% in macroporous materials.

Water vapour permeability reduces 10% in both microporous and macroporous materials.
PRS PERFORMANCE resists water-rain impact more than 10 years. In Cantabrian Cornice would suppose 30 years of rain to generate a 4% decrease in the contact angle.

Very light colour saturation.

High protection against accidental stains (UNE-EN 16301:2014), improving substantially the stained answer in macroporous and microporous substrate.

After one year equivalent of ultraviolet radiation exposition, it is produced a light increase in the colour saturation. The capillary absorption coefficient is maintained in 98.01% and the vapour permeability has decreased 2.27%.

GENERAL CONCLUSIONS:

TECNADIS PRS PERFORMANCE presents optimum qualities as water as stain repellence, regarding to contact angle, low water vapour permeability modification and stain resistance with agent varieties. According to these qualities, there are evident advantages in comparison with traditional water repellent products.

After water stream erosion accelerated ageing, TECNADIS PRS PERFORMANCE shows minimum variation in performance and efficiency for 10 years of water repellence and durability in the presence of rain.

The obtained results show less than 4% variations, after equivalent to one year sun exposition, according to UNE-EN ISO 11507 (2002) ultraviolet radiation exposition accelerated ageing, water capillary absorption, water vapour permeability and contact angle variation tests.

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