



## TECHNICAL DATA SHEET

### SOLGEL TC - Water repellent treatment for cotto

SOLGEL TC is a water repellent treatment for cotto based on sol-gel technology. The product contains nanostructured and functionalized silica ideal for the treatment of terracotta. Once applied it forms a layer of amorphous silica thin, colorless, transparent, water resistant able to cover the pores while allowing natural transpiration. It soaks the material providing a wet effect while maintaining the natural aspect of the surface. The functionalized component - hydrophobic- is arranged outwards and it prevents the absorption of water and dirt and by the material.

### APPLICATION

#### Surface preparation

Remove dust and deposits from the surface to be treated. Before the application the surface must be dry.

#### Dilution

The product is ready to use without dilution.

#### Directions for use

Use a brush to apply the product evenly on the surface. Allow to absorb gradually and repeat the application when the surface is still wet. In the case of materials with low level of absorption remove any excess with a cloth. Treat small areas (max 1m<sup>2</sup>).

The product is compatible with the application by spray and by paint roller for solvent-based varnishes.

#### Surface coverage

The product yield is about 10 m<sup>2</sup>/L if applied by spray and 5 m<sup>2</sup>/L if applied by brush.

#### Drying

The coated surface is dry in 30 minutes.

#### Stability

The treatment is completely stable after 72 hours.

#### Temperature conditions

Min. 5°C – max. 35°C.

### CHEMICAL/PHYSICAL PROPERTIES

#### Composition

The product is liquid and contains nanostructured silica (25%) in alcoholic solution functionalized with silica alkoxides organically modified.

#### Aspect

Liquid, colorless, transparent.

#### Relative density

0,835 g/cm<sup>3</sup>

#### Drying

At room temperature.

#### Flash point

<19 °C

#### Reactions

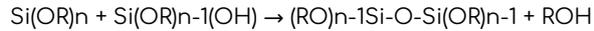
The liquid products forms a thin layer of glass through two reactions:

1. Hydrolysis

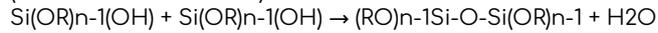




## 2. Condensation



(alcohol condensation)



(water condensation)

### Contact angle

106 ±10 (°θ) according to UNI EN 15802, 2004.

### Water absorption coefficient

w = 0,049 kg/(m<sup>2</sup>h<sup>0,5</sup>) W3 class (low permeability to liquid water) according to UNI EN 1062-3, 2008.

### Permeability to water vapour

V1 class (high permeability to vapour) according to UNI EN ISO 7783, 2012.

### Compatibility

Chemical covalent bonds are formed between the silica layer and the substrate: Si-O-Si (in case of silicate material) or Si-O-Ca (in case of carbonates), with water release.

### Resistance to detergents/maintenance

To clean the surfaces just use water and neutral detergents with soft sponges or microfiber cloths. Avoid powder detergents, alkaline substances and abrasives.

## ADDITIONAL NOTES

### Cleaning of the application tools

After use the tools should be washed with alcohol (2-Propanol or ethanol).

### Storage

Store in a closed container, away from heat in a cool, dry place. If properly stored, the storage life is 24 months.

### Safety

The product is flammable.

### Advices

The product is in alcoholic solution and has a quick setting; please avoid the application with temperatures higher than 35 °C. Carry out a preliminary test on a small surface area.

### Note

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. We reserve the right to modify and improve the product and to adapt it to safety regulations as well as to modify the packages. We suggest to adapt the application of our products on the basis of the nature and of the conditions of the material to be treated by testing the product in a sample area. Our technical office is at disposal for any other explanation.