



TECHNICAL DATA SHEET

SIOX-5 REPAINT Mineral binder for paint retouching

SIOX-5 REPAINT is a mineral binder of silicate composition based on sol-gel technology developed by the Group of Chemistry for Cultural Heritage of the Department of Chemical Sciences of the University of Padua (Patent No. 0001370467).

HOW IT WORKS

The product contains a nanostructured and functionalized silica gel in alcoholic solution that can be used as a binder or fixative for the pictorial retouching of ceramic, mural paintings and frescoes. The silica matrix is able to incorporate most of mineral pigment by creating matt paint layers, UV and leaching resistant.

Compatibility: iron oxides and hydroxides (red and yellow ochre), zinc oxide, titanium oxide, gold, chrome green, green earth, black carbon, mercury sulfide (cinnabar red), Prussian blue (ferric potassium ferrocyanide) cobalt blue

APPLICATION

Method of use.

Mix the liquid product with powdered mineral pigments. It is possible to vary the amount of pigment in the mixture depending on the effect you wish to achieve (from light glazing to an opaque effect). The required amount of pigment is variable and depends on the chemical nature of the pigment itself. The recommended range is between 1 percent and 40 percent (w/w).

Apply the mixture to the surface by means of retouching brushes, not exceeding the amount of product applied.

Once dry, dab the retouching with soft sponges and deionized water to remove any excess pigment.

Dilution

The product is ready to use without dilution.

Drying

30 minutes to touch

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 in alcoholic solution (20%) functionalized with silica alkoxides organically modified.

Aspect

Liquid, colorless, transparent.

Relative density

0,835 g/cm³

Drying

At room temperature.



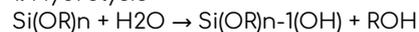
Flash point

<19 °C

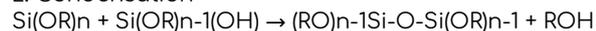
Reactions

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

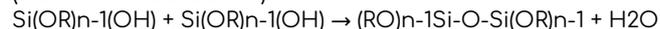
1. Hydrolysis



2. Condensation



(alcohol condensation)



(water condensation)

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.

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.