

## TECHNICAL SHEET 06.13.01-eng FAÇADE PAINTS

# NANOXILCOLOR

Self-cleaning micro-reinforced façade paint

### 1. Description, Application

NANOXILCOLOR is a micro-reinforced façade paint with a self-cleaning effect. It is based on water dispersion of silicone binders. It is suitable for decorative protection of all types of solid, embossed or rough and smoothed or fine rough façade surfaces (at least a month old lime-cement and cement render finishes, at least a month old unplastered concrete façade surfaces, fibre-cement and similar façade boards and similar). The paint film is additionally reinforced with thin synthetic fibres so that it does not crack on spots of excessively thick applications, in furrows, channels and holes. Application is also possible to well adhered old acrylic, silicate and silicone paint coats and decorative render finishes of all types.

Key components made in accordance with the latest discoveries in nanotechnologies ensure the paint high resistance to the effects of smoke, ultraviolet rays and other atmospheric factors and, consequently, solid resistance in any climate conditions even on façade surfaces exposed to heavy rainfall.

It is more difficult for dust, soot and other filth to adhere to surfaces processed with NANOXILCOLOR due to its high content of silicone binders as well as siloxane and other additives, which form an extremely water repellent texture on the surface. Thus, dust, soot and other filth are largely washed away by drainage water. Painted surfaces remain resistant to infection with the most widespread types of wall algae and mould for a long time, therefore NANOXILCOLOR is also suitable for maintenance painting of façade surfaces infected with wall algae and mould if such surfaces are disinfected well prior to the application of the paint.

In addition to the mentioned characteristics, the paint is also distinguished by good coverage and very high water vapour permeability.

### 2. Packaging, Paints

Plastic containers holding 16 liters:

- White (shade 1001)
- 76 shades from the JUB colour chart – shades whose code's last figure is 4 and 5 (on JUMIX tinting stations at points of sale)
- Under certain conditions, delivery of paints designed at a special request of the customer is also possible.

Paints of various shades can be mixed in optional ratios!



### 3. Technical Data

Density (kg/dm <sup>3</sup> )		~1.70	
Content of vaporous organic substances (VOS) (g/l)		<20 The EU VOC requirement – category A/c (from 1 January 2010): <40	
Dry to recoat T = +20 °C, relative air humidity = 65 % (hours)	Touch dry		~3
	Suitable for further treatment		~6
Characteristics of dry paint film	Vapour permeability EN ISO 7783-2	μ coefficient (-)	<500
		Sd value (d = 100 μm) (m)	<0.08 Class I (high water vapour permeability)
	Water absorption w <sub>24</sub> EN 1062-3 (kg/m <sup>2</sup> h <sup>0.5</sup> )		<0.03 Class III (low water absorption)
	Grasp to standard lime-cement render (1: 1: 6) EN 24624 (MPa)		>0.5
Gloss		mat	

Main ingredients: silicone and styrene-acrylate binder, fine calcite and alumo-silicate fillers, synthetic microfibers, titanium dioxide, cellulose thickener, water

### 4. Surface Preparation

Surface should be solid, dry, and clean - without any badly-adhered particles, dust, remains of panelling oils, fat, or other dirt.

In normal conditions (T = +20 °C, relative air humidity = 65 %), let the newly applied renders and levelling compounds dry or mature for at least 1 day for each mm of their thickness. Concrete surfaces should dry for at least a month. In case of paint renovation, thoroughly remove from the surface all old badly-adhered paints, precoat, and other decorative coats, all of which get easily soaked in water. Washing with a jet of hot water or steam is recommended mainly for very dirty façade surfaces, all concrete surfaces, and façade surfaces infected with wall algae and mould. Disinfect such surfaces after washing.

In the event of potential mending of façade surfaces that have been damaged in any way, follow only procedures, which ensure, concerning roughness, as high a level of equalisation as possible to the mended surface.

Application of a primer is obligatory before the first as well as before renovation paintings. JUB recommends SILICONEPRIMER JUBOSIL G (SILICONEPRIMER JUBOSIL G: water = 1 : 1), JUKOLPRIMER diluted with water (JUKOLPRIMER: water = 1 : 1), or even the paint diluted with water (REVITALCOLOR AG : water = 1 : 1). They are applied with a paint or masonry brush, or a long-bristle fur or textile paint roller (SILICONEPRIMER JUBOSIL G and JUKOLPRIMER can also be sprayed).

If the surface is hair-cracked, cover it once or twice with REVITALPRIMER UNIVERSAL. Stir the paint well before use, and, if necessary, dilute it with SILICATEPRIMER JUBOSIL GX up to 10 %. Apply the paint with a paint or masonry brush.

In normal conditions (T = +20 °C, relative air humidity = 65 %), painting may begin 6 hours after the application of a primer in the case of REVITALPRIMER UNIVERSAL or JUKOLPRIMER; otherwise painting may begin 12 hours after the application of a primer.



Indicative or average use (depending on absorption and roughness of the surface):

SILICONEPRIMER JUBOSIL G	90 – 100 ml/m <sup>2</sup>
pr JUKOLPRIMER	90 – 100 ml/m <sup>2</sup>
or NANOXILCOLOR	90 – 110 ml/m <sup>2</sup>
or REVITALPRIMER UNIVERSAL	~300 ml/m <sup>2</sup>

## 5. Paint Preparation

Only stir the paint well before use and, if necessary, dilute it with water (maximum 10 %) in accordance with consistency corresponding to application technique and conditions. ATTENTION! Paint coverage decreases with diluting!

Equalize paint needed to coat the finishing wall surface (or, better still: all surfaces, which are painted in the same paint shade) in a container of appropriate size. In case of large surfaces, where, in such a manner, it is impossible to technically ensure sufficient quantity of paint even for a one-layer application, mix paint from at least three containers in an equalisation container first. When a third of the so prepared paint is used, pour new paint into the container and stir it well together with the rest of the paint already in the container, etc. Equalisation of white paint of the same production batch, which has not been diluted, is not necessary.

Any “repairs” of the paint during application (adding tinting agents, diluting, and similar) are not allowed. The quantity of paint required to paint specific surface can be calculated or estimated from the surface and data on average consumption. In specific cases, the consumption can be determined by measuring at large enough test surface.

## 6. Paint Application

Paint is applied in two (exceptionally three) coats using a long-bristle fur or textile paint roller (length of hairs or threads is 18 to 20 mm; the following can be used: natural and artificial fur or textile linings made of different synthetic threads – vestan, dralon, nylon, perlon ali poliester), a painting brush suitable for application of dispersion wall paints or it can be sprayed.

Use a suitable bucket grid when applying the paint with a roller; the second or the third application can be applied only onto a completely dry previous coat – in normal conditions (T = +20 °C, relative air humidity = 65 %) it is usually after approximately 6 hours (in case of lower temperatures and high relative air humidity drying time can be substantially extended!).

An individual wall surface is painted without interruptions from one end to the other. Regardless of the before stated, always treat surfaces inaccessible to a standard long-bristle paint roller (corners, gutters, narrow reveal surfaces, and similar) first using suitable brushes or smaller paint rollers adjusted to existing conditions.

Painting is possible only in suitable weather or microclimate conditions: temperature of the air and the wall surface should not be lower than +5 °C and not higher than +35 °C and relative air humidity should not be higher than 80 %. Protect façade surfaces against the sun, wind and rainfall with curtains; however, do not conduct any work in rain, fog or strong wind (≥30 km/h) despite such protection.

In normal conditions (T = +20 °C, relative air humidity = 65 %), resistance of freshly painted surfaces to damage caused by precipitation (washing away of the application) is achieved in 24 hours at the latest.

Approximate or average consumption for a two-coat application:

NANOXILCOLOR 180 - 220 ml/m<sup>2</sup>, depending on absorption and roughness of the surface

## 7. Tool Cleaning, Waste Management

Thoroughly clean all the tools with water immediately; dried stains cannot be removed.

Keep unused paint (only that, which has not been diluted!) in a well sealed package for potential repairs or later use. Waste liquid remains must not be emptied into drains, watercourses, or environment and they must not be disposed together with domestic wastes. Mix them with cement (hardened mortar remains and wastes, sand or sawdust may be added to them) and when they harden, deposit them onto the dumping grounds of construction waste (waste classification number: 17 09 04) or municipal waste (waste classification number: 08 01 12).

Cleaned packaging can be recycled.



## 8. Safety at Work

In addition to general instructions and regulations on safety at works including construction and painting, as well as instructions from the safety sheet, follow also the following warnings:

R52/53 - Harmful to aquatic organisms: may cause long-term adverse effects in the aquatic environment

S2 - Keep out of the reach of children

S 26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28 - After contact with skin, wash immediately with plenty of water.

S 29 - Do not empty into drains.

S 46 - If swallowed, seek medical advice immediately and show this container or label.

S 61 - Avoid release to the environment. Refer to special instructions - safety data sheet.

## 9. Maintenance and Restoration of Painted Surfaces

Painted façade surfaces do not require any special maintenance. The non-adhering dust and other non-adhering filth can be swept, vacuumed or washed away with water. Adhering dust and more obstinate stains can be removed by light rubbing with a wet cloth or brush soaked into a solution of usual universal household preparations and washed away by clean water.

However, paint should be restored on surfaces, which cannot be cleaned of filth and stains by following the method described above. In such cases, apply two coats of paint as described in the chapter »Paint Application«. An appropriate primer is mandatory, which can be skipped only if the last painting was conducted not more than two years ago.

## 10. Storage, Transportation Conditions and Durability

Storage and transportation at temperature +5°C to +25°C, protected from the direct sunlight, out of reach of children, **MUST NOT FREEZE!**

Durability when stored in originally sealed and undamaged packaging: at least 18 months.

## 11. Quality Control

The product's quality characteristics are determined with the internal manufacturing specifications as well as with the Slovenian, European and other standards. The achievement of declared or set quality level is ensured by the ISO 9001 system for total quality management and control, which has been implemented at JUB for many years. It comprises daily quality checks in our own labs, and occasionally also at the Construction Institute in Ljubljana, at Forschungsinstitut für Pigmente und Lacke in Stuttgart and at other independent institutions at home and abroad. During the manufacturing process, we strictly comply with the Slovenian and European standards for protection of the environment and for ensuring security and health at work, which is confirmed by the ISO 14001 and OHSAS 18001 certificates.

## 12. Other Information

Technical instructions in this brochure are given based on our experiences and are given as a guideline for achieving optimal results. We cannot take any responsibility for the damage, caused by incorrect selection of a product, incorrect use or unprofessional work.

The colour shade may differ from the print in the colour chart or from the approved sample. However, the total colour difference  $\Delta E_{2000}$  – it is determined in accordance with the ISO 7724/1-3 and by the mathematical model CIE DE2000 – doesn't exceed 1.5 for shades from the JUB colour chart and 2.5 for shades from the NCS colour chart. A correctly dried application of paint to the test surface and a standard of the concerned colour, which is stored at TRC JUB d.o.o., shall be decisive for control purposes. Paint manufactured by other samplers and colour charts is the best possible approximation for the JUB's primers and tinting agents. Therefore, in such cases the total colour difference from the desired shade may be even higher than the value guaranteed above. Difference in colour shade, which is a result of unsuitable working conditions, of a colour preparation technique, which differs from the one in this technical sheet, failure to follow the equalization rules, application onto an unsuitably prepared, overly or not enough absorbing surface, more or less coarse surface, on wet or not dried enough surface, cannot be subject of complaint.



This technical sheet supplements and replaces all preceding editions. We reserve the right to change and supplement data in the future.

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