

TECHNICAL SHEET 10.02.49-GBR
 DECORATIVE RENDER FINISHES



JUBIZOL CarbonStrong finish S 1.5 and 2.0

Micro-reinforced siloxanized smooth render

1. Description, Application

JUBIZOL CarbonStrong finish S 1.5 and 2.0 are intended for the preparation of final coat in JUB's façade systems. They are based on polymeric binders and they have a characteristic equally grained surface. They are enriched with a combination of basalt and carbon fibres which give them exceptional elasticity and strength at the same time. They tolerate outstandingly elongations and surface tensions. They are intended for decorative protection of façade wall surfaces of all types of construction facilities, including multi-storey buildings with minimum roof eaves. They adhere well to all finely coarse construction substrates: conventional fine lime-cement and cement render finishes, smoothed concrete surfaces, as well as to fibre-cement and gypsum-cardboard panels, chipboards, etc.

Selected ratio of fine and coarse sand fillers and a combination of modern thickeners, omočeval and water-retention agents ensure mortar compounds extraordinary processing properties, which enables easier application and spreading, as well as significantly longer processing time of applied renders. High content of siloxane additives gives JUBIZOL CarbonStrong finish renders good water repellence and high resistance to the effects of smoke, ultraviolet rays and other atmospheric factors and consequently good stability in any climate conditions. They are also characterized by high solidity. Due to relatively high water vapour permeability, which is atypical for acrylic render finishes, they can also be applied as a final render finish in JUB's ETIC systems on mineral wool. Treated surfaces have an assured long-term resistance to contamination with wall algae and mould. Therefore, it is not necessary to add any biocidal substances prior to application.

2. Packaging

Plastic containers holding 25 kilos

3. Colour Shades

- White (colour shade 1001)
- Colour shades from the JUB PAINTS AND RENDERS colour chart whose code's last figure is 2, 3, 4 and 5 (on JUMIX tinting stations at points of sale!)
- Colour shades from the JUB FAVOURITE FEELINGS colour chart – colour shades ending in C, D, E and F (on JUMIX tinting stations at points of sale!)
- Delivery in colour shades designed at a special request of the customer is possible under certain conditions

4. Technical Data

	JUBIZOL CarbonStrong finish S 1.5	JUBIZOL CarbonStrong finish S 2.0
Density (kg/dm ³)	~1.80	~1.80
Drying time – touch dry T = +20 °C, rel. air humidity = 65 % (ur)	~6	~6



Water-vapour permeability EN ISO 7783-2	μ coefficient (-)	<120	<120
	Sd value (m)	<0.18 (for d = 1.5 mm) class V2 (medium water-vapour permeability)	<0.24 (for d = 2,0 mm) class V2 (medium water-vapour permeability)
Water absorption w_{24} EN 1062-3 ($\text{kg/m}^2\text{h}^{0.5}$)		<0.05 Class W3 (low water absorption)	<0.05 Class W3 (low water absorption)
Adhesion to standard lime-cement render finish (1 : 1 : 6) EN 24624 (MPa)		>0.30	>0.30

Main ingredients: acrylic binder, coarse and fine calcite and aluminosilicate fillers, cellulose and hectorite thickeners, titanium dioxide, siloxane additives, water

5. Surface Preparation

The surface should be slightly rough (ideal is the roughness of a conventionally smoothed fine render of 1.0 mm granulation), solid (compressive strength of at least 1.5 MPa – CS II according to EN 998-1), dry and clean, without weakly-adhered particles, dust, easy water-soluble salts, oil stains and other filth. Potential smaller uneven parts – protrusions and indentations – hinder the smoothing of the applied render finish; therefore, it is important to attend to the preparation of the surface.

Prior to the application of the decorative render finish, the newly applied base coats have to dry at least 7 to 10 days for each cm of their thickness. Decorative render finishes are applied to new concrete surfaces only a month after concreting (stated drying times of the surface are valid in normal conditions: $T = +20\text{ }^{\circ}\text{C}$, relative air humidity = 65 %). Remove all coatings, slurries and other decorative coats from old solid renders. After the surface had been cleaned, dust it thoroughly by washing and, if necessary, repair and level it. Washing the surface with a high-pressure water blaster (hot water or steam) is especially recommended in the case of fibre-cement boards and all concrete surfaces since it removes panel oil from new surfaces, and soot, moss, lichen, remains of old coatings and similar from old ones.

Suitable primers for individual types of surfaces are listed in the table below:

Substrate	Primer	Consumption (depends on absorption and coarseness of substrate)
Fine lime-cement render finishes and basic render finishes of thermal insulation systems	JUBIZOL Unigrund (colour shade as close as possible to the colour of render finish)	120 – 200 g/m^2
	water diluted ACRYLCOLOR (colour shade as close as possible to the colour of render finish) ; water = 1 : 1	90 – 100 ml/m^2
	water-diluted AKRIL Emulsion (AKRIL Emulsion : water = 1 : 1)	90 – 100 ml/m^2
Smooth, low absorbent surfaces (concrete, fibre-cement boards) and excessively absorbent surfaces (gypsum-cardboard panels,	JUBIZOL Unigrund (colour shade as close as possible to the colour of render finish)	120 – 200 g/m^2



chipboards)	VEZAKRIL Primer	~300 ml/m ²
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They are applied by using a painting or masonry brush, while ACRYLCOLOR and AKRIL EMULSION can also be applied by using a long-thread fur or textile painting roller or by spraying. The application of a render finish should start when the primer is completely dry. In normal conditions (T = +20 °C, relative air humidity = 65 %), drying time for UNIGRUND is at least 12, for VEZAKRIL Primer at least 24, and for ACRYLCOLOR and AKRIL Emulsion 4 to 6 hours.

6. Preparation of Render Compound for Application

Prior to application, stir the render finish with an electric mixer, and, if necessary (only exceptionally), dilute it with water (maximum 1 dl per container). The colour shade must be checked; then, equalize the render finish in order to remove even the slightest or imperceptible differences in colour shade between individual buckets. Stir the content of four buckets well in a large container of appropriate size. When a quarter of the so prepared compound is used, the content of the next bucket is poured into the container and mixed properly with the rest of the render finish, etc. Equalisation of white renders, which belong to the same production batch or to the same production date and which have not been diluted, is not necessary.

Any “repairs” of the render finish during application (addition of tinting agents, diluting, and similar) are not allowed.

6. Application of Mortar Compound

Apply the mortar compound manually with a stainless-steel smoothing trowel or spray it in the thickness slightly above the diameter of the thickest sand grain. When applying the render finish by spraying, follow instructions of the producer of the mechanical equipment. Immediately after the application smooth the surface with a solid plastic smoothing trowel. Smoothing should be performed by circular strokes until an evenly grained structure is achieved. Grains in the applied mortar coat should move as little as possible during smoothing, pushing of the mortar compound in the form of a wave in front of the trowel is not allowed. In most cases, the creation of such a wave can be attributed to over-thickness of the application or to the surface not being prepared well or it being uneven. At the end – a few minutes after trowelling - push the protruding lumps into the surface by smoothing the surface slightly using a clean stainless-steel smoothing trowel.

Perform the application as fast as possible, without any interruptions from one corner of the wall to the other. When applying the render finish onto wall surfaces higher than one floor, it must be applied simultaneously to all floors: in such cases, always begin the application at the top floor, while performing a phase-delayed “step shift” in lower floors. Larger wall surfaces should be divided into smaller sections by using adequately wide decorative grooves, mortar trims, and other decorations, frames or in any other way. In this manner we avoid potential problems caused by continuous application of the render finish as well as non-aesthetic appearance due to a potentially uneven surface. Joints between planes in inner or outer corners can be made easier by preparing a few cm wide, finely smoothed stripes, which also give a pleasant decorative appearance to processed surfaces. Decorative smoothed stripes, grooves, mortar trims, frames, and similar are usually made prior to the application of the decorative render finish. They are protected by suitable wall paints, while paying attention not to apply coatings encroaching onto surfaces prepared for the application of the render finish.

The application of a mortar compound is possible only in suitable weather or microclimate conditions: the temperature of the air and the wall surface should not be lower than +5 °C and not higher than +35 °C and the relative air humidity should be below 80 %. Protect façade surfaces from sun, wind and rainfall with protective scaffold nettings; 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 processed surfaces to damage caused by precipitation (washing away of the application) is achieved in 24 hours at the latest.

Approximate or average consumption:	
JUBIZOL CarbonStrong finish S 1.5	~2.5 kg/m ²
JUBIZOL CarbonStrong finish S 2.0	~3.1 kg/m ²

Thoroughly clean the tools with water immediately after use. Dried stains cannot be removed.

7. Safety and Health at Work

Further instructions regarding handling the product, use of personal protection equipment, waste management, tool cleaning, first aid measures, warning signs, signal words, components determining hazard, hazard statements and safety statements are listed in the product’s safety sheet which you can find on JUB’s web page or you can require it from the manufacturer or seller. When applying the product, the instructions and regulations regarding safety for construction,



façade and painting works should also be observed.

8. Maintenance and Restoration of Painted Surfaces

Façade surfaces processed with JUBIZOL CarbonStrong finish S 1.5 and 2.0 do not require any special maintenance. The non-adhering dust and other non-adhering filth can be swept, hoovered or washed away with water. Adhering dust and more obstinate stains can be removed by light rubbing with a soft brush soaked into a solution of usual universal household preparations and washed away by clean water.

However, on surfaces where filth and stains cannot be removed applying the methods described above, renovation painting is recommended. In such cases, apply two coats of the micro-reinforced façade paint REVITALCOLOR or micro-reinforced façade paint SILICONECOLOR onto a prior coat of an appropriate primer.

9. Storage, Transportation Conditions and Durability

Storage and transportation at temperatures between +5 °C and +25 °C, protected from direct sunlight, **MUST NOT FREEZE!**

Shelf life when stored in originally sealed and undamaged packaging: at least 12 months.

10. Quality Control

The product's quality characteristics are determined with the internal manufacturing specifications as well as with the Slovenian, European and other standards. We constantly monitor the declared or set quality level in our own labs, at the Construction Institute in Ljubljana and occasionally also at other independent institutions at home and abroad. The quality level is also ensured by the ISO 9001 system for total quality management and control, which has been implemented at JUB for many years. 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

The adequacy of JUBIZOL CarbonStrong finish S 1.5 in 2.0 for the preparation of final coat in JUB's facade ETIC systems has been approved with the European Technical Approval (ETA). In accordance with the ETAG 004/2000 guidelines, the testing was performed at the Construction Institute in Ljubljana.

11. Other Information

The 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 ΔE_{2000} for colour shades from the JUB's Paints and renders or ALL THE SHADES OF YOUR FAVOURITE FEELINGS colour chart – it is determined in accordance with the ISO 7724/1-3 and with a mathematical model CIE DE2000 – does not exceed 2.5. In order to check the colour shade, a dry application of render finish on a test surface is compared to a standard of the concerned shade, which is stored in the TRC JUB d.o.o. A colour shade of a render finish made on the basis of other samplers and colour charts is the best possible approximation for JUB's product bases and tinting agents. Therefore, in such cases the total colour difference from the desired shade may be even higher than the value guaranteed above. A difference in colour shade, which is the result of unsuitable working conditions, of a product preparation technique, which differs from the one in this technical sheet, of failure to follow the equalisation rules, of the application of the product onto an unsuitably prepared, overly or not enough absorbing surface, more or less coarse surface, on a wet or not dried enough surface, cannot be subject of complaint.

For External Wall Insulation (EWI) systems, we recommend render finishes with the brightness (Y) over 25. Darker render finishes and render finishes of intensive colour shades are less stable under heavy conditions of use, less resistant to being washed out by precipitation and tend to chalk more. Complaints regarding changes, which might thus occur on exposed façade surfaces, especially in the form of faster bleaching, will not be accepted. Therefore, one should consult JUB's experts for each case individually regarding conditions for the application of such renders and the maintenance of processed surfaces. The list of such susceptible colour shades is available at stores where JUMIX tinting stations are located as well as in our sales and technical information department.

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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