TWO-COMPONENT ALIPHATIC POLYURETHANE VARNISH FOR CONCRETE
REAL PU 100

PRODUCT DESCRIPTION

REAL PU 100 is a two-component, aliphatic, polyurethane, UV-resistant, self-leveling topcoat varnish with a high-gloss finish and highest level of wear resistance.

TECHNICIAL SPECIFICATIONS

Appearance	Glossy
Color	Transperant
Density (gr./ml. 20ºC)	1,02 ± 0,05
Mixing ratio by weight	Comp.: A 7 units Comp.: B 3 units
Solids by weight (w/w)	% 75 ± 2
Viscosity	Mixture: 100 - 1,100 mPa.s
Wear resistance	7 days:125mg (± %3) (CS 10/1000/1000) (ASTM D4060-14)
Application method	Air/airless spray, roller and brush
Open working time at +20ºC	40-45 min.
Full drying at +22°C	5-7 days
Consumption	Per layer 0,100 kg/m2

MIXTURE PREPARATION

Before mixing the two components, ensure that their temperatures are between +15°C and +25°C. Stir Component A separately using a low-speed mixer until a homogeneous mixture is achieved. Then, add Component B to Component A and mix again at low speed until a homogeneous mixture obtained (mix for approximately 3 minutes). To avoid potential errors, move the mixed product into a clean bucket and mix once more at low speed. The mixture is then ready for use.

ENVIRONMENTAL CONDITIONS

The air temperature should be between +15°C and +35°C. Application must not be carried out at relative humidity levels above 80%. The surface temperature must be at least 3–5°C above the dew point to prevent condensation.

It should be noted that material consumption may increase when it is applied at lower temperatures. The surface temperature must be at least +5°C and no more than +45°C.

APPLICATION AREAS AND FEATURES

REAL PU 100 is a two-component, aliphatic, polyurethane, UV-resistant, self-leveling topcoat varnish with a high-gloss finish and solvent content.

Application:

- For interior and exterior use
- Museums, libraries, congress and exhibition halls
- Concrete and cement-mineral surfaces
- Epoxy and polyurethane coated surfaces
- To achieve a fully glossy finish on smooth or sandblasted surfaces
- In areas requiring high hygiene standards, such as hospitals, laboratories, and sterile rooms
- Kindergartens and nursing homes
- Indoor and outdoor swimming pools

Advantages:

- High UV resistance
- Easy to apply, clean, and maintain
- Hygienic and antibacterial
- Has a glossy surface appearance
- Resistant to mechanical loads, abrasion, and chemicals
- Low viscosity
- Very high adhesion
- Environmentally friendly material with low VOC (volatile organic compounds) content
- Excellent penetration properties
- Hard-elastic structure

USAGE MANUAL

The compressive strength of the application surface must be at least 25 N/mm², and the adhesion strength of the floor concrete – at least 2.5 N/mm². The concrete must be fully cured, and the moisture content must not exceed 4%.

The floor temperature must not be below +8°C and at least +3°C above the dew point. Surfaces covered with epoxy or polyurethane must be lightly abraded.
The surface must be dry and cleaned from dust, dirt, paint, oil, and other similar substances that could reduce adhesion. In case of cracks and holes, they must be filled.

Oil-contaminated surfaces must be cleaned with chemical cleaners and then rinsed again with water. Remaining water puddles must be removed with wet vacuum cleaners.

After surface cleaning, mechanical treatment by grinding must be carried out to achieve a finely roughened surface. The dust layer formed after mechanical cleaning must be removed using industrial vacuum cleaners.

Once concrete surface preparation is completed, the aliphatic, polyurethane, UV-resistant, self-leveling topcoat varnish **REAL PU 100** is ready for applying.

APPLICATION DETAILS

When following the climate and surface application conditions described above:

- Do not apply the product at temperatures below +10°C, above +30°C, or during rainy and windy weather.
If necessary, the ambient and floor temperature should be optimized using heating equipment.
It must not be used on surfaces with moisture present.

- After mixing is complete, **REAL PU 100** should be applied to the surface with a roller or brush. Full coverage with a non-porous layer must be ensured. To minimize joint marks, make sure that the adjoining areas have not dried during application and the surface must be neatly cut.

- To ensure color uniformity, **REAL PU 100** with the same production/batch number should be used within each area.

- If heating is required, gas, diesel, paraffin, or similar fossil fuel heaters must not be used, as they emit large amounts of CO_2 and water vapor (H_2O), which can affect the appearance of the coating. Therefore, only electric heating systems that blow warm air should be used.

- At an average temperature of +20°C, the mixture must be used within a maximum of 200 minutes.
The waiting time between coats is a minimum of 10 hours and a maximum of 48 hours at +20°C.
If more than 48 hours pass, the surface must be sanded. Full curing and achievement of mechanical and chemical resistance occurs after a minimum of 7 days.

- The curing time of polyurethane resin-based products varies depending on climatic conditions. The chemical reaction and working time also change accordingly. Therefore, attention should be paid to these details during application.
At lower temperatures, the chemical reaction slows down, extending the working and coating time.

- After application is complete, the floor must be protected from direct contact with water for at least 24 hours.
Otherwise, carbonation and softening of the coating will occur in areas in contact with water, leading to loss of its properties. If such a situation occurs, the entire coating must be removed and reapplied.

- To maintain the appearance of **REAL PU 100** after application, any spilled particles and substances must be immediately removed, and the surface must be regularly cleaned using floor cleaning machines, rotary brushes, high-pressure machines, vacuum cleaners, and appropriate cleaning and polishing agents.

- Epoxy and polyurethane floor systems should be applied only by professionals.

PACKAGES

REAL PU 100

Component A: 3.5 kg. + Component B: 1.5 kg.
Total set weight: 5 kg.

Component A: 10.5 kg. + Component B: 4.5 kg.
Total set weight: 20 kg.

SHELF LIFE

The products should be stored in its original packaging in a cool and dry place. The shelf life in unopened packaging is 24 months for components A and B. Products in opened packaging should be stored under appropriate storage conditions and used within 1 week at most.

HEALTH AND SAFETY INFORMATION

Refer to the product's Material Safety Data Sheet (MSDS) for safety guidelines and warnings.

The most essential safety precautions to follow are:

Contact of the product with skin and eyes must be avoided by using gloves, safety goggles, a face mask, and protective cream.

Ensure proper ventilation during application and until the primer is fully dried.

In case of skin contact, wash the affected area with warm water, soap, or a suitable cleanser.

In case of eye contact, rinse thoroughly with water for at least 10 minutes and seek medical attention.

Carefully read all warning labels on the packaging and strictly follow the recommended working

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