Topcoat composition for thin-layer epoxy floors Defens EF-111 (2K)

Description

The two-component epoxy composition is a heavily filled composition based on epoxy resins, designed specifically to provide a thin-layer industrial polymer flooring. It forms a smooth and non-slip surface with high mechanical strength and chemical resistance after drying.

Intended use and scope

It is used as the main layer of seamless polymer coatings when installing polymer flooring. It can be applied to concrete and other mineral substrates that are not subject to significant deformation and vibration loads.

High strength and scratch resistance characterise the coating. The fully cured coating is highly resistant to water and aggressive substances of low and medium concentrations. High hygiene and fire safety level. Weather impact resistant. Very high resistance to abrasive wear and chemicals such as oils, petroleum products, salts.

The composition is used for installing floors in food industry industrial premises including those with wet technological processes, agricultural premises (storage, greenhouses, glasshouses, premises for animals and birds), offices, medical and children's institutions, trade and catering enterprises, hotels, exhibition halls, entertainment institutions, **car services and parking lots**.

Technical parameters

Indicator name and unit measure	Indicator value
Appearance and dried coating film colour	A homogeneous and smooth surface of grey or other colour as agreed with the customer
Mixture non-volatile matter mass fraction, % , not less	96
Mixture slump loss time (spreadable life) at a temperature (20±2) ºC, min, not less	40
Drying time to degree 3 at temperature (20±2) ºC, h, no more	6
Adhesive strength not less than, N/mm2	2.5
Density at temperature (20±2) ºC (components A+B), g/cm^3	1.3±0.05
Mechanical loads are permissible in, days	1.5
Abrasive wear, mm^3/m	12
Hardness, c.u., not less	0.5
The components ratio, A: B by weight	4.7:1
The next coating shall be applied after, no later than, h	48

Recommendations for use

Concrete substrate properties and preparation requirements

Concrete substrate properties and surface preparation methods must comply with the current construction and technical standards. The substrate shall be solid, homogeneous, clean, dry, free from oils, fats, crumbling areas, old coating flaking residues and other contaminants that prevent the adhesion and primed with the primers **Defens EP -01**, **Defens EP -02, Defens EP -03**.

Defens EF-111 shall be applied no later than a day after applying the primer layer. Concrete substrate basic requirements: compressive strength — not less than 20 N/mm2, tear strength — not less than 1.5 N/mm2. Concrete substrate shall be treated with abrasive tools, bead blasting, milling or grinding equipment. For concrete floors with a reinforced top layer, only bead blasting is allowed. The dust formed during processing shall be carefully removed with an industrial vacuum cleaner.

Application conditions requirements

The primer components temperature, substrate surface temperature and the ambient air temperature in the work area: from + 10°C to +25°C.

Attention! The substrate surface temperature shall be at least 3°C above the measured dew point during both the primer application and primer layer complete polymerization/drying required time. Relative humidity: not more than 70 %.

Application method

Pour the entire volume of the comp. 1 and 2 in a mixing container of the appropriate volume and mix thoroughly until smooth for 2-3 minutes. To mix the components, use a low-speed (300-400 rpm) mixer with an electric drive.

DO NOT MIX THE COMPONENTS MANUALLY!

Attention! Depending on the components reactive capacity, the epoxy composition curing process is accompanied by the release of a certain amount of heat. Epoxy composition mixture self-heating in the mixing tank can provoke its premature curing. *Therefore, it is strongly not recommended to leave the prepared epoxy composition mixture directly in the mixing tank for a long time.*

Application method: use a serrated spatula to pour and level until the desired thickness is reached. To ensure high surface quality and guaranteed air bubbles removal from the coating, it is necessary to roll the freshly applied coating with a needle roller. The rolling shall be carried out in different directions slow and sure for 2 minutes until the bubbles complete removal and finished as the coating viscosity increases. Do not remove the roller from the material when rolling. **Attention!** Work shall be carried out at a temperature not lower than + 15^0 C. The material temperature shall be within + (15-25^0 C).

Packaging and storage

The composition is supplied in sealed metal containers. The kit consists of two components (A, B), total weight — 10 kg, 20 kg. Store the composition in a tightly closed container, keep away from moisture, direct sunlight, and heat sources, at a temperature of 10 to + 30°C without condensation. The storage warranty period is 6 months from the manufacture date subject to compliance with the storage conditions.

Tools cleaning

Work tools and equipment shall be washed with a solvent P-5, 646 immediately after use. The cured composition can only be removed mechanically.

Security precautions

Persons working with epoxy composition shall be provided with personal protective equipment. All work shall be carried out in rooms equipped with supply and exhaust ventilation. In case of contact with skin or eyes, rinse thoroughly with water and seek medical advice if necessary. After complete drying and polymerization, the seamless floor is completely safe and allowed for operation in public, residential and industrial premises, including food production, catering, pharmaceutical industry, agriculture, in rooms for children and medical institutions.

When carrying out work, use personal protective equipment, avoid contact with eyes, respiratory tract and skin. Keep away from fire.

Remark

The information given in this specification is not intended to be completely comprehensive and any person using the product for any other purpose not mentioned in this specification without obtaining a written confirmation from us according to its suitability is acting at his or her own risk. We try to ensure that all recommendations are given regarding the product (in this or other specifications) are correct but we cannot control both the treated surface quality and condition, as well as take into account the many other factors influence that affects the way of use and product application. Therefore, unless we expressly agree in writing to do so, we assume no liability whatsoever for whatever happens due to the product application or for any loss or damage resulting from the use of the product. The information contained in this specification is subject to change from time to time based on our experience and continuous product development policy. It is the user responsibility to verify this specification is valid before using the product.