



POLYURETHANES

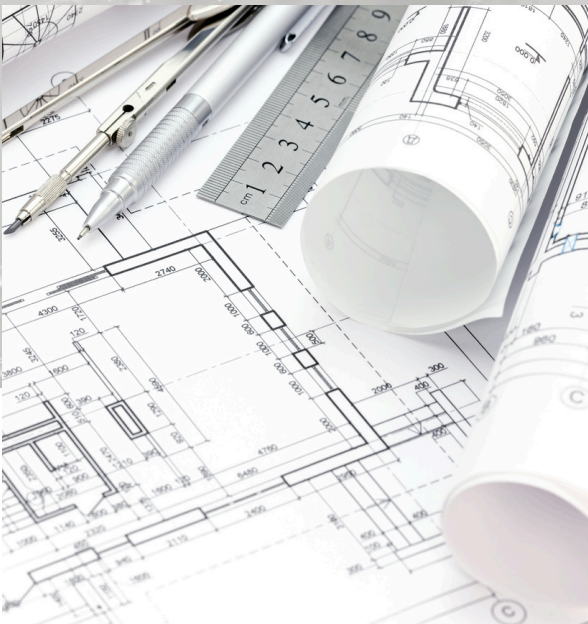
PU 280

Waterproofing Membrane

2024

**The Best
Product**

Single Component
High Performance
Keep Your Buildings Dry



PU 280

Polyurethane Liquid-applied Waterproof membrane



Product Description

SAFEGUARD PU 280 is a single component, polyurethane based waterproof coating that bridges cracks, curing with air & humidity. Liquid and ready to use. Adheres perfectly to various surfaces creating a durable and elastic film. Has high mechanical and chemical resistance and resistant to tensile, tear and abrasion with its flexible structure. SAFEGUARD PU 280 is suitable for pedestrian traffic subject to a suitable top coat.

Area of Application

- Terrace, roof, and rain gutters,
- On patio and balconies,
- Vehicle grade system for car parks,
- Stadium turbines,
- Bridge platforms,
- On light roofs made of metal and fibrous materials,
- Bitumen, PVC, EPDM based membranes,
- Used with appropriate primers on concrete, wood and metal surfaces.

Properties

- Suitable for cold application and can be easily applied with a roller, trowel, brush or airless spray gun,
- Creates a crack bridge,
- Resistance to ponding water,
- Suitable for light pedestrian walking.
- Maintains physical properties at -30°C to $+90^{\circ}\text{C}$
- Water vapor permeable and allows the surfaces to breathe.
- Excellent adherence properties.
- Shows effective resistance to chemicals.
- Does not contain toxic substances after curing.
- High elongation,
- Low VOC,
- Excellent weather and UV resistance

Surface Preparation

The surfaces to be applied should be dry and clean. Clean concrete and plaster residues mechanically: oil, grease, fuel and paraffin wastes should be cleaned using chemical solvents. Damaged coatings, uneven surfaces and cracks should be repaired with appropriate products. After the repair, the surface should be primed with PU based primer depending on the substrate and then the application of SAFEGUARD PU 280 should be started.

- Hardness of application concrete (R28 = 15 Mpa)
- Temperature: $5-35^{\circ}\text{C}$
- Relative humidity of air: $< 85\%$

Priming

Many absorbent surfaces such as concrete, cement screed or wood should be filled with PU lining before the primer application, without creating a film.

It is of great importance for good adhesion that the surface is smooth and saturated with primer. If the surface is not cleaned and primed properly it can lead to the removal of the applied product from the surface and the formation of problems such as bubbles, craters, pinholes etc. on the surface.

Preparation of Material

- SAFEGUARD PU 280 is a ready for use one component product. Before applying the product, mix with a suitable mixer at a speed of 300 RPM for 2-3 minutes.
- The packages should be kept at room temperature for 24 hours before opening and mixed to a homogenous consistency. Mixing should be done with low speed mixer and appropriate mixer tip.

Application

SAFEGUARD PU 280 is applied in 2 coats with thin comb trowel, airless spraying machines or brush or roller.

- Do not wait more than 24 hours between layers.
- In case of exceeding 24 hours, the application surface must be treated with sandpaper.
- If applying by spray, material should be diluted with MEK no more than 5%.
- SAFEGUARD PU 280, offers practical application in ready-to-use packaging, and can be applied without thinning.
- The application must be protected against water and rain, external influences and mechanical stress until it is dry.
- Second coat application should commence after approximately 8-12 hours. It should be kept in mind that the waiting time in hot weather may be shortened and may be extended in cold weather.
- The product should be applied in thin layers to avoid problems such as pinholes and craters. The amount to be applied to the floors is specified in the consumption section.

Consumption

- 1,4 -2.5 kg/m² - applied in 2 or 3 coats
- Consumption may vary according to surface roughness, ambient and surface temperature and application methods. Factors like surface porosity, temperature and type of application method can alter consumption. Application of SAFEGUARD Fabric reinforcement will increase consumption.

Limitations

- In closed areas, due to long-term solvent odour, the environment must be well ventilated.
- Do not install the product without the use of primer.
- It is recommended to use SAFEGUARD PU 450 or PU 440 topcoats after PU 280 is applied for UV protection and to prevent possible yellowing/chalking.
- The surface temperature should be >5° C
- The material should be mixed with a special mixing device and tip which does not exceed 300- 400 RPM and should not be mixed with a high speed drill.
- In cold weather, packaging must be stored at a minimum temperature of +15° C for at least 24 hours prior to application.
- There should be no negative water pressure present. In such a case, special insulation must be applied before application.
- After the application, the surface must be protected against water, rain, dew, snow, hail etc. until it is dry.
- Full mechanical and chemical strength will occur in 7 days .
- Contains solvent, flammable.
- Do not contact with open flames and do not smoke during application.
- For professional use only
- Not suitable for waterproofing of swimming pool surfaces that are in contact with chemically treated water.

Shelf Life

- The shelf life is 12 months, from production date, if the specified storage conditions are followed in its original unopened packaging.

Repair of cracks & joints

- Repair of cracks and joints: The careful sealing of existing cracks and joints before the application is extremely important for long lasting waterproofing results.
- Clean concrete cracks and hairline cracks, of dust, residue or other contamination. Prime locally with the SAFEGUARD PU 720 Primer and allow 2-3 hours to dry. Fill all prepared cracks with SG FLEX20 PU sealant. Then apply a layer of SAFEGUARD PU 280, 200mm wide centered over all cracks and while wet, cover with a correct cut strip of the SAFEGUARD Fabric. Press it to soak. Then saturate the SAFEGUARD Fabric with enough SAFEGUARD PU 280, until it is fully covered. Allow 12 hours to cure.
- Clean concrete expansion joints and control joints of dust, residue or other contamination. Widen and deepen joints (cut open) if necessary. The prepared movement joint should have a depth of 10-15 mm. The width: depth ratio of the movement joint should be at a rate of approx. 2:1.
- Apply some SG FLEX20 PU Joint-Sealant on the bottom of the joint only. Then with a brush, apply a strip of SAFEGUARD PU 280, 200mm wide centered over and inside the joint. Place the SAFEGUARD Fabric over the wet coating and with a suitable tool, press it deep inside the joint, until it is soaked and the joint is fully covered from the inside. Then fully saturate the fabric with enough SAFEGUARD PU 280. Then place a polyethylene cord of the correct dimensions inside the joint and press it deep inside onto the saturated fabric. Fill the remaining free space of the joint with SG FLEX20 PU sealant. Do not cover. Allow 12-18 hours to cure.

PROPERTY	RESULTS	TEST METHOD
Shore A Scale - Hardness	>65	ASTM D 2240 /DIN 53505 /ISO R868
Application Temperature	5°C to 35°C	Inhouse Lab
Elongation at break	600%	ASTM D 412
Tensile Strength	4 N/mm	ASTM D 412
Adhesion - Concrete	>1.9N/mm ² (Concrete surface failure)	EN 1542
Final curing time	7 days	Conditions : 20°C, 50% RH
Rain stability time	4 hours	Conditions : 20°C, 50% RH

Declaration

The information contained herein and in particular the application and end-use recommendations are provided in good faith, based on our current knowledge and experience when properly stored, prepared and applied. The documents does not cover all possible scenarios or imply product suitability for every case of application. Products, application surfaces and application areas are quite diverse in practice. Therefore, when using our products be sure to apply the right product in the right conditions and in the right place and strictly follow the information and instructions given by our company regarding commercial convenience and/or suitability for a particular purpose. Otherwise, Safeguard is not responsible for damages that may occur.

The user of the product (user) must test the suitability of the product for the application and purpose for which it intends to use the product. We reserve the right to change the specifications of our products. Property rights of third parties should be observed. Upon acceptance of all orders our current terms of sale and shipping shall prevail.

Users should always consider the latest edition of the Product Data Sheet (TDS), which we can obtain from our company.



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