

Neoproof® PU Fast

Fast-drying water-based aliphatic polyurethane waterproofing coating for roofs, with high resistance to early rain



Description

Fast-drying, one-component water-based aliphatic polyurethane waterproofing coating for roofs, with high resistance to early rain.

Dries very quickly, allowing recoating in just 2 hours and facilitating the full completion of the waterproofing system within one day.

Demonstrates resistance to early rain just 30 minutes after application.

Forms an impermeable to moisture membrane, with high resistance to UV radiation and mechanical stress.



Fields of application

- Exposed roofs made of concrete, cement tiles, cementitious screeds
- Walkable roofs where high resistance to ponding water is required
- Metallic surfaces
- On top of new or old liquid waterproofing membranes
- Over PU foam insulation for its protection
- On top of mineral-surfaced bitumen membranes

The above surfaces require appropriate preparation and priming prior to the application of Neoproof® PU Fast

Packing

13kg & 4kg

Colours

RAL 9003

RAL 7040

Properties - Advantages

- Quick application: Touch dry in 1 hour – Dry to recoat in 2 hours, facilitating the full completion of the waterproofing system within one day
- Resistance to early rain in just 30 minutes after application
- High elongation and mechanical strength
- Excellent resistance to ponding water
- Certified cool roofing properties (for the white colour shade)
- Ideal waterproofing solution for walkable roofs
- Long-lasting resistance to UV radiation & adverse weather conditions
- No signs of blisters or craters on the surface, during the curing phase

- Increased hardness and crack-bridging properties
- May also be applied on damp surfaces (not fully wet)
- Eco-friendly & user-friendly (water-based, one-component)
- Long service life secured

Certificates – Test reports

- CE Certification acc. to EN 1504-2
Certificate of Conformity No. 1922-CPR-0386
- Certified cool roofing material by the National Center for Scientific Research “Demokritos”
Reflectance and emissivity report by the Advanced Ceramics & Composites laboratory of the research center NCSR “Demokritos”
- Test report by the external independent quality control laboratory Geoterra (No. 2023-702_1)
- Fulfills the requirement LEED v4.1: SS Credit – Heat Island Reduction - Option 1 – High Reflectance Roof, Initial SRI ≥ 82
- Complies with the V.O.C. content requirements acc. to the E.U. Directive 2004/42/CE



Certified by:
NCSR
DEMKRITOS

Technical characteristics

Density (EN ISO 2811-1)	1,40kg/L (±0,1)
Elongation at break (ASTM D412)	350% (±30)
Tensile strength at break (ASTM D412)	2,20MPa (±0,20)
Tensile strength at break (reinforced with Neotextile®, ASTM D412)	>4,5MPa
Adhesion strength (EN 1542)	>2,0N/mm ²
Hardness Shore A (ASTM D2240)	68
Liquid water permeability (EN 1062-3)	<0,1kg/m ² h ^{0,5}
Permeability to CO ₂ – Diffusion-equivalent air-layer thickness Sd (EN 1062-6)	>50m
Water vapour permeability – Diffusion-equivalent air-layer thickness Sd (EN ISO 7783)	7,8m (Class II)
Accelerated UV ageing in the presence of moisture (UVB-313, 4h UV @60°C + 4h condensation @50°C, ASTM G154)	Pass (>1000 hours)
Service temperature	-15°C min. / +80°C max.
Total Reflectance SR% (ASTM C1549)	82% (white)
Infrared Emittance (ASTM E408)	0,96 (white)
Solar Reflectance Index SRI (ASTM E1980-11)	104 (white)
Consumption: 1-1,2kg/m² for two layers (cementitious surface)	

Application conditions

Substrate moisture content	<6%
Relative air humidity (RH)	<80%
Application temperature (ambient - substrate)	+5°C min. / +40°C max.

Curing details

Drying time (RH 50%)	+10°C	100-120 minutes
	+23°C	45-60 minutes
	+35°C	20-30 minutes
Dry to recoat (RH 50%)	+10°C	3 hours
	+23°C	2 hours
	+35°C	1 hour
Resistance to early rain (RH 50%)	+10°C	40 minutes
	+23°C	30 minutes
Resistance to early rain (RH 70%)	+40°C	40 minutes
Full hardening		~ 7 days

* Low temperatures and high humidity during application and/or curing prolong the above times, while high temperatures reduce them

**The above times for drying, recoating and early rain resistance refer to layer application of avg. consumption 600gr/m²

Appropriate primers on usual substrates

Substrate	Primer	Description - Details
Concrete, cement screed	Revinex® (diluted with water 1:4)	Water-based primer of high adhesion on cementitious substrates
	Silatex® Primer	Acrylic solvent-based primer, with high penetrating ability
	Vinyfix® Primer	Solvent-based primer based on vinyl resins, ideal for stabilizing brittle substrates
Bitumen membrane with mineral slates	Revinex® (diluted with water 1:4)	Water-based primer, suitable for stabilizing bitumen membranes with mineral slates, offering an ideal bridge of adhesion
Metal (iron, steel)	Neotex® Metal Primer	Water-based, one-component anti-corrosive primer, with excellent adhesion on old or new metal surfaces
Inox, galvanized steel, aluminium	Neotex® Inox Primer	One-component water-based primer, with high adhesion strength on glossy non-porous substrates

Instructions for use

Substrate preparation

The surface must be stable, clean, sufficiently dry, protected from rising moisture and free of dust, oil, grease and loose materials. Any poorly adhering materials and older coatings should be removed, and the surface should be thoroughly cleaned mechanically or chemically. Depending on the substrate, appropriate mechanical preparation may be required, to smooth the irregularities, open the pores and create the optimum conditions for adhesion. The surfaces should have the appropriate slopes and they should be sufficiently flat, smooth, and continuous (i.e., without holes, cracks, bays, etc.). In the opposite case, they should be treated accordingly (e.g. by proper puttying).

Priming

Prior to the application of **Neoproof® PU Fast**, the proper **NEOTEX®** primer should be applied, depending on the substrate (see table). In the case of cementitious substrates, it is proposed to apply **Revinex®** diluted with water in a ratio **Revinex®**: water - 1:4 or the solvent-based primers **Silatex® Primer** or **Vinyfix® Primer**.

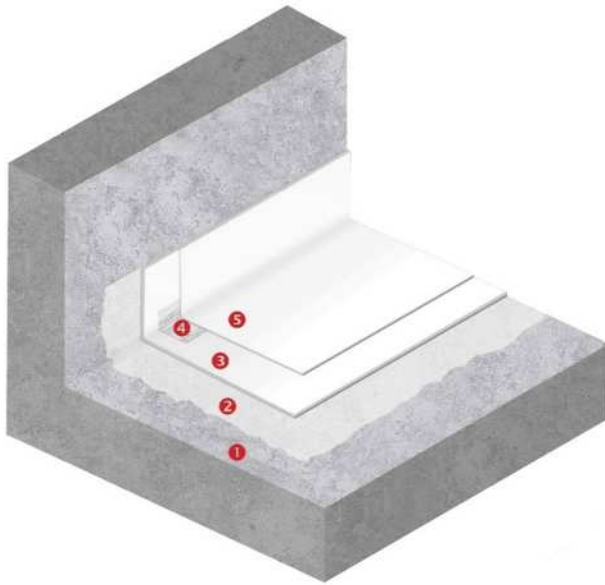
Application

Following the priming of the surface, **Neoproof® PU Fast** is applied, after thorough stirring, in at least two layers by roller, brush or airless spray. The first layer is diluted up to 5% with clean water, while the second layer (and every subsequent one) is applied undiluted, in a vertical or different direction than the previous one.

Along the upstands-floor intersections (as well as in all other corners), in construction details (such as around and inside roof drains), along the joints, as well as when covering cracks, it is advisable that **Neoproof® PU Fast** is locally applied in advance, reinforced with the specially designed non-woven polyester fabric **Neotextile®** of 50gr/m² weight ("wet-on-wet" application of two layers with the fabric positioned in between).

In cases of projects with higher demand in terms of mechanical resistance and crack bridging, it is recommended that **Neoproof® PU Fast** is thoroughly reinforced with the non-woven polyester fabric **Neotextile®** in the whole application surface.

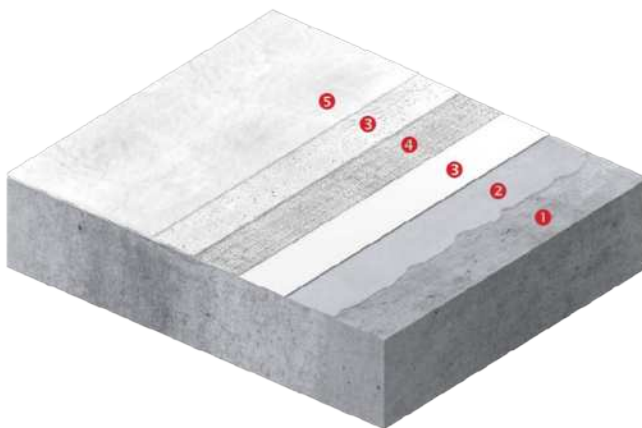
Indicative systems build-up



EXPOSED ROOF WATERPROOFING ON CEMENTITIOUS SUBSTRATE

- 1 Cementitious substrate
- 2 *Primer: Revinex®* diluted with water (mixing ratio 1:4)
- 3 *Waterproofing base coat: Neoproof® PU Fast* (diluted up to 5% with water)
- 4 *Corner reinforcement: Neotextile® tape*
- 5 *Waterproofing topcoat: Neoproof® PU Fast* (without dilution)

Consumption of Neoproof® PU Fast: 1-1,2kg/m²



REINFORCED WATERPROOFING SYSTEM FOR EXPOSED WALKABLE ROOFS

- 1 Cementitious substrate
- 2 *Primer: Revinex®* diluted with water (mixing ratio 1:4)
- 3 *Waterproofing base coats: Neoproof® PU Fast* (diluted up to 5% with water) "Wet-on-wet" application of two layers with the fabric positioned in between
- 4 *Polyester reinforcement: Neotextile®*
- 5 *Waterproofing topcoat: Neoproof® PU Fast* (without dilution)

Consumption of Neoproof® PU Fast: 2-2,5kg/m²

Special notes

- Substrate temperature during application and curing must be at least 3°C above dew point to avoid condensation issues.
- **Neoproof® PU Fast** should not be applied under extremely wet conditions (i.e. out of specification) or if rainy weather is expected immediately after application.
- The application is continued sufficiently in the vertical surfaces of the roof (min. 30cm), in order to form a uniform waterproofing membrane. It is recommended in any case to cover the upstands entirely and to continue the waterproofing application in their horizontal sections.
- The durability of the waterproofing system is enhanced by the increase of the total dry film thickness, which may be achieved through the application of an additional layer or layers.
- In areas with an increased likelihood of stagnant water remaining for an extended period of time, **Neoproof® PU Fast** is recommended to be reinforced with the polyester fabric **Neotextile®**. In such case at least 3 coats of **Neoproof® PU Fast** are required locally. In any case though, it is deemed necessary that appropriate slopes are created in advance to facilitate the smooth flow of water away from the roof.
- In case of new cement screed and soon after its laying, it is recommended to create suitable joints (per 15-20m² of surface area and at a depth approximately equal to ¼ of the thickness of the cement screed), which shall then be properly sealed (eg with closed-cell PE foam cord and **Neotex® PU Joint** after proper priming of their sides). It is also necessary to create expansion joints around the perimeter, as above, and with a minimum width of 1cm. Any existing joints of the concrete slab should be transferred to the new substrate.


Maintenance instructions

- The full hardening of the film occurs app. 7 days after the application of the final layer, depending also on the atmospheric conditions. During this period, it is advisable that the access to the application area is prohibited or limited only to specialized personnel.
- It is recommended to annually inspect the coating for any damage caused by accidental impact or misuse
- In case of need for local repairs, **Neoproof® PU Fast** is re-applied in its original dry film thickness at the minimum, after cleaning and priming (if necessary) the affected area. Where appropriate, it is recommended that the non-woven polyester fabric **Neotextile®** is used as a reinforcement.
- Periodic cleaning by water-jetting is advisable (combined with a neutral washing agent, if needed), especially in case of heavy accumulation of dirt, dust and pollutants on the surface

Appearance	Viscous liquid
Colours	White. Grey RAL 7040 Also available other shades upon request
Packing	13kg and 4kg in plastic pails



Cleaning of tools – Stains removal	By water immediately after application. In case of hardened stains, by mechanical means
Volatile organic compounds (V.O.C.)	V.O.C. limit acc. to the E.U. Directive 2004/42/CE for this product of category AcWB: 40g/l (Limit 1.1.2010) - V.O.C. content of the ready-to-use product <40g/l
UFI code	CH14-90SV-P002-53F4
Versions	Neoproof® PU W , water-based aliphatic polyurethane waterproofing coating Neoproof® PU Fiber , fiber-reinforced waterproofing coating Neoproof® PU W -40 , with resistance to extremely low temperatures down to -40°C Neoproof® PU360 , for non-exposed surfaces Neoproof® PU Fast 30 , fast-drying, with resistance to early rain and to low temperatures down to -30°C
Storage stability	2 years, stored in its original sealed packing, protected from frost, humidity and exposure to sunlight

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1922-CPR-0386 DoP No.: 4950-98 EN 1504-2 Neoproof® PU Fast Surface protection products Coating	
Water vapour permeability	Class II
Adhesion strength	≥1.5N/mm ²
Capillary absorption and permeability to water	W<0.1Kg/m ² h ^{0.5}
Permeability to CO ₂	S _D >50m
Reaction to fire	Euroclass F
Dangerous substances	Comply with 5.3

The information supplied in this datasheet, concerning the uses and the applications of the product, is based on the experience and knowledge of NEOTEX® SA. It is offered as a service to designers and contractors to help them find potential solutions. However, as a supplier, NEOTEX® SA does not control the actual use of the product and therefore cannot be held responsible for the results of its use. As a result of continual technical evolution, it is up to our clients to check with our technical department that this present data sheet has not been modified by a more recent edition.

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