

## Neopox® SF Plus

**Solvent-free high-build epoxy coating,  
for flooring applications**



### Description

Two-component, solvent-free, high-build epoxy coating, suitable for flooring applications

### Fields of application

Interior floors of parking & car service garages, warehouses, factories, supermarkets, stores, laboratories, etc.

*The surfaces require appropriate preparation and priming prior to the application of Neopox® SF Plus.*



### Properties - Advantages

- High mechanical and chemical resistance
- Remarkable hardness and durability
- Excellent resistance to abrasion and impact
- Very high compressive and flexural strength
- Excellent adhesion on concrete substrate
- Resistant to alkalis and dilute acids, petroleum products, sea water and many solvents
- Also ideal for the creation of anti-slip interior floors, by sprinkling quartz sand between layers

### Packing

Sets (A+B) of 16kg and 5kg

### Colours

RAL 7035

### Certificates – Test reports

- CE Certification acc. to EN 1504-2
- Test report by the external independent quality control laboratory Geoterra (No. 2019/300 & No. 2021/483\_9)
- Complies with the V.O.C. content requirements acc. to the E.U. Directive 2004/42/CE



Technical characteristics	
Mixing ratio A:B (by weight)	130:30
Density (EN ISO 2811-1)	1,50kg/L (±0,1)
Solids content by weight	~98%
Solids content by volume	~97%
Gloss (60°)	97
Abrasion resistance (Taber Test, CS 10/1000/1000, ASTM D4060)	68mg
Adhesion strength (EN 1542)	≥2,5N/mm <sup>2</sup>
Hardness Shore D (ASTM D2240)	72
Impact resistance (EN ISO 6272)	≥4Nm
Scratch hardness (Sclerometer Test - Elcometer 3092)	5N
Compressive strength (EN 13892-2)	≥85MPa
Flexural strength (EN 13892-2)	≥60MPa
Skid resistance (EN 13036-4, wet surface, by broadcasting Quartz Sand M-32)	>23 (PTV – slider 55)
Liquid water permeability (EN 1062-3)	<0,1kg/m <sup>2</sup> h <sup>0,5</sup>
Permeability to CO <sub>2</sub> – Diffusion-equivalent air-layer thickness Sd (EN 1062-6)	>50m
Water vapour permeability – Diffusion-equivalent air-layer thickness Sd (EN ISO 7783)	>5m (Class II)
Resistance to temperatures (dry loading)	-30°C min. / +100°C max.
<b>Consumption: 250-300gr/m<sup>2</sup> per layer</b>	

Application conditions	
Substrate moisture content	<4%
Relative air humidity (RH)	<70%
Application temperature (ambient - substrate)	+12°C min. / +35°C max.

Curing details		
Pot life (RH 50%)	+12°C	1 hour
	+25°C	40 minutes
	+30°C	30 minutes
Dry to recoat – walkability (RH 50%)	+12°C	36 hours
	+25°C	24 hours
	+30°C	24 hours
Full hardening	~ 7 days	



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

### Appropriate primers on concrete substrate

	Primer	Description - Details
Solvent-free	<b>Epoxol® Primer SF</b>	Two-component, solvent-free epoxy primer for flooring applications
	<b>Epoxol® Primer SF-P</b>	Two-component, solvent-free epoxy primer, ideal in cases of substrates with increased porosity
	<b>Neopox® Primer WS</b>	Two-component, solvent-free epoxy primer for wet surfaces (without ponding water or rising moisture)
	<b>Neopox® Primer AY</b>	Two-component, solvent-free anti-osmotic epoxy primer, for floors with rising moisture
Water-based	<b>Acqua Primer</b>	Two-component, water-based epoxy primer
Solvent-based	<b>Epoxol® Primer</b>	Two-component, solvent-based epoxy primer

## Instructions for use

### Substrate preparation

The concrete must be min. Grade C20/25, with a tensile strength of  $\geq 1,5\text{MPa}$ , and allowed to cure for at least 28 days, taking all the necessary maintenance measures during its curing period. The cementitious substrate must be properly prepared mechanically (e.g. grinding, shot blasting, milling etc.) to smooth out the irregularities, achieve an open-textured surface and ensure optimum adhesion.

The surface must be dry and protected from rising moisture, stable, clean and free of dust, grease, oil, etc. Loose friable material must be fully removed by brushing or sanding with a suitable machine and a high suction vacuum cleaner.

The surface must be as smooth and flat as possible, as well as continuous (ie without voids, cracks etc.)

Repairs to the substrate, filling of joints, blowholes/voids and surface leveling must be carried out using appropriate repairing products, such as the pourable epoxy-cement mortar **Epoxol® CM** and the epoxy putty **Epoxol® Putty**, or/and a mixture of **Epoxol® Primer SF-P** and Quartz Sand M-32 (indicative mixing ratio 1:1-2 w/w), after proper priming.

### Priming

For the stabilization of the substrate and sealing of pores, as well as for creating the optimum conditions for stronger adhesion and higher coverage of the subsequent epoxy system, it is recommended to apply the solvent-free epoxy **Epoxol® Primer SF-P** or an alternative appropriate **NEOTEX®** primer (see table), depending on the substrate. In cases of substrates with increased porosity, an additional priming layer may be required.

After the primer has dried, any further existing surface imperfections (holes, cracks) may be repaired locally using **Neopox® SF Plus** mixed with Quartz Sand M-32 (indicative mixing ratio 1:1,5 w/w). Alternatively, **Epoxol® Putty** may be used in a ratio 2A:1B or 1A:1B w/w, depending on application conditions.



### **Application**

#### *Smooth epoxy coating*

Once the primer is dry to overcoat, **Neopox® SF Plus** is applied as an epoxy coating in min. two layers by roller. The second layer is applied ~24 hours after the application of the first one depending on the prevailing atmospheric conditions.

Prior to mixing, mechanical stirring of component A for 1 minute is recommended. This is followed by the addition of component B into component A in the predetermined ratio (13A : 3B w/w) and stirring of the two components for app. 3-5 minutes with a low speed electric stirrer. It is important to stir thoroughly both near the sides and at the bottom of the container, so that the hardener (component B) is evenly distributed.

Consumption of **Neopox® SF Plus**: 0,25-0,30kg/m<sup>2</sup> per layer

#### *Anti-slip epoxy coating*

After the priming and during the application of the first layer of **Neopox® SF Plus**, it is recommended to broadcast Quartz Sand M-32 until saturation on the still fresh layer of **Neopox® SF Plus**, with an estimated sand consumption of 3kg/m<sup>2</sup>. After drying, any loose grains should be removed with a high suction vacuum cleaner and any surface irregularities should be sanded down. The surface is then sealed with **Neopox® SF Plus**, applied by roller in one layer.

Consumption of **Neopox® SF Plus** as sealing layer: ~0,40-0,50kg/m<sup>2</sup>

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## Special notes

- **Neopox® SF Plus** should not be applied under wet conditions, or if wet conditions are expected to prevail during the application or the curing period of the product. Increased humidity may have a negative impact on the adhesion, film properties and the final result (e.g. blur, stickiness)
- The components should not have been stored at very low or very high temperatures, especially before mixing. Mixing and stirring of the mixture should be preferably done in the shade. The stirring of the mixture must be done mechanically and not manually with a rod, etc.
- Excessive stirring of the material should be avoided, in order to mitigate the risk of air entrapment. After stirring the mixture, it is recommended to apply the material shortly in order to avoid the development of high temperatures and potential hardening inside the can
- The substrate temperature must be at least 3°C above dew point to reduce the risk of condensation or blooming on the floor finish
- Due to the nature of the material, the direct and permanent exposure of the final coating to UV radiation may cause the phenomenon of chalking over time. For this reason, the application on exterior areas is not recommended.
- The application of **Neopox® SF Plus** by roller as a smooth epoxy coating leads to a mild embossed finish ("orange peel" finish)
- In case that an extended period of time (>36 hours) has passed between successive layers, it is recommended to lightly sand the surface of the previous layer, in order to avoid possible adhesion problems of the next layer



- Depending on the desired slip resistance, quartz broadcast may be done by using quartz sand of greater granulometry (e.g. 0,4-0,8mm)

## Maintenance instructions

- In case of minor spills and stains, it is recommended to remove them as soon as possible by using a soft cloth along with warm clean water (temperature <+60°C)
- For the maintenance cleaning of the surface from dust and dirt, it is recommended to use a vacuum cleaner or a soft bristle broom. The use of hard brushes or wires to remove the stains should be avoided.
- For cleaning the surface from hardened stains, it is recommended to use a hard foam mop with a solution of water and ammonia (~3% dilution). Then, rinse off with clean warm water (temperature <+60°C) and dry the surface with a soft towel.
- In case of using commercial cleaning products, the use of neutral ones is recommended (pH between 7 and 10). Soaps or all-purpose cleaners containing water-soluble salts or harmful ingredients with high concentration in alkalis or acids should be avoided. Follow the manufacturer's recommendations with respect to the optimum dilution with water. In any case, the first time a commercial cleaning product is used, it is recommended that a trial is made in a small surface area.

## Chemical resistance table

Chemical substances (% content)	Contact time with chemicals (+20°C)		
	1 hour	1 hour	1 hour
Phosphoric acid (10%)	C	C	C
Sulphuric acid (10%)	B	B	B
Hydrochloric acid (10%)	A	A	A
Lactic acid (10%)	B	B	B
Nitric acid (10%)	B	D	D
Sodium hydroxide (10%)	A	D	D
Formaldehyde (10%)	A	A	A
Ammonia (10%)	A	A	A
Chlorine (5%)	A	B	B
Diesel	A	A	A
Gasoline unleaded	A	A	A
Xylene	A	A	A
M.E.K	A	A	A
Alcohol 95 <sup>0</sup>	A	A	A
Saltwater 15%	A	A	A
Engine oil	A	A	A
Wine (red)	A	A	A



**Evaluation of resistance**

- A: Excellent resistance
- B: Good resistance (light discoloration)
- C: Reduced resistance (intense discoloration)
- D: Not recommended

<b>Appearance (cured)</b>	Glossy
<b>Colours</b>	Light grey RAL 7035 Available in other shades upon request
<b>Packing</b>	Sets (A+B) of 16kg and 5kg in plastic containers
<b>Cleaning of tools – Stains removal</b>	By <b>Neotex® 1021</b> immediately after application. In case of hardened stains, by mechanical means
<b>Volatile organic compounds (V.O.C.)</b>	V.O.C. limit acc. to the E.U. Directive 2004/42/CE for this product of category AjSB: 500g/l (Limit 1.1.2010) - V.O.C. content of the ready-to-use product <500g/l
<b>UFI code</b>	<i>Component A:</i> G080-A0FA-D005-CTY3 <i>Component B:</i> Y380-U04Q-P00P-05J5
<b>Storage stability</b>	2 years, stored in its original sealed packing, protected from frost, humidity and exposure to sunlight



<b>CE</b>	
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DoP No.: 4950-51  <b>EN 1504-2</b>  <b>Neopox® SF Plus</b>  Surface protection products  Coating	
Water vapour permeability	Class II
Adhesion strength	≥1.5N/mm <sup>2</sup>
Capillary absorption and permeability to water	W<0.1Kg/m <sup>2</sup> h <sup>0.5</sup>
Permeability to CO <sub>2</sub>	S <sub>D</sub> >50m
Reaction to fire	Euroclass F
Dangerous substances	Complies to 5.3

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