Neopox® W Plus

Premium, two-component water-based epoxy coating, of ultra-low VOC emissions, with satin appearance

Description

Premium, two-component brushable water-based epoxy coating, of ultra-low VOC emissions, with satin appearance.

Qualified for use in **LEED** projects globally, by showing compliance with the specifications for VOC content *(<1g/l*) and VOC emissions, achieving the highest classification in terms of TVOC emissions *(<0,5mg/m^3*).

Classified in the highest emission class **A+** with respect to VOC emissions in interior areas.

Certified excellent reaction to fire (**Class B_{fl}-s1**) acc. to **EN 13501-1**.

Presents exceptional wet-scrub resistance (**Class 1** acc. to **EN 13300**).

Suitable for the food industry in various food facilities - Complies with the overall migration limits for a wide variety of types of food, acc. to the Commission Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food.

Packing

Sets (A+B) of 12,5kg, 5kg and 1,25kg

Colours

RAL 9003 | RAL 7035

Fields of application

Indoor floors, walls and ceilings of:

- Production sites
- Warehouses, shops and parking areas
- Rooms with increased humidity, such as bathrooms and kitchens

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

Properties - Advantages

- High resistance to abrasion and mechanical stress
- Resistant to water, alkalis and dilute acids, detergents, mild solvents
- Excellent wet-scrub resistance (**Class 1** acc. to **EN 13300**)
- Practically zero content in volatile organic compounds (*Zero-VOC paint*), combined with ultra-low VOC emissions
- Contributes to the optimization of indoor air quality: **A+** acc. to the French legislation requirements
- Resistant to water, alkalis and dilute acids, detergents, mild solvents

- Complies with the strict VOC requirements for sustainable buildings, according to **LEED** guidelines
- Certified high performance in terms of reaction to fire (**Class B_{fl}-s1** acc. to **EN 13501-1**)
- Tested and evaluated for its suitability in food facilities
- Odourless – Ideal for interior rooms, where solvent fumes are unwanted
- Exceptional adhesion on various substrates
- User-friendly & eco-friendly

Certificates – Test reports

- CE certification acc. to EN 1504-2
- Qualified for use in LEED projects globally, by showing compliance with the specifications for VOC emissions and VOC content, as attested by the external independent specialized laboratory of Eurofins - Fulfils the requirement LEED v4 & v4.1 (beta): EQ Credit - Low-Emitting Materials, achieving the highest classification in terms of TVOC emissions *(<0,5mg/m^3)*, combined with VOC content <1g/l
  - *Attestation LEED v4 and v4.1 (beta): EQ Credit - Low-Emitting Materials*
  - *VOC Emission Test report No. 392-2023-00256101 – Regulation: CDPH (California Department of Public Health) v.1.2-2017*
  - *VOC Content Test report No. 392-2023-00256101 – Regulation: SCAQMD (South Coast Air Quality Management District) Rule 1113 (2016)*
- Certification of compliance with the French regulation regarding indoor VOC emissions - Classified in the highest emission class A+
  - *Attestation French VOC Regulation: VOC emission class A+*
  - *VOC Emission Test report No. 392-2023-00256101 – French VOC Regulation: Decree of March 2011 and Arrête of April 2011 and French CMR components: Regulation of April and May 2009*
- Certified for its high performance in terms of reaction to fire acc. to EN 13501-1 *Classified as B_{fl}-s1 based on classification report No. 1608\DC\REA\23_3 acc. to EN 13501-1 and individual test reports acc. to EN ISO 9239-1 and EN ISO 11925-2 (No. 1608\DC\REA\23_1 & 2) by the independent accredited laboratory CSI S.p.A*
- Tested and evaluated for its suitability in food facilities – Complies with the overall migration limits for all types of food, except for acidic foods (i.e. vinegar or foods with pH≤4,5), acc. to Table 3 of Annex III-Part 4 of the Commission Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food. *Test report for the overall migration into food simulants A-B-D2 acc. to EN 1186-2, EN 1186-3 and EN 1186-9, by the external independent specialized laboratory of TÜV AUSTRIA Food Allergens Labs (Certificate No. 5012-GR01052204-23-08*
- Tested successfully and evaluated for its wet-scrub resistance, cleaning ability and resistance to liquids – Classified in the highest class (Class 1) acc. to EN 13300 *Test report by the external independent quality control laboratory Eurofins (No. 392-2023-00256102)*
- Test report by the external independent quality control laboratory Geoterra (No. 2019-300 & 2023/333_37)
- 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)	100:25
Density (EN ISO 2811-1)	1,40kg/L (±0,1)
Gloss (60°)	62
Abrasion resistance (Taber Test, CS 10/1000/1000, ASTM D4060)	78mg
Adhesion strength (EN 1542)	≥2,5N/mm²
Flexibility (Mandrel Bend Test, ASTM D522, 180° bend, 1/8'' mandrel)	Pass
Scratch hardness (Sclerometer Test - Elcometer 3092)	5N
Impact resistance (EN ISO 6272)	≥5Nm
Skid resistance (EN 13036-4, wet surface, with 2,5% w/w addition of Neotex® Antiskid M)	38 (PTV - slider 55)
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)	6,5m (Class II)
Wet-scrub resistance (EN 13300)	Class 1
Cleaning ability (EN ISO 11998:2006-10)	Cleanable
Resistance to liquids – absorbent medium (EN ISO 2813-3)	No visible defects
Resistance to temperatures (dry loading)	-30°C min. / +70°C max.
Reaction to fire (EN 13501-1)	Class B_{fl}-s1* **Classification report: No. 1608\DC\REA\23_3 - CSI S.p.A.*
Consumption: 330-400gr/m² for two layers	

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 (+25°C, RH 50%)	45 minutes
Dry to recoat (+25°C, RH 50%)	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 cementitious substrate		
	Primer	**Description - Details**
Water-based	**Acqua Primer**	Two-component, water-based epoxy primer
Solvent-free	**Epoxol® Primer SF**	Two-component, solvent-free epoxy primer for flooring applications
	Epoxol® Primer SF-P	Two-component, solvent-free epoxy primer, ideal in cases of substrates with increased porosity
	Neopox® Primer WS	Two-component, solvent-free epoxy primer for wet surfaces (without ponding water or rising moisture)
	Neopox® Primer AY	Two-component, solvent-free anti-osmotic epoxy primer, for floors with rising moisture
Appropriate primers on metallic substrate (iron - steel)		
Solvent-based	**Neopox® Primer 815**	Two-component, anticorrosive solvent-based epoxy primers suitable for metallic surfaces
	Neopox® Special Primer 1225	
Appropriate primers on galvanized substrate - stainless steel		
Water-based	**Neotex® Inox Primer**	One-component, water-based primer, ideal for inox, aluminium, galvanized surfaces

Instructions for use

Substrate preparation

Concrete

The concrete must be min. Grade C20/25, with a tensile strength of ≥1,5MPa, 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.

Metallic surfaces (iron – steel)

The metallic surfaces must be properly prepared by sandblasting or sanding with a wire brush and should be dry, free of dust, dirt, greasy and oily substances, as well as any poorly adhering coatings. In rusty areas, it is recommended to locally apply the chemical rust converter **Neodur® Metalforce.** New metallic surfaces should be degreased with dilutant **Neotex® 1021**.

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 coating, it is recommended to apply the water-based epoxy **Acqua Primer** 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.

Application

Smooth epoxy paint

Once the primer is dry to overcoat, it is recommended to apply the first layer of **Neopox® W Plus** diluted 10-15% w/w with water, by roller, brush or airless spray. The second layer is applied ~24 hours after the application of the first one, (depending also on the atmospheric conditions), diluted 5-10% w/w with water. For any additional layers, **Neopox® W Plus** shall be diluted 5% w/w with water.

The two components A & B are mixed in the predetermined ratio (100A : 25B w/w) and, after the addition of the water, they are stirred for app. 3-5 minutes with a low-speed electric stirrer, until the mixture is homogeneous. The stirring must be done both near the sides and at the bottom of the container, so that the hardener is evenly distributed. The mixture is left for a short time period in the container (~1-2 minutes) and then applied. Prior to mixing, mechanical stirring of component A & B is recommended.

Consumption of **Neopox® W Plus:** 0,33-0,40kg/m^2 in two layers

*Anti-slip epoxy paint with addition of **Neotex® Antiskid M***

Once the primer is dry to overcoat, **Neopox® W Plus** is applied as described above by roller, brush or airless spray. During the mixing process of **Neopox® W Plus** prior to the application of the final layer of the system, the anti-slip additive **Neotex® Antiskid M** is included in the mixture at a ratio of 1,5-2,5% w/w. Then, the mixture is stirred again with a low-speed electric stirrer for ~1 minute and **Neopox® W Plus** is applied on the surface by roller or brush.

Consumption of **Neopox® W Plus:** 0,33-0,40kg/m^2 in two layers

Anti-slip epoxy paint with broadcast of Quartz Sand M-32

After the priming and during the application of the first layer of **Neopox® W Plus** (diluted 10-15% w/w with water), it is recommended to broadcast Quartz Sand M-32 until saturation on the still fresh layer of **Neopox® W Plus**, with an estimated sand consumption of 2-3kg/m^2. After drying, any loose grains should be removed with a high suction vacuum cleaner and any surface irregularities should be sanded down.
Then, the sealing layer of **Neopox® W Plus** is applied diluted 5-10% w/w with water, applied in 1 or 2 layers, depending of the desired slip resistance.

Consumption of **Neopox® W Plus:** ~0,50-0,60kg/m^2 in two or three layers

Special notes

- **Neopox® W 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, the film properties and/or the final result (e.g. blurry surface, 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 materials, 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 in exterior areas is not recommended.
- 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
- The application of **Neopox® W Plus** by roller as a smooth epoxy coating leads to a mild embossed finish ("orange peel" finish)
- Prior to the application on existing epoxy coatings, light sanding of the whole surface is required
- Depending on the desired slip resistance, quartz broadcast may be done by using quartz sand of greater granulometry (e.g. 0,4-0,8mm). In such case, the number of sealing layers and total consumption may increase

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 <+50°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 <+50°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	5 hours	24 hours
Phosphoric acid (10%)	C	C	C
Sulphuric acid (10%)	C	C	C
Hydrochloric acid (10%)	B	B	B
Lactic acid (10%)	C	C	C
Nitric acid (10%)	C	D	D
Sodium hydroxide (10%)	D	D	D
Formaldehyde (10%)	A	A	A
Ammonia (10%)	A	A	A
Chlorine (5%)	B	C	D
Diesel	A	A	A
Gasoline unleaded	A	A	A
Xylene	A	A	A
M.E.K	B	B	B
Alcohol 95^0	A	A	A
Saltwater 15%	A	A	A
Engine oil	A	A	A
Wine (red)	A	A	A
Sea water	A	A	A

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

Appearance (cured)	Satin
Colours	White RAL 9003, Light grey RAL 7035 Tailor-made shades available, upon special arrangement
Packing	Sets (A+B) of 12,5kg, 5kg and 1,25kg 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 AjWB: 140g/l (Limit 1.1.2010) - V.O.C. content of the ready-to-use product <140g/l

UFI code	*Component A:* 9E80-U0W9-W00N-NHVE *Component B:* APE0-R00H-K00U-0CEC
Versions	**Neopox® W**, with mat appearance, suitable for use in the food industry
Storage stability	2 years, stored in its original sealed packing, protected from frost, humidity and exposure to sunlight

CE

NEOTEX S.A.
V.Moira str., P.O. Box 2315
GR 19600 Industrial Area Mandra, Athens, Greece

19

DoP No.: 4950-52

EN 1504-2

Neopox® W Plus

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	B_{fl}-s1
Dangerous substances	Complies 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.

HEADQUARTERS - PLANT
V. Moira str., Xiropigado
LOGISTICS SALES & CENTER
Loutsas str., Voro

P.O. Box 2315, GR 19600
Industrial Area Mandra
Athens, Greece
T. +30 210 5557579

NORTHERN GREECE BRANCH
Ionias str., GR 57009
Kalochori, Thessaloniki, Greece
T. +30 2310 467275

www.neotex.gr ● export@neotex.gr