

Neodur® Varnish W Satine



Transparent, water-based, two-component aliphatic polyurethane satin varnish

Description

Two-component water-based aliphatic polyurethane clear satin varnish, suitable for the protection of decorative micro-cement coatings and various other construction surfaces.

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.

Suitable for the food industry – Complies with the overall migration limits *for all 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 9kg, 3kg and 0,8kg

Appearance (cured)

Clear, satin

Fields of application

- Protection and decoration of micro-cement coatings
- Protection and decoration of cementitious and metallic surfaces, natural stone, polyester, industrial floors, epoxy and other resinous systems in interior or exterior areas
- Suitable for surfaces that come into contact with food
- Suitable for light to medium duty flooring applications
- Ideal for applications on walls

Properties - Advantages

- Protects against water absorption and enhances the mechanical strength of micro-cement coatings and several other substrates
- Contains UV filters, offering long-term resistance to solar radiation and yellowing
- Renders a final surface of high hardness with excellent resistance to abrasion and scratching
- Practically zero content in volatile organic compounds (Zero-VOC), combined with ultra-low VOC emissions
- Contributes to the optimization of indoor air quality: **A+** acc. to the French legislation requirements

- Complies with the strict VOC requirements for sustainable buildings, according to **LEED** guidelines
- Tested and evaluated for its suitability in food facilities
- Presents very good resistance to pollutants and common stains
- Excellent adhesion properties on numerous substrates
- Ideal for interior rooms, where solvent fumes are unwanted
- May be also used for the creation of highly anti-slip surfaces, after the appropriate addition of antiskid additive
- Eco-friendly & user-friendly
- Excellent aesthetic result

Certificates – Test reports

- CE Certification acc. to EN 1504-2
Certificate of Conformity No. 1922-CPR-0386
- 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
 - *Attestation LEED v4 and v4.1 (beta): EQ Credit - Low-Emitting Materials*
 - *VOC Emission Test report No. 392-2024-00059001 – Regulation: CDPH (California Department of Public Health) v.1.2-2017*
 - *VOC Content Test report No. 392-2024-00059002 – 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. 392-2024-00059001 – French VOC Regulation: Decree of March 2011 and Arrête of April 2011 and French CMR components: Regulation of April and May 2009*
- Tested and evaluated for its suitability in food facilities – Complies with the overall migration limits *for all types of food* 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-GR01057146-24-08)
- Test report by the external independent quality control laboratory Geoterra (No. (No. 2023/702_6)
- Complies with the V.O.C. content requirements acc. to the E.U. Directive 2004/42/CE



Technical characteristics

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| Mixing ratio A:B (by weight) | 100:25 |
| Density (EN ISO 2811-1) | 1,07kg/L (±0,05) |
| Gloss (60°) | ~30 |
| Abrasion resistance (Taber Test, CS 10/1000/1000, ASTM D4060) | 27mg |
| Adhesion strength (EN 1542) | ≥2,5N/mm ² |
| Flexibility (Mandrel Bend Test, ASTM D522, 180° bend, 1/8" mandrel) | Pass |
| Scratch hardness (Sclerometer Test - Elcometer 3092) | 7N |
| Skid resistance (EN 13036-4, wet surface, with 2,5% w/w addition of Neotex® Antiskid M) | >45 (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) | >5m (Class II) |
| Resistance to temperatures (dry loading) | min. -30°C / max. +80°C |
| Consumption: ~125 gr/m² per layer (on properly prepared surfaces) | |

Application conditions

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| Substrate moisture content | <4% |
| Relative air humidity (RH) | <65% |
| Application temperature (ambient - substrate) | +8°C min. / +35°C max. |

Curing details

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| Pot life (+25°C, RH 50%) | 1 hour |
| Drying time (+25°C, RH 50%) | 4,5 hours |
| Dry to recoat (+25°C, RH 50%) | 8 hours |
| Full hardening | ~ 7 days |

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

Instructions for use

Substrate preparation

The surface must be stable, clean, 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 by

proper mechanical or chemical means. Depending on the substrate, appropriate mechanical preparation may be required, in order to smooth out the irregularities, open the pores and create the optimum conditions for adhesion.

Priming

Especially in the case of a micro-cement substrate, it is advisable to prime the surface with the hybrid primer **Neodur® Varnish PR** diluted 25-30% w/w with clean water.

Application

Once the primer is dry to overcoat, it is recommended to apply **Neodur® Varnish W Satine**, diluted 20-25% w/w with water, by roller or brush, in at least two layers.

The two components A & B are mixed in the predetermined ratio (10A:2,5B w/w) and, after the addition of water in the appropriate ratio, they are mechanically stirred for ~3 minutes with a low-speed stirrer until the mixture becomes homogeneous. The mixture is left for ~5 minutes and then applied.

For enhanced anti-slip properties, it is recommended that the final layer of **Neodur® Varnish W Satine** is applied after the product has been mixed 1,5-2,5% w/w with the anti-slip additive **Neotex® Antiskid M**.

Special notes


- **Neodur® Varnish W Satine** 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.
- **Neodur® Varnish W Satine** should not be applied on surfaces where water repellent impregnation materials (e.g., siloxane-based) or waxes have been applied in the past.
- Depending on the porosity of the substrate, the application of multiple protective layers may be required to achieve full sealing. This is particularly important on cementitious substrates where no priming with **Neodur® Varnish PR** has been carried out, in which case the application of at least three layers of the varnish is deemed necessary.
- Depending on the intended use, the application of extra protective layers may be needed in order to form a protective film of increased total thickness.

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.

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| Appearance (cured) | Clear, satin |
| Packing | Sets (A+B) of 9kg, 3kg and 0,8kg |
| 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 “Two-Pack reactive performance coatings”: 140g/l (Limit 2010). V.O.C. content of the ready to use product <140g/l |
| UFI code | <i>Component A:</i> X9MH-50E5-600T-AY3V <i>Component B:</i> VCMH-P03J-H00A-Y9QH |
| Versions | Neodur® Varnish W Gloss , water-based, with glossy appearance Neodur® Varnish W Mat , water-based, with mat appearance Neodur® Varnish Gloss , solvent-based, with glossy appearance Neodur® Varnish Satine , solvent-based, with satin appearance Neodur® Varnish Mat , solvent-based, with mat appearance |
| Storage stability | <i>A component:</i> 2 years, stored in its original sealed packing, protected from frost, humidity and exposure to sunlight. <i>B component:</i> 6 months, stored in its original sealed packing, protected from frost, humidity and exposure to sunlight. Component B must be stored in an absolutely dry place, protected from frost and humidity. In case of contact with ambient moisture it can be polymerized inside the container. |

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| NEOTEX S.A. V.Moira str., P.O. Box 2315 GR 19600 Industrial Area Mandra, Athens, Greece 24 | |
| 1922-CPR-0386 DoP No.: 4951-04 EN 1504-2 Neodur® Varnish W Satine 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 | 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.

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