

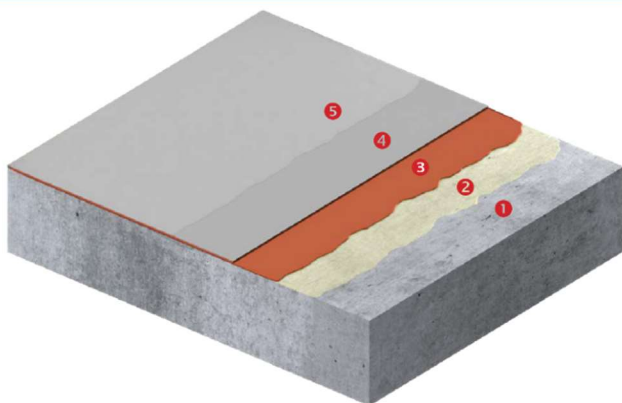
Neodur® Floor SF NVW/S ESLi-25s SF-P

Smooth solvent-free tough-elastic self-levelling system, with an intermediate leveling layer and an abrasion resistant satin finish of protective varnish, for interior industrial floors

- ✓ Dry film thickness: ~2,5mm
- ✓ For medium-heavy duty floors
- ✓ Smooth satin finish
- ✓ Elevated crack-bridging properties
- ✓ Solvent-free - LEED compliant in terms of VOC emissions and VOC content
- ✓ Excellent reaction to fire (B_{fl-s1} acc. to **EN 13501-1**)
- ✓ Suitable for use in the food industry



System Build-up – Indicative Consumptions		
Layer	Product	Consumption
Priming	Epoxol® Primer SF-P	200-300gr/m ² for one layer
Leveling layer (scratch coat)	Epoxol® Primer SF-P + Quartz Sand M-32 (0,1-0,3mm) - avg. ratio 1:1 w/w	1,2-1,4kg/m ² for the mixture (=0,60-0,70kg/m ² resin + 0,60-0,70kg/m ² sand)
Wearing layer	Neodur® Floor SF	~2kg/m ² for ~1,5mm thickness
Final protective layers	Neodur® Varnish W Satine	~250gr/m ² for two layers by roller



System Characteristics

Nominal thickness	2,5mm
Final surface appearance	
Smooth coloured, satin Gloss (60°): ~30	
User load	
MD/HD (Medium-Heavy Duty)	
Reaction to fire (EN 13501-1)	
B _{fl} -s1	
Abrasion resistance (Taber Test, CS 10/1000/1000, ASTM D4060)	
30mg	
Scratch hardness (Sclerometer Test - Elcometer 3092)	
5N	
Adhesion strength (EN 13892-8)	
≥2,5N/mm ²	
Impact resistance (EN ISO 6272)	
≥10Nm – IR10	
Resistance to temperatures (dry loading)	
-30°C min. / +80°C max.	

- ① Concrete substrate
- ② Primer: **Epoxol® Primer SF-P**
- ③ Levelling layer: **Epoxol® Primer SF-P** mixed with Quartz Sand M-32 (ratio 1:1 w/w)
- ④ Wearing layer: **Neodur® Floor SF**
- ⑤ Final protective layers:
Neodur® Varnish W Satine



System Description

High-strength, smooth coloured tough-elastic solvent-free self-levelling protection system, with an intermediate leveling layer and an abrasion resistant satin finish of protective varnish, of total thickness ~2,5mm for interior industrial floors. Forms a smooth, seamless & monolithic coating of closed porosity, which is resistant to medium-heavy loading and renders a waterproof and non-absorbent final surface.

Qualified for use in LEED projects globally, by showing compliance with the specifications for VOC emissions and VOC content, with respect to the products that comprise the system. Certified excellent reaction to fire (**Class B_{fl}-s1**) acc. to **EN 13501-1**. Also certified for use in the food industry.

Indicative Fields of Application

Interior floors subjected to medium-heavy stresses*, e.g. in:

- Factories, laboratories, and warehouses
- Parking and car service garages (especially above the ground floor)
- Food & beverage facilities and refrigerating rooms

**Indicatively:* regular pedestrian traffic, frequent to constant traffic by cars-trucks & forklift trucks with rubber tires, occasional to frequent traffic by carts with hard plastic wheels, potential for impact

Βασικά Υλικά Συστήματος

Neodur® Floor SF: High-strength, tough-elastic solvent-free polyurethane system, suitable for the creation of interior self-levelling floors in interior areas. It constitutes the main material of the system, creating a tough-elastic floor coating with excellent crack-bridging properties, very high mechanical resistance (abrasion, impact etc.), as well as chemical resistance (alkalis, dilute acids, mineral oils etc.) which guarantees the long-lasting protection of the substrate.

Neodur® Varnish W Satine: Two-component water-based aliphatic polyurethane clear satin varnish, suitable as a protective layer on floors and walls. Offers a final surface of high hardness, with excellent resistance to abrasion, scratching, as well as solar radiation.

Epoxol® Primer SF-P: Solvent-free epoxy primer, suitable for the protection of cementitious surfaces which will be covered with epoxy systems. It stabilizes the substrate and creates an ideal bridge of adhesion for the subsequent epoxy coating. Ideal for substrates of high porosity.

System Properties & Advantages

- Tough-elastic properties - Combines high elasticity and final surface hardness with excellent resistance to mechanical stress
- Very high impact and abrasion resistance
- Elevated crack-bridging properties
- Excellent adhesion on concrete substrate
- Broad service temperature range
- Complies with the strict VOC requirements for sustainable buildings, according to **LEED** guidelines
- Ideal for interior rooms where solvent fumes are undesirable
- Excellent reaction to fire (classified as **B_{fl}-s1** acc. to **EN 13501-1**)

- Tested and evaluated for its suitability in food facilities
- Very good resistance to pollutants and common stains
- Ease of cleaning-maintenance
- Remarkable durability

Πιστοποιητικά – Test Reports

Neodur® Floor SF

- CE Certification acc. to EN 1504-2
Certificate of Conformity No. 1922-CPR-0386
- CE Certification acc. to EN 13813
Classified as a synthetic resin screed material SR-AR0,5-B2,0-IR10
- 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. 392-2024-00059003 – Regulation: CDPH (California Department of Public Health) v.1.2-2017*
 - *VOC Content Test report No. 392-2024-00059004 – Regulation: SCAQMD (South Coast Air Quality Management District) Rule 1113 (2016)*
- Complies with the French regulation regarding indoor VOC emissions
 - *Attestation French VOC Regulation*
 - *VOC Emission Test report No. 392-2024-00059003 – 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_f-s1 based on classification report No. 1480\DC\REA\24_9 acc. to EN 13501-1 and individual test reports acc. to EN ISO 9239-1 and EN ISO 11925-2 (No. 1480\DC\REA\24_7 & 8) 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* 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-GR01056282-24-08)
- Test reports by the external independent quality control laboratory Geoterra (No. 2023/702_3A & 3B)
- Test report for the determination of wear resistance by the Aristotle University of Thessaloniki – Civil Engineering Dept.
- Complies with the V.O.C. content requirements acc. to the E.U. Directive 2004/42/CE





Neodur® Varnish W Satine

- 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 - Fulfills 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

Epoxol® Primer SF-P

- CE certification acc. to EN 13813
Classified as SR-B2,0
- 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 – Fulfills 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. 392-2022-003450002 – Regulation: CDPH (California Department of Public Health) v.1.2-2017*
 - *VOC Content Test report No. 392-2022-00345006 – Regulation: SCAQMD (South Coast Air Quality Management District) Rule 1113 (2016)*
- Certified for its performance in terms of reaction to fire as part of the self-levelling systems **Epoxol® Floor** and **Neodur® Floor SF** acc. to EN 13501-1
System classification B_{fl}-s1 based on classification reports No. 1480\DC\REA\24_3 & 9 acc. to EN 13501-1 and individual test reports acc. to EN ISO 9239-1 (No.1480\DC\ REA\24_1 & 7) and acc. to EN ISO 11925-2 (No. 1480\DC\REA\24_2 & 8) by the independent accredited laboratory CSI S.p.A.
- Test reports by the external independent quality control laboratory Geoterra (No. 2021/483_2A & 2021/483_2B)
- Complies with the V.O.C. content requirements acc. to the E.U. Directive 2004/42/CE

Technical Characteristics of Main System Products

	Neodur® Floor SF	Neodur® Varnish W Satine	Epoxol® Primer SF-P
Mixing ratio A:B (by weight)	8,2:1,8	100:25	6,5:2,5
Density (EN ISO 2811-1)	1,35kg/L (±0,1)	1,07kg/L (±0,05)	1,29kg/L (±0,05)
VOC content	<15g/l	<1g/l	<10g/l
Liquid water permeability (EN 1062-3)	<0,1kg/m ² h ^{0,5}	<0,1kg/m ² h ^{0,5}	-
Permeability to CO ₂ – Diffusion-equivalent air-layer thickness Sd (EN 1062-6)	>50m	>50m	-
Water vapour permeability – Diffusion-equivalent air-layer thickness Sd (EN ISO 7783)	>5m (Class II)	>5m (Class II)	-
Elongation at break (ASTM D412)	90% (±10)		
Tensile strength at break (ASTM D412)	13MPa (±1)		
Crack-bridging properties: Max. width of crack bridged (EN 1062-7 – Method A)	>1,25mm - Class A4 (23,5°C)		
Classification acc. to EN 13813	SR-AR0,5-B2,0-IR10	-	SR-B2,0

System Application Conditions

Substrate moisture content	<4%
Relative air humidity (RH)	<65%
Application temperature (ambient - substrate)	+12°C min. / +35°C max.

Curing Details

	Neodur® Floor SF	Neodur® Varnish W Satine	Epoxol® Primer SF-P
Pot life (+25°C, RH 50%)	18 minutes	1 hour	25 minutes
Dry to recoat - overcoat (+25°C, RH 50%)	24 hours	8 hours	24 hours
Full hardening	~7 days		

System Method Application

Substrate preparation

- The concrete must be min. Grade C20/25, with a tensile (pull-off) 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 (recommended surface profile CSP-3 to CSP-4, based on ICRI Technical Guideline 310.2R)
- The surface must be dry and protected from rising moisture, stable, clean and free of dust, oil, grease, 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 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 primer **Epoxol® Primer SF-P**, in one layer by roller.

The two components A & B are mixed in the predetermined ratio (6,5A : 2,5B w/w) and mechanically stirred for app. 2-3 minutes with a low-speed stirrer, until the mixtures become homogenous.

In order to ensure the adhesion of the self-leveling epoxy system that follows, especially in case it is applied more than 24 hours after the application of the primer, it is recommended to sparsely broadcast Quartz sand M-32 (0,1-0,3mm, average grain size 0,26mm) on the still fresh layer of the primer, with an estimated sand consumption of 0,3-0,5kg/m². After drying, any loose grains should be removed with a high suction vacuum cleaner.

Consumption of Epoxol® Primer SF-P: 200-300gr/m² in one layer (in case of increased porosity a second layer may be required)

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

Application of levelling layer (scratch coat)

Once the primer is dry to overcoat – specifically after 24 hours (+25°C, RH 50%) – for the levelling of the substrate, it is recommended to apply the solvent-free epoxy primer **Epoxol® Primer SF-P** mixed with Quartz sand M-32 in an average ratio of 1:1 w/w. The mixture is then applied by smooth trowel on the already primed substrate.

The two components A & B are mixed in the predetermined ratio (6,5A : 2,5B w/w) and mechanically stirred for app. 2-3 minutes with a low-speed 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. The mixture is then left for app. 1-2 minutes and Quartz Sand M-32 is then gradually added under continuous stirring, until the mixture becomes homogeneous.



*Indicative consumption of the mixture **Epoxol® Primer SF-P** + Quartz sand M-32: 1,2-1,4kg/m² (=0,6-0,7kg/m² **Epoxol® Primer SF-P** + 0,6-0,7kg/m² Quartz sand M-32)*

Application of wearing layer

Once the scratch-coat is dry to overcoat – specifically after 24 hours (+25°C, RH 50%), the solvent-free polyurethane material **Neodur® Floor SF** is applied as a tough-elastic, self-levelling coating *without Quartz sand M-32* in the mixture. The mixture is applied by notched trowel in a layer of ~1,5mm thickness.

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 (100A : 22B w/w) and mechanical stirring of the two components for app. 3 minutes with a low-speed 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.

During the application of the self-leveling coating on the floor, the thorough use of a special spiked roller is essential, in order to release any trapped air and create a smooth coating of uniform thickness without bubbles. During this procedure, the use of spiked shoes is also required.

*Consumption of **Neodur® Floor SF**: ~2kg/m² for ~1,5mm thickness*

Application of final protective layers

After 2-3 days (+25°C, RH 50%) it is recommended to lightly sand the surface and apply the final layers of the water-based polyurethane varnish **Neodur® Varnish W Satine** in two layers by roller, diluted 20-25% w/w with water.

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.

*Consumption of **Neodur® Varnish W Satine**: ~250gr/m² in two layers by roller*

Ιδιαίτερες Συστάσεις

- After the application of the system, it is recommended that the floor's expansion joints are primed with **Neotex® PU Primer** or **Epoxol® Primer SF-P** and then sealed with the elastomeric polyurethane sealant **Neotex® PU Joint** or with the epoxy repairing material **Epoxol® Putty** in its elastic version (mixing ratio 1A : 2-2,5B w/w). Any incorrect evaluation regarding the function of the joints while covering them with the resinous system, as well as any insufficient or incorrect repair of existing joints and cracks, may lead to the creation of cracks that are transferred to the resinous system from the substrate.
- The materials 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.
- It is recommended that the material used for the finish comes from the same production batch, in order to ensure that a completely uniform colour shade is achieved over the entire application surface.

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 clean warm 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.
- In case any chemical solutions come in contact with the floor, it is recommended to remove them as soon as possible (usually with warm water – temperature <+50°C – under pressure), to avoid any further chemical stress and possible discolouration or alteration of the gloss of the floor finish. It is noted that the frequent contact of the coating with chemical solutions (especially dense corrosive ones), acts cumulatively on the chemical stress of the surface, even if the removal of the chemicals is done regularly and diligently. Therefore, in such cases, side-effects such as discolouration or loss of gloss may be considered a normal development over time, but it is also normal that the best possible maintenance and regular cleaning of the floor directly extends the operational life of the coating.

The information referred on the use and the application, are offered as a service to designers and manufacturers in the sense of facilitating the finding of possible solutions and is based on the experience and knowledge of NEOTEX® S.A.. Due to the development of knowledge and methods, it is at the discretion of each interested party to be informed by the NEOTEX® technical department as to whether this brochure has been replaced by a more recent one. The measurable technical data stated in the current technical data sheet are based on laboratory tests and may differ from the results of other individual measurements due to conditions beyond the control of NEOTEX®. The durability of the system is directly related to the condition of the substrate and the type of load (mechanical, chemical) to which the substrate is subjected. It is important that the application is done in accordance with the applicable official technical data sheets (TDS) of the materials and that the use of the surface is within the specifications of the materials. As a producer and supplier, NEOTEX® S.A. does not control the application, the substrate conditions or the actual use of the products and therefore cannot be held responsible for the final result or any failures caused by poor application or omissions, inadequate substrate conditions or due to the end use of the products

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