NEOTEX
CONSTRUCTION CHEMICALS SINCE 1959

HEADQUARTERS - PLANT
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Neodur® Special Mat

Aliphatic polyurethane coating, with mat appearance, for exterior flooring applications

Fields of application

- Exterior or interior floors of shops, industries, parking areas, warehouses, etc.
- Exterior or interior metallic surfaces

Properties-Advantages

- Renders a mat final surface of high hardness and increased anti-slip properties
- Remains unaffected by UV radiation and adverse weather conditions, without yellowing
- Very high abrasion and scratch resistance
- Excellent adhesion strength
- Ideal solution for the creation of exterior anti-slip floors

Technical characteristics

Mixing ratio A:B (by weight)	75:25
Density (EN ISO 2811-1)	1,40kg/L (±0,1)
Gloss (60°)	14
Abrasion resistance (Taber Test, CS 10/1000/1000, ASTM D4060)	40mg
Adhesion strength (EN 1542)	≥2,5N/mm²
Scratch hardness (Sclerometer Test - Elcometer 3092)	14N
Skid resistance (EN 13036-4, wet surface)	35 (PTV – slider 96)
Skid resistance (EN 13036-4, wet surface, with 2,5% w/w addition of Neotex® Antiskid M)	46 (PTV – slider 55)
Skid resistance (EN 13036-4, wet surface, by broadcasting Quartz Sand M-32)	>60 (PTV – slider 55)
Liquid water permeability (EN 1062-3)	$<0,1 kg/m^2h^{0,5}$
Permeability to CO2 – 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)	-40°C min. / +60°C max.

Consumption: 250-300gr/m² for two layers (depending on the substrate)

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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
Drying time (+25°C, RH 50%)	5 hours
Dry to recoat (+25°C, RH 50%)	24 hours
Full hardening	~ 7 days
** Low temperatures during application and/or curing prolong the above times, while high temperatures and humidity reduce them*	

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 texture surface and ensure the optimum bonding.

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,

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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 solvent **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 polyurethane coating, it is recommended to apply the solvent-based epoxy **Epoxol® 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 polyurethane paint

Once the primer is dry to overcoat, it is recommended to apply the first layer of **Neodur® Special Mat** diluted 5% w/w with solvent **Neotex® PU 0413** by roller, brush or airless spray. The second layer (and every potential subsequent one) is applied in the same way ~24 hours after the application of the previous one (depending also on the atmospheric conditions).

The two components A & B are mixed in the predetermined ratio (75A : 25B w/w) and, after the addition of the solvent, they are stirred for app. 3-5 minutes with a low speed electric stirrer. It is important to stir thoroughly at the bottom of the container, as well as near the sides, so that the hardener (component B) 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 is recommended.

Indicative consumption of **Neodur® Special Mat:** 0,25-0,30kg/m^2 in two layers

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

Once the primer is dry to overcoat, **Neodur® Special Mat** is applied as mentioned above by roller, brush or airless spray. During the mixing process of **Neodur® Special Mat** 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 **Neodur® Special Mat** is applied on the surface by roller or brush.

Indicative consumption of **Neodur® Special Mat:** 0,25-0,30kg/m^2 in two layers

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

After the priming and the application of the first layer of **Neodur® Special Mat** (diluted 5% w/w with solvent **Neotex® PU 0413**), it is recommended to broadcast Quartz Sand M-32 until saturation on the still fresh layer of **Neodur® Special Mat**, with an estimated sand consumption of 2-3kg/m^2. After drying, any

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	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 **Neodur® Special Mat**, diluted 5% w/w with solvent **Neotex® PU 0413**, applied in 1 or 2 layers, depending on the desired slip resistance. Indicative consumption of **Neodur® Special Mat:** ~0,40-0,50kg/m^2 in two or three layers
Special notes	• **Neodur® Special Mat** should not be applied under wet conditions, or if wet conditions or rainy weather are expected to prevail during the application or the curing period of the product. • 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 • Substrate temperature during application and curing must be at least 3°C above dew point to avoid any condensation issues • 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). In such case, the number of sealing layers and total consumption may increase • In order to achieve the optimum aesthetic result for the final surface (uniform gloss, without any shading issues), it is recommended to apply the final layer in a relatively thin thickness (indicatively of ~100gr/m^2 consumption)
Colours	White RAL 9003, Grey RAL 7040 Tailor-made shades available, upon special arrangement
Packing	Sets (A+B) of 10kg and 5kg in metal cans
Cleaning of tools – Stains removal	By **Neotex® PU 0413** 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 AjSB “Two-Pack reactive performance

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	coatings": 500g/l (Limit 2010). V.O.C. content of the ready to use product <500g/l.
Versions	**Neodur® Special**, glossy aliphatic polyurethane coating, for exterior and interior flooring applications
UFI code	*Component A:* GVF0-T0P2-V00S-84K8 *Component B:* FXF0-A0CG-6008-XG5A
Storage stability	*Component A*: 2 years, stored in its original sealed packing, protected from frost, humidity and exposure to sunlight *Component B*: 1 year, stored in its original sealed packing, protected from frost, humidity and exposure to sunlight

Chemical resistance table

Chemical substances (% content)	Contact time with chemicals (+20°C)		
	1 hour	4 hours	24 hours
Phosphoric acid (10%)	A	A	C
Phosphoric acid (20%)	B	B	C
Sulphuric acid (10%)	B	B	C
Sulphuric acid (20%)	C	C	C
Sulphuric acid (80%)	C	C	C
Hydrochloric acid (10%)	B	B	B
Hydrochloric acid (20%)	B	C	C
Lactic acid (10%)	A	A	A
Lactic acid (20%)	A	A	A
Nitric acid (10%)	A	B	C
Nitric acid (20%)	B	B	C
Caustic soda (10%)	A	C	C
Caustic soda (20%)	B	C	C
Formaldehyde (10%)	A	A	A
Formaldehyde (20%)	A	A	A
Ammonia (10%)	A	A	A
Chlorine (5%)	A	B	B
Petroleum	A	A	A
Xylene	B	B	B
M.E.K	B	B	B
Alcohol 95^0	B	B	B
Saltwater 15%	A	A	A
Engine oil	A	A	A
Wine (red)	A	A	A
Sea water	A	A	A

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

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1922-CPR-0386

DoP No.: 4950-69

EN 1504-2

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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