

Neodur[®] Fast Track

Fast-curing, brushable aliphatic polyurea system
for flooring applications



Description

Innovative, fast-curing, high-solid brushable two-component aliphatic polyurea system, for exterior and interior flooring applications.

Dries and cures quickly, enabling the complete application of the flooring system within one day, as well as the delivery of the project the very next day (full traffic).

Fields of application

Outdoor and indoor floors, where high mechanical and chemical resistance are required, such as shops, warehouses, parking and service garages, laundries, gas stations, etc.

The surfaces require appropriate preparation and priming prior to the application of Neodur[®] Fast Track.



Packing

Sets (A+B) of 5kg

Colours

| | | |
|----------|----------|----------|
| RAL 9003 | RAL 1013 | RAL 7035 |
| RAL 3009 | RAL 7038 | RAL 1018 |

Properties - Advantages

- Minimum downtime: dry to recoat in 2 hours, facilitating the complete application of the flooring system within 8 hours (primer & two coats)
- Quick turnaround: fully exploitable within 24 hours
- Unaffected by sunlight and adverse weather conditions
- Incomparable coverage: Just one coat after priming is sufficient, when the substrate is smooth and properly prepared
- Also applicable when low temperatures prevail
- Excellent resistance to abrasion and mechanical stress
- High chemical resistance (to dilute acids, alkalis, car oils, petroleum etc.)

Certificates – Test reports

- CE Certification acc. to EN 1504-2
Certificate of Conformity No. 1922-CPR-0386
- Test report by the external independent quality control laboratory Geoterra (No. 2016/1003 & 2020/190_2)
- Complies with the V.O.C. content requirements acc. to the E.U. Directive 2004/42/CE

| Technical characteristics | |
|---|--|
| Mixing ratio A:B (w/w) | 3:2 |
| Density (EN ISO 2811-1) | 1,30kg/L (±0,1) |
| Gloss (60°) | 92 |
| Abrasion resistance (Taber Test, CS 10/1000/1000, ASTM D4060) | 62mg |
| Adhesion strength (EN 1542) | >3N/mm ² |
| Flexibility (ASTM D522, 180° bend, 1/8" mandrel) | Pass |
| Scratch hardness (Sclerometer Test - Elcometer 3092) | 9N |
| Skid resistance (EN 13036-4, wet surface, with 2,5% w/w addition of Neotex® Antiskid M) | 24 (PTV – slider 55) |
| Skid resistance (EN 13036-4, wet surface, by broadcasting quartz sand M-32) | >24 (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. -20°C / max. +80°C |
| Consumption: 200gr/m² per layer | |

| Application conditions | |
|---|------------------------|
| Substrate moisture content | <4% |
| Relative air humidity (RH) | <80% |
| Application temperature (ambient - substrate) | +5°C min. / +35°C max. |
| <p><i>*Neodur® Fast Track may be applied in colder conditions, if required, as it dries even at low temperatures down to -10°C, without significant changes in the technical properties of the final surface. In such case, the times of workability and curing are significantly affected, depending on the prevailing atmospheric conditions.</i></p> | |

Curing details

| | | |
|--------------------------------------|-------|------------|
| Pot life (RH 50%) | +12°C | 20 minutes |
| | +25°C | 15 minutes |
| | +30°C | 10 minutes |
| Dry to recoat – Walkability (RH 50%) | +12°C | 3 hours |
| | +25°C | 2 hours |
| | +30°C | 2 hours |
| Full cure – Heavy traffic (RH 50%) | +12°C | 36 hours |
| | +25°C | 24 hours |
| | +30°C | 24 hours |

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

Appropriate primers on cementitious substrate

| | Primer | Description - Details |
|---------------|------------------------------|--|
| Solvent-based | Neodur® Fast Track PR | <i>Fast-drying</i> , two-component solvent-based hybrid polyurea – polyurethane primer |
| | Epoxol® Primer | Two-component, solvent-based epoxy primer |
| Water-based | Acqua Primer | Two-component, water-based epoxy primer |
| Solvent-free | Neodur® Primer SF | <i>Fast-drying</i> , two-component, solvent-free hybrid polyurea – polyurethane primer |
| | 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 |

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 mixture of **Epoxol® Primer SF-P** and Quartz Sand M-32 (indicative mixing ratio 1:1-2 w/w), after proper priming. For fast-drying repairs and leveling, it is recommended to use the polyaspartic putty **Neodur® FT Putty** or/and a mixture of the fast-drying aliphatic polyurea resin **Neodur® Polyurea M** with Quartz Sand M-32 (indicative mixing ratio 1:1-2 w/w).

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 polyurea coating, it is proposed to prime the surface with the fast-drying hybrid primer **Neodur® Fast Track PR** or an alternative **NEOTEX®** primer, depending on the substrate (see table). In cases of substrates with increased porosity, an additional priming layer may be required. After the primer has dried, any remaining imperfections (holes, cracks) can be puttied locally using the fast-drying repairing solutions (**Neodur® FT Putty** or/and **Neodur® Polyurea M** + quartz sand), as described above.

Application

Smooth finish

Once the primer is dry to overcoat, it is recommended to apply the first layer of **Neodur® Fast Track**, undiluted, by roller or brush. The second (and every subsequent) layer is applied in the same way ~2-3 hours after the application of the previous layer (depending on the atmospheric conditions).

Prior to mixing, mechanical stirring of component A is recommended. The two components A & B are mixed in the predetermined ratio (3A : 2B w/w) and stirred for app. 1-2 minutes with a low-speed electric stirrer, until the mixture becomes homogeneous. The stirring must be done in the bottom and near the sides of the container, so that the hardener (component B) is evenly distributed. The mixture is then left in the container for a short period (~2-3 minutes) and then poured entirely along the floor to be shortly applied, in order to avoid potential hardening of the mixture inside the container, due to the limited pot life.

The application rollers must have been previously dipped in the mixture, in order to avoid the possibility of inserting air due to the dry rollers.

Consumption of **Neodur® Fast Track**: 0,40kg/m² in two layers

Anti-slip finish with the addition of Neotex® Antiskid M

Once the primer is dry to overcoat, **Neodur® Fast Track** is applied, as described above, by roller or brush. During the mixing process of **Neodur® Fast Track** 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® Fast Track** is applied on the surface by roller or brush.

Consumption of **Neodur® Fast Track**: 0,40kg/m² in two layers

Anti-slip finish with broadcast of Quartz Sand M-32

After priming and during the application of the first layer of **Neodur® Fast Track**, it is recommended to broadcast Quartz Sand M-32 until saturation on the still fresh layer of **Neodur® Fast Track**, with an estimated sand consumption

of 2-3kg/m². 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 **Neodur® Fast Track**, applied by roller in one layer.

Consumption of **Neodur® Fast Track**: ~0,50kg/m² in two layers

Special notes

- **Neodur® Fast Track** 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
- The substrate temperature must be at least 3°C above dew point to reduce the risk of condensation or blooming on the floor finish
- In case that an extended period of time (>24 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 material may be diluted up to 3% with solvent **Neotex® PU 0413** when the temperature during application is high.
- It is advisable to avoid over-rolling or back-rolling and that the application is continuous, since the fast-drying nature of the material may otherwise cause shades in the final surface
- 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 <+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 | 5 hours | 24 hours |
| Phosphoric acid (10%) | A | C | C |
| Sulphuric acid (10%) | A | B | C |
| Sulphuric acid (50%) | A | C | C |
| Hydrochloric acid (10%) | A | A | C |
| Lactic acid (10%) | A | A | C |
| Nitric acid (10%) | A | B | C |
| Sodium hydroxide (10%) | A | A | A |
| Formaldehyde (10%) | A | A | C |
| Ammonia (10%) | A | A | A |
| Chlorine (5%) | A | A | A |
| Diesel | A | A | A |
| Gasoline unleaded | A | A | A |
| Xylene | A | A | A |
| M.E.K | C | C | C |
| Alcohol 95 ⁰ | 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



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| Appearance (cured) | Glossy |
| Colours | White RAL 9003, Light beige RAL 1013, Light grey RAL 7035, Oxide red RAL 3009, Grey RAL 7038, Yellow RAL 1018 Tailor-made shades available, upon special arrangement |
| Packing | Sets (A+B) of 5kg in metallic containers |
| 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: 500g/l (Limit 1.1.2010) - V.O.C. content of the ready-to-use product <500g/l |
| UFI code | <i>Component A:</i> 2Q30-00XG-200E-9RTV <i>Component B:</i> MS30-H0MV-C00X-X3DX |
| Versions | Neodur® Fast Track SF , fast-drying solvent-free aliphatic polyurea system, for flooring applications |
| Storage stability | <i>Component A:</i> 2 years, stored in its original sealed packing, protected from frost, humidity, and exposure to sunlight <i>Component B:</i> 1 year, stored in its original sealed packing, protected from frost, humidity, and exposure to sunlight |

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| 1922-CPR-0386 DoP No.: 4950-33 EN 1504-2 Neodur® Fast Track 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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