

Neodur® FT Elastic

Fast-curing, brushable elastic aliphatic polyurea system,
for waterproofing and flooring applications



Description

Fast-curing, cold-applied elastic aliphatic polyurea system, suitable for the protection of floors, where outstanding waterproofing properties and high resistance to abrasion and mechanical stress are required.

Fields of application

- Roof parking decks
- Balconies & terraces with high traffic
- Tiled surfaces
- As a wear-resistant topcoat over **Neoproof® Polyurea** coatings
- As a topcoat over aromatic waterproofing systems

The surfaces require appropriate preparation and priming prior to the application of Neodur® FT Elastic.

Properties - Advantages

- Combines mechanical durability with outstanding waterproofing properties (*zero water absorption*)
- Unaffected by UV radiation and adverse weather conditions
- Fast-drying & resistant to early rainfall
- High resistance to abrasion and mechanical stress
- Excellent chemical resistance (dilute acids, alkalis, petroleum, etc.)
- Classified as SR-AR0,5-B2,0-IR4 acc. to EN 13813



Packing

Sets (A+B) of 5,5kg

Colours

| | |
|----------|----------|
| WHITE | RAL 7035 |
| RAL 7038 | RAL 3009 |

Certificates – Test reports

- 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-IR4



- Test report by the external independent quality control laboratory Geoterra (No. 2018/998 & 2023/333_13_B)
- 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

| Technical characteristics | |
|---|--|
| Mixing ratio A:B (w/w) | 3:2,5 |
| Density (EN ISO 2811-1) | 1,30kg/L (±0,05) |
| Gloss (60°) | 85 |
| Elongation at break (ASTM D412) | 170% (±30) |
| Tensile strength at break (ASTM D412) | 14MPa (±1) |
| Adhesion strength (EN 1542) | >3N/mm ² |
| Hardness Shore A (ASTM D2240) | 80 |
| Hardness Shore D (ASTM D2240) | 39 |
| Abrasion resistance (Taber Test, CS 10/1000/1000, ASTM D4060) | 75mg |
| Flexibility (ASTM D522, 180° bend, 1/8" mandrel) | Pass |
| Impact resistance (EN ISO 6272) | ≥4Nm |
| Scratch hardness (Sclerometer Test - Elcometer 3092) | 8N |
| Wear resistance BCA (EN 13892-4) | 13µm (AR0,5) |
| Skid resistance (EN 13036-4, wet surface, with 2,5% w/w addition of Neotex® Antiskid M) | 35 (PTV – slider 55) |
| Skid resistance (EN 13036-4, wet surface, by broadcasting Quartz Sand M-32) | ≥25 (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) |
| Service temperature | min. -30°C / max. +80°C |
| Consumption: 300gr/m² per layer (depending on substrate) | |

Application conditions

| | |
|---|------------------------|
| Substrate moisture content | <4% |
| Relative air humidity (RH) | <80% |
| Application temperature (ambient - substrate) | +5°C min. / +35°C max. |

Curing details

| | | |
|--------------------------------------|-------|------------|
| Pot life (RH 50%) | +12°C | 40 minutes |
| | +25°C | 30 minutes |
| | +30°C | 15 minutes |
| Dry to recoat – Walkability (RH 50%) | +12°C | 5 hours |
| | +25°C | 4 hours |
| | +30°C | 4 hours |
| Full cure – Traffic (RH 50%) | +12°C | 36 hours |
| | +25°C | 24 hours |
| | +30°C | 24 hours |

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

Appropriate primers – adhesion promoters on usual substrates

| Substrate | Primer | Description - Details |
|----------------------------|------------------------------------|--|
| Concrete, cement screed | Neodur® Fast Track PR | Two-component, fast-drying hybrid polyurea – polyurethane primer |
| | Epoxol® Primer | Two-component solvent-based epoxy primer |
| | Acqua Primer | Two component water-based epoxy primer |
| Metal (iron, steel) | Neopox® Primer 815 | Two-component anti-corrosive epoxy primers for metallic surfaces |
| | Neopox® Special Primer 1225 | |
| Ceramic tiles | Neosil® Bond (mandatory) | Adhesion promoter for coating systems on inorganic surfaces, ceramic tiles, glass etc. |
| | Neodur® Polyurea M | Two-component, transparent fast-drying aliphatic polyurea resin, also ideal for use as a fast-drying primer (diluted with Neotex® PU 0413) |

Instructions for use

Substrate preparation

Concrete

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 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.

For fast-drying repairs and levelling, 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** and Quartz Sand M-32 (indicative mixing ratio 1:1-2 w/w).

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 resinous coating, it is recommended to apply the fast-drying hybrid primer **Neodur® Fast Track PR** 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 finish

After priming, the application of the first layer of **Neodur® FT Elastic** follows, undiluted, by roller or brush. The second layer (and every potential subsequent one) is applied in the same way ~4 hours after the application of the previous layer (depending also on the atmospheric conditions), in a vertical or different direction.

Prior to mixing, mechanical stirring of component A is recommended. The two components A & B are mixed in the predetermined ratio (3A : 2,5B w/w) and mechanically stirred for app. 1-2 minutes with a low-speed stirrer, until the mixtures become homogenous. 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 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 because of the dry rollers.

Consumption of **Neodur® FT Elastic**: 0,30kg/m² per layer

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

Once the primer is dry to overcoat, **Neodur® FT Elastic** is applied, as described above, by roller or brush in at least two layers. Then, it is recommended to apply an additional thin layer, in which the anti-slip additive **Neotex® Antiskid M** is added. More specifically, during the mixing of **Neodur® FT Elastic** and before the application of the final layer of the system, it is recommended to add 1,5-2,5% w/w of **Neotex® Antiskid M** in the mix. Then, the mixture is mechanically stirred again with a low-speed electric stirrer for ~1 minute and **Neodur® FT Elastic** is applied on the surface by roller or brush in a thin layer.

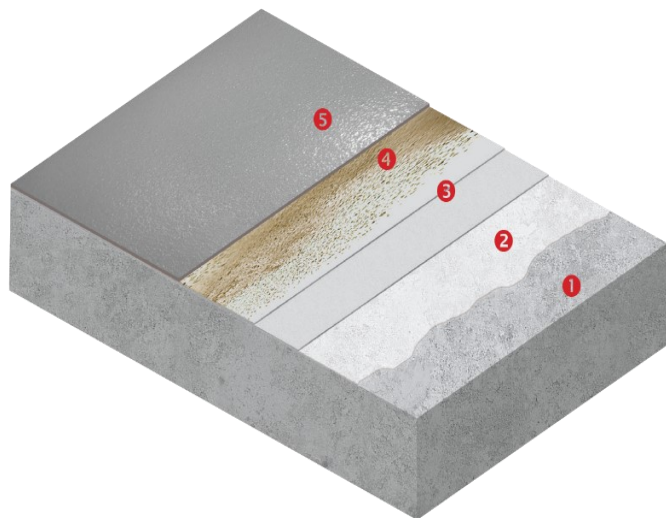
Consumption of the final anti-slip layer of **Neodur® FT Elastic**: 0,15-0,20kg/m²

Topcoat in anti-slip waterproofing system of exposed roof parking decks

During the application of the final layer of the waterproofing coating **Neoproof® Polyurea R** or **Neoproof® Polyurea H**, it is recommended to broadcast Quartz Sand M-32 (or 0,8-1,2mm in case of ramps) in excess (until saturation) on the still fresh layer of the waterproofing coating, with an estimated sand consumption of 3-4kg/m². After ~24 hours (depending on the atmospheric conditions) – and after having removed the loose grains with a high suction vacuum cleaner, as well as sanded down any surface irregularities – it is recommended to apply the fast-drying, brushable elastic aliphatic polyurea coating **Neodur® FT Elastic** by roller in 1-2 layers.

Consumption of **Neodur® FT Elastic**: a) 0,40-0,50kg/m² in one layer, on top of a coating saturated with Quartz Sand M-32, b) 0,70-0,80kg/m² in two layers, on top of a coating saturated with quartz sand 0,8-1,2mm

Indicative system build-up



EXPOSED ROOF PARKING DECK WATERPROOFING

- 1 Cementitious substrate
- 2 *Primer: Acqua Primer NP*
- 3 *Waterproofing layers:*
Neoproof® Polyurea R (min. 3 layers)
- 4 Quartz sand (full broadcast)
- 5 *Wear-resistant waterproof topcoat:*
Neodur® FT Elastic

Consumption of Neodur® FT Elastic: 400-500gr/m²

Special notes

- **Neodur® FT Elastic** 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 must not be stored in very low or very high temperatures, especially before their mixing. Preferably, the mixing and stirring of the mixture is recommended to be done in the shade. The stirring must be done mechanically and not manually with rods etc.
- It is recommended not to over-stir the product, in order to avoid air entrapment in the mixture. After the stirring of the mixture, it is recommended to apply it immediately in order to prevent high temperatures and its polymerization inside the container
- The substrate temperature must be at least 3°C above dew point to reduce the risk of condensation or blooming on the floor finish
- The application is continued sufficiently in the vertical surfaces, in order to form a uniform waterproofing membrane
- In case that an extended period of time (>24 hours) has passed between successive layers of **Neodur® FT Elastic**, it is recommended to lightly sand the surface of the previous layer with fine sandpaper or abrasive sponge
- 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
- For the preparation of the substrate and the essential preconditions in the case of application on top of ceramic tiles, please refer to the technical data sheet of **Neodur® FT Clear**

Maintenance instructions

- The total hardening of the film occurs app. 24 hours after the application of the final layer, depending also on the atmospheric conditions. During this period, it is advisable that the access to the application area is prohibited or limited only to specialized personnel.
- It is recommended to annually inspect the coating for any damage caused by accidental impact or misuse
- In case of need for local repairs, **Neodur® FT Elastic** is re-applied in its original dry film thickness at the minimum, after cleaning and priming (if necessary) the affected area.
- Periodic cleaning by water-jetting is advisable (combined with a neutral washing agent, if needed), especially in case of heavy accumulation of dirt, dust and pollutants on the surface

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

| | |
|--|---|
| Appearance (cured) | Glossy |
| Colours | White, Light grey RAL 7035, Grey RAL 7038, Oxide red RAL 3009 Tailor-made shades available, upon special arrangement |
| Packing | Sets (A+B) of 5,5kg 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> 4D40-20FN-H00D-KGGD <i>Component B:</i> SG40-K051-T00V-7U2F |
| 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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| NEOTEX S.A. V.Moira str., P.O. Box 2315 GR 19600 Industrial Area Mandra, Athens, Greece 19 | |
| 1922-CPR-0386 DoP No.: 4950-36 EN 1504-2 Neodur® FT Elastic Surface protection products Coating | |
| Water vapour permeability | Class II |
| Adhesion strength | $\geq 1,5\text{N/mm}^2$ |
| Capillary absorption and permeability to water | $W < 0,1\text{kg/m}^2\text{h}^{0.5}$ |
| Permeability to CO ₂ | $S_D > 50\text{m}$ |
| Reaction to fire | Euroclass F |
| Dangerous substances | Complies with 5.3 |

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|---|-------|
|  24 | |
| NEOTEX S.A. V.Moira str., P.O. Box 2315 GR 19600 Industrial Area Mandra, Athens, Greece 24 | |
| DoP No.: 4950-96 EN 13813 SR-AR0,5-B2,0-IR4 Neodur® FT Elastic Synthetic Resin screed material for use internally in buildings | |
| Release of corrosive substances | SR |
| Wear resistance | AR0,5 |
| Impact resistance | IR4 |
| Bond strength | B2,0 |
| Reaction to fire | NPD |

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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