



NEOTEX[®] Roof Car Parking System Neoproof[®] Polyurea R-3L FTE Q3

Slip resistant, cold-applied, elastomeric polyurea waterproofing system, with a hard-wearing finish. Ideal for car parking decks and for walkable balconies or terraces with high traffic.

- ✓ Very high mechanical strength
- Excellent waterproofing properties (zero water absorption)
- ✓ Unaffected by UV radiation & weather conditions
- Anti-slip finish
- ✓ Resistant to early rain
- Increased crack-bridging properties
- ✓ High chemical resistance
- Easy application by roller







* See table of primers for alternative compatible primers suitable for cementitious substrates



System Characteristics

Final surface appearance
Slip-resistant – Uniformly rough
(effect of dense quartz broadcast) - Coloured
Tensile strength at break (ASTM D412)
>10MPa
Abrasion resistance (ASTM D4060)
<100mg (Taber Test, CS 10/1000/1000)
Adhesion strength (EN 1542)
≥3N/mm²
Impact resistance (EN ISO 6272)
≥4Nm – IR4
Skid resistance (EN 13036-4)
 >100 PTV (Pendulum Test Value, slider 96,
dry surface)
 >25 PTV (Pendulum Test Value, slider 96,
wet surface)
R10 equivalent
Liquid water permeability (EN 1062-3)
<0,01kg/m ² h ^{0,5}
Service temperature
-35°C min. / +80°C max.
Cementitious substrate
Primer: Acqua Primer NP (or
alternative proper NEOTEX [®] primer)
8 Waterproofing layers:
Neoproof [®] Polyurea R in 3 layers
Broadcast: Quartz Sand M-32 (in excess)

6 Wear-resistant waterproof sealing layer:

Neodur[®] FT Elastic



System Description

Slip-resistant cold-applied elastomeric polyurea waterproofing system, with a hard-wearing finish, ideal for the long-term protection of exposed roof parking decks. Suitable also for walkable balconies and terraces with high traffic. It forms a blister-free and impermeable to moisture membrane, with exceptionally high resistance to UV radiation and mechanical stress.

Indicative Fields of Application

Ideal for applications where high mechanical properties are required, combined with excellent waterproofing and anti-slip properties, e.g. in:

- Roof parking decks or outdoor car parks (especially above basements)
- Walkable terraces and balconies with high traffic and normal loading

Main System Products

Neodur[®] FT Elastic: Brushable, fast-curing elastic aliphatic polyurea system, suitable for the protection of floors where waterproofing and high mechanical strength are required. It offers high protection against abrasion and remains unaffected by UV radiation and adverse weather conditions.

Neoproof[®] **Polyurea R**: Cold-applied, two-component, elastomeric polyurea, ideal for the long-term protection of various construction surfaces. It forms a blister-free and impermeable to moisture membrane, with high resistance to UV radiation and mechanical stress which guarantees the long-lasting protection of the substrate.

Acqua Primer NP: Water-based epoxy primer, ideal for construction surfaces prior to the application of **Neoproof® Polyurea** waterproofing systems. It creates a chemical bond with **Neoproof® Polyurea** coatings, contributing to the long-lasting durability of the waterproofing system. Suitable also for stabilization and sealing of cementitious and other highly porous substrate.

System Properties & Advantages

- Combines high mechanical strength with excellent waterproofing properties (zero water absorption)
- Unaffected by UV radiation and adverse weather conditions
- Increased anti-slip properties
- Resistant to early rain
- Presents a broad range of service temperature from -30°C to +80°C
- Blister-free final surface during the curing of the layers
- Excellent crack-bridging properties
- High chemical resistance (dilute acids, alkalis, petroleum, etc.)
- Easy application by roller
- Ultra-long service life secured



Certificates – Test Reports

Neodur[®] FT Elastic

- 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

Neoproof[®] Polyurea R

- CE Certification acc. to EN 1504-2 Certificate of Conformity No. 1922-CPR-0386
- Certified cool roofing material by the University of Athens
 Evaluation of the optical properties of the coating, both in white and light grey (RAL 7035) colour shades, conducted by
 the National and Kapodistrian University of Athens Physics Dept.
- Test report by the external independent quality control laboratory Geoterra (No. 2015/283, 2017/1213 & 2021/483_5)
- Fulfils the requirement LEED v4.1: SS Credit Heat Island Reduction Option 1 High Reflectance Roof, Initial SRI ≥82
- Tested successfully and evaluated for its resistance against root penetration acc. to CEN/TS 14416:2014
 Test Report 23/32304595 by the external independent laboratory LGAI Technological Center S.A. (Applus)
- Certified performance under external fire exposure acc. to EN 13501-5 System classification B_{roof}(t1) based on the classification report No. D/4/1/2023 acc. to EN 13501-5 and the test report No. 65/23/120/1/D-1/O_{ENV} of tests conducted acc. to CEN/TS 1187 by the external independent laboratory Łukasiewicz IMBiGS
- Complies with the V.O.C. content requirements acc. to the E.U. Directive 2004/42/CE

Acqua Primer NP

- Part of the certified Neoproof[®] Polyurea system according to the Guideline for European Technical Approval ETAG 005 (Liquid Applied Roof Waterproofing Kits) European Technical Assessment ETA 18/0563 by the accredited body of technical assessment KIWA Nederland B.V. (member of EOTA)
- CE certification acc. to EN 13813 Classified as SR-B2,0
- Test report by the external independent quality control laboratory Geoterra (No. 2021/483_7)
- Complies with the V.O.C. content requirements acc. to the E.U. Directive 2004/42/CE



Technical Characteristics of Main System Products					
	Neodur [®] FT Elastic	Neoproof [®] Polyurea R	Acqua Primer NP		
Mixing ratio A:B (by weight)	3:2,5	13:6	10:4		
Density (EN ISO 2811-1)	1,30kg/L (±0,05)	1,45kg/L (±0,1)	1,15kg/L (±0,05)		
Liquid water permeability (EN 1062-3)	<0,1kg/m ² h ^{0,5}	<0,1kg/m ² h ^{0,5}	-		
Permeability to CO2 – 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)	-		
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-IR4	-	SR-B2,0		

System Application Conditions				
Substrate moisture content	<4%			
Relative air humidity (RH)	<70%			
Application temperature (ambient - substrate)	+12°C min. / +35°C max.			

Curing Details				
	Neodur [®] FT Elastic	Neoproof [®] Polyurea R	Acqua Primer NP	
Pot life	20 minutos	80 minutes**	1 hour	
(+23°C, RH 50%)	Sommutes			
Dry to recoat	4 hours	18 hours	24 hours	
(+23°C, RH 50%)	4 110013			
Full hardening	~ 7 days			
* Low temperatures during application and/or curing prolong the above times, while high temperatures reduce them				

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Appropriate primers on cementitious substrates				
Primer	Description - Details			
Acqua Primer NP	Water-based epoxy primer			
Epoxol [®] Primer	Solvent-based epoxy primer			
Neodur [®] Fast Track PR	Fast-drying hybrid (polyurea-polyurethane) primer. Dry to overcoat in 3 hours (+25°C, RH 50%).			
	Enables the application of the 1 st layer of the Neoproof® Polyurea system on the same day.			
Neodur [®] Primer 1K	One-component, fast-drying polyurethane primer. Dry to overcoat in 4 hours (+25°C, RH 50%).			
	Enables the application of the 1 st layer of the Neoproof® Polyurea system on the same day.			
Neopox [®] Primer WS	Solvent-free epoxy primer for damp surfaces. Ideal for substrates with high moisture content			
	(without ponding water)			

System Method Application

Substrate preparation

- The concrete must be min. Grade C20/25, with a tensile (pull-off) 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-textured surface and ensure optimum adhesion.
- 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 should have the appropriate slopes and 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 elastomeric polyurethane sealant Neotex[®] PU Joint, the non-shrinking cementitious repairing mortar Neorep[®], the pourable epoxy-cement mortar Epoxol[®] CM and/or the epoxy putty Epoxol[®] Putty, 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 waterproofing system, it is recommended to apply the water-based epoxy primer **Acqua Primer NP**, in one layer by roller.

The two components A & B are mixed in the predetermined ratio (100A : 40B w/w) and after the addition 25-30% w/w of clean water, they are mechanically stirred for app. 2-3 minutes with a low-speed stirrer, until the mixture becomes homogeneous.

Consumption of Acqua Primer NP: 120-160gr/m² in one layer (in case of increased porosity a second layer may be required)

* In case of application of an alternative compatible primer, suitable for cementitious substrates (see table), please consult the respective technical data sheet of the product for the application details

Application of waterproofing layers

Once the primer is dry to overcoat – specifically after 24 hours (+23°C, RH 50%) - the first layer of the cold-applied elastomeric polyurea **Neoproof® Polyurea R** is applied, undiluted, by roller or airless spray. The second and the third layer are applied in the same way in ~18 hours (+23°C, RH 50%) after the previous one, in a vertical or different direction.



Before mixing the two components, component A should be mechanically stirred thoroughly for app. 1 minute. Components A & B are then mixed at the predetermined ratio (13A:6B w/w) and mechanically stirred for app. 3 minutes with a low-speed stirrer until the mixture is homogeneous.

Along the upstands-floor intersections (as well as in all other corners), in construction details (such as around and inside roof drains), along the joints, as well as when covering cracks, it is advisable that **Neoproof® Polyurea R** is locally applied in advance, reinforced with the specially designed non-woven polyester fabric **Neotextile® NP** of 100gr/m² weight ("wet-on-wet" application of two layers with the fabric positioned in between).

During the application of the third layer, it is recommended to broadcast Quartz Sand M-32 until saturation (in excess) on the still fresh layer of **Neoproof® Polyurea R**, with an estimated sand consumption of ~3-4kg/m². After drying, any loose grains should be removed with a high suction vacuum cleaner and any surface irregularities should be sanded down.

Consumption of **Neoproof® Polyurea R**: • 1,8kg/m² in three layers (without reinforcement)

• 3-3,5kg/m² locally where reinforcement Neotextile[®] NP is applied

Application of sealing layer

Then – specifically after ~24 hours (+23°C, RH 50%) - the surface is sealed with the brushable, fast-curing elastic aliphatic polyurea **Neodur® FT** Elastic, applied by roller in 1-2 layers.

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 mixture becomes homogeneous. 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: 0,40-0,50kg/m² in 1-2 layers

Special Notes

- In case of new cement screed and soon after its laying, it is recommended to create suitable joints (per 15-20m² of surface area and at a depth approximately equal to ¾ of the thickness of the cement screed), which shall then be properly sealed (eg with closed-cell PE foam cord and Neotex[®] PU Joint after proper priming of their sides with Neotex[®] PU Primer or Acqua Primer NP). It is also necessary to create expansion joints around the perimeter, as above, and with a minimum width of 1cm. Any existing joints of the concrete slab should be transferred to the new substrate.
- Any incorrect evaluation of the joint movement while covering them with the resinous system, as well as any
 insufficient or incorrect repair of the existing joints and cracks, may lead to the creation of cracks that are transferred
 from the substrate to the waterproofing resinous system
- In cases of wide expansion joints, and especially at points of entry and exit from a parking area, it is recommended to install suitable metal expansion joint profiles, after applying Neoproof® Polyurea R reinforced with the non-woven polyester fabric Neotextile® NP inside the joint and under the sealing materials (e.g. PE foam cord and Neotex® PU



Joint). After installation, both sides of the joint profile, as well as the punctured points, should be properly sealed with Neotex[®] PU Joint and Neoproof[®] Polyurea R.

- The materials 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 layers
- The components should not have been stored at very low or very high temperatures, especially before mixing. Mixing and stirring of the mixtures should be preferably done in the shade. The stirring of the mixtures must be done mechanically and not manually with a rod, etc.
- Excessive stirring of the materials should be avoided, in order to mitigate the risk of air entrapment. After stirring the
 mixtures, it is recommended to apply the materials shortly in order to avoid the development of high temperatures
 and potential hardening inside the cans
- Substrate temperature during application and curing must be at least 3°C above dew point to avoid condensation issues
- The application is continued sufficiently in the vertical surfaces of the roof (min. 30cm), in order to form a uniform waterproofing membrane. It is recommended in any case to cover the upstands entirely and to continue the waterproofing application in their horizontal sections.
- For the release of any trapped water vapour of the substrate, it is recommended to apply air vents in the whole roof's surface per 20-25m²
- 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

System Chemical Resistance

The system presents durability against various chemical solutions (alkalis and dilute acids, petroleum products, salt water, various solvents etc.). For the indicative degree of chemical resistance to specific chemical compounds in relation to the contact time with them, please consult the respective chemical resistance table of the technical data sheet of **Neodur® FT Elastic**. For specific specialized information, please contact the Technical Support Department of **NEOTEX®**.

Maintenance Instructions

- The total hardening of the film occurs app. 7 days 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, the system is re-applied in its original dry film thickness at the minimum, after cleaning and priming (if necessary) the affected area. Where appropriate, it is recommended that the non-woven polyester fabric Neotextile[®] NP is used as a reinforcement.
- 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
- 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.
- 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 <+60°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.</p>

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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