

Nanoflex No Limits

High-adhesion, highly workable waterproof gel-membrane.

Nanoflex No Limits guarantees perfectly waterproofed substrates in the revolutionary Laminato No Limits system for a safe, perfect and long-lasting laying.



1. Ideal to waterproof balconies and terraces
2. Perfect fusion with H40 Gel-Adhesives
3. Variable rheology, suitable for any building site condition
4. Easy to apply with no reinforcing mesh in order to reduce laying times
5. Insensitive to chlorinated water attack
6. Breathable
7. Suitable for overlaying
8. 30% better coverage than two-component systems

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Areas of application

→ Use

Terraces, balconies, flat roofs, horizontal surfaces and swimming pools on mineral screeds, monolithic cement-based screeds, existing floors covered with ceramic tiles, marble tiles, dimensionally stable natural stones well-anchored to the substrate and clean, cement-based plasters/renders and cementitious mortars, aged concrete. Walls, floors; for internal and external use. Terraces and balconies are equivalent to external floors. This tiling must be laid on waterproofed substrates (UNI 11493 - 7.13.5).

→ What is Laminato No Limits?

- Laminato No Limits, the forefather and benchmark of Laminates systems: H40 No Limits gel-adhesive blends with the Nanoflex No Limits gel-membrane, the waterproof and breathable core of the system, also developed using Gel-Technology.
- Laminato No Limits is a waterproofing system with high resistance to shear stresses for high workable waterproof and breathable laying of ceramic tiles and natural stones with the

mineral gel-adhesives on balconies, terraces, flat roofs, swimming pools and external horizontal surfaces.

- The very high shear resistance of the Laminato No Limits technology guarantees the elimination of expansion tensions on external surfaces of any size, maintaining maximum application speed and ease of use; the structural fusion between gel-adhesive and gel-membrane guarantees breathable waterproofing insensitive to alkaline hydrolysis for interventions with maximum durability.

Do not use on gypsum or anhydrite-based substrates without the use of Active Prime Fix, water-based surface isolation, on metal or wood substrates, on bituminous sheeting, to waterproof exposed surfaces, on low-density screeds, on insulation layers on inverted roofs made with isolation panels or lightened materials, in swimming pools and tanks used to hold exposed water, when adhesion of the coverings requires the use of H40 Extreme or reactive adhesives.

Instructions for use

→ Preparation of substrates

Substrate requirements (UNI 11493 – 7.3)

Cured (dimensionally stable):

- screeds in Keracem and Keracem Pronto waiting time 24 hrs
- concrete wait 6 months
- for cement-based screeds or plasters waiting time 7 – 10 days per cm of thickness (good weather)

Intact (free of cracks):

- restore integrity with Kerarep
- check the adhesion of pre-existing coverings
- elements not perfectly adherent must be removed

Compact (to full thickness):

- striking forcefully (5 kg mallet), no evident marks or crumbling must be made

Tough on the surface

- when scraping with a large steel nail no deep scratches will form and no crumbling will occur
- free of surface bleeding

Dry:

- dry surface free of condensation
- R.H. of mass < 4% (UNI 10329)

Clean:

- surfaces must be free of cement slurry, oil-based parting compounds, traces or residues of paints, adhesives, residues of previous operations, dust.

Restore weakened or missing parts or honeycombs and fill any uneven surfaces with suitable products from the Keralevel Range. On old flooring that is stable and perfectly anchored, completely remove any surface treatments and clean thoroughly with specific detergents and pressurised water. Remove any condensation or residual washing water. Before application damp the surface of absorbent substrates, avoiding standing water. Make the perimeter joints along the full perimeter of the substrates at the borders with other surfaces whatever their orientation and where they meet the thresholds (UNI 11493 - 7.11).

Waterproof the perimeter, the fractionizing, the expansion and the desolidarisation joints of the substrates with Aquastop 120 or Aquastop Plus 120 bonded with Nanoflex No Limits; use the special pieces or make special pieces for the corners and to connect drains and installations by cutting the Aquastop 120 or Aquastop Plus 120 tape; where the space is insufficient for bonding the tape, apply Aquastop Nanosil.

Instructions for use



Waterproof the structural joints with Aquastop 200 HP, waterproof tape for structural joints.

→ Preparation

Prepare Nanoflex No Limits in a clean container, pouring in a quantity of water equal to approximately $\frac{3}{4}$ of the amount required. Gradually pour Nanoflex No Limits into the container, mixing the paste from the bottom upwards with a low-rev (400/min.) electrical mixer.



- ① Add water until a fluid, smooth, lump-free mixture is obtained. The mixture must be of smooth consistency and without any lumps. The amount of water indicated on the packaging is indicative. It is possible to obtain mixtures with a more or less fluid consistency, depending on the type of application.

→ Application

After waterproofing the joints with Aquastop 120 or Aquastop Plus 120, check the adhesion of the tapes and proceed with the application of the Nanoflex No Limits gel-membrane.



- ① Nanoflex No Limits should be applied with a smooth spreader on a previously prepared substrate. Apply the first coat about 1 – 2 mm thick, pressing down to ensure maximum adhesion to the substrate. Fully cover all the surfaces including the horizontal sections of the tape strips.
- ② Once the product has hardened, and after removing any surface condensation, apply the second coat of Nanoflex No Limits. Apply a continuous, even layer about 2-3 mm thick covering the substrate completely. Fully cover the tapes, including the vertical portions.

→ Laying the covering



- ① Subsequent laying of the covering must be carried out immediately with mineral gel adhesives in the H40 range; if rain falls on the product before it is fully hardened, carefully check its suitability for subsequent laying.
- ② The presence of full-bed adhesive is an essential requirement for durability purposes (UNI 11493 – 7.13.5).
- ③ Lay the flooring with open joints (UNI 11493 – 7.10.2); gaps of 5 mm are recommended.
- ④ Ceramic skirting boards must be affixed to the vertical surface with adhesive and kept at a distance of > 2 mm above the floor tile.
- ⑤ Create elastic joints at least 5 mm in width to separate the floor from the vertical elements and between materials of different types; create a grid of movement joints measuring between 3x3 m and 4x2.5 m (UNI 11493 point 7.11.1.2-3) with particular attention to possible structural movements. The joints made must coincide exactly with the joints made previously in the substrate and waterproofed with Aquastop 120 or Aquastop Plus 120 tape strips; cut the tiles if necessary.
- ⑥ Perform grouting with Fugabella Color or Fugalite Color without filling the elastic joints.
- ⑦ Seal the elastic joints and the space between the skirting boards and floors with a permanently elastic material (UNI 11493 – 7.12.3) such as Silicone Color, Neutro Color or Silmat Color.

→ Cleaning

Residual traces of Nanoflex No Limits can be removed from tools with plain water before the product hardens.

Special notes

- Nanoflex No Limits does not require a reinforcing mesh within the Laminato No Limits system because it creates a single body with the H40 No Limits gel-adhesive which produces very high shear adhesion values to guarantee the durability of the system.

The use of Aquastop AR1, a Special reinforcing mesh made of alkali-resistant glass fibre, guarantees that the required quantity of product is applied: once the total coverage of the mesh texture is obtained, the substrate surface is completely covered. When required, submerge the Aquastop AR1 mesh in the first layer of freshly applied Nanoflex No Limits by pressing down with the spreader; once hardened, apply the second coat, completely covering the texture of the mesh.



- Pools, tanks, basements and foundations in cured reinforced concrete before laying the covering: break the spacer holes mechanically and clean them suitably, then apply Aquastop Nanosil neutral organic silane sealant; level the surface with a suitable finishing product. Waterproof the corners and edges by bonding the Aquastop 120 or Aquastop Plus 120 tape with Nanoflex No Limits; use the special special pieces for the corners or create them on site by cutting the tape itself.

- Surfaces subject to foot traffic: use Aquastop Traffic to protect untiled surfaces that have been waterproofed using Nanoflex No Limits.

- Front sections and outflow and foundation exterior edges: in perimeter sections without masonry walls or parapets, such as front sections and outflow edges, apply Aquastop tape to fully cover the vertical thickness of the screed ("L" facing downward) and proceed with waterproofing (UNI 11493 – 7.12.6). If no glued covering is present on the front section, protect the waterproofing with Aquastop Traffic or suitable finishing/decorating materials. In substrates executed on the ground (with adequate underlying drainage/loose stone) or in lateral contact with the earth (pavements, pathways, colonnades, etc.) the interface at the border between substrate and earth must be waterproofed: apply Aquastop tape to fully cover the vertical thickness of the screed and proceed with waterproofing (UNI 11493 – 7.12.7). Where no glued covering is present, protect the waterproofing against blows and mechanical action.

- The floors must be laid with appropriate slopes to prevent standing water; drains must have capacity adequate for extreme surface wetting conditions (UNI 11493 – 7.12).

Abstract

Supply and certified laying of a single-component, breathable, anti-alkali and chlorine-resistant, super-adhesive, ultra-workable, waterproof gel-membrane, with low CO₂ emissions and very low volatile organic compound emissions, CM01P-certified according to standard EN 14891, such as Nanoflex No Limits by Kerakoll Spa, specifically designed for high-adhesion and superior durability waterproof laying of ceramic tiles and stone materials with a gel-adhesive such as H40 No Limits by Kerakoll Spa; substrate residual moisture ≤ 4%, shear adhesion ≥ 2.5 N/mm² (ANSI A-118), breathability ≥ 1 billion nanopores/cm² (ASTM E128), water vapour diffusion resistance coefficient (μ) ≤ 825 (ISO 7783-1). After specific cleaning of the substrate, apply two coats with a smooth trowel, embedding the Aquastop AR1 mesh into the first wet coat if required; carefully cover the entire surface, including Aquastop 120 or Aquastop Plus 120 tapes, with the dry product to a thickness of ≈ 2.5 mm, corresponding to ≈ 3 kg of product per m².

Certificates and marks



** émission dans l'air intérieur Information sur le niveau d'émission de substances volatiles dans l'air intérieur, présentant un risque de toxicité par inhalation, sur une échelle de classe allant de A+ (très faibles émissions) à C (fortes émissions).*

Technical Data compliant with Kerakoll Quality Standard	
Appearance	grey pre-mixed
Apparent volumetric mass	1 kg/dm³
Mineralogical nature of inert material	silicate – crystalline carbonate
Shelf life	≈ 12 months from production in the original sealed packaging, protect from humidity
Pack	20 kg bags with handle
Mixing water	≈ 5 – 6 l / 1 20 kg bag
Viscosity	≈ 60000 mPas · sec
Specific weight of the mixture	≈ 1.5 kg/dm³
Pot life	≥ 1 hr
Apparent density of dry, hardened product	≈ 1.38 kg/dm³
Temperature range for application	from +5 °C to +35 °C
Substrate residual humidity	≤ 4%
Minimum total thickness	≥ 2 mm
Maximum thickness per layer	≤ 1.5 mm
Waiting time between 1st and 2nd coat	≥ 6 hrs
Waiting time before laying the covering*	≥ 24 hrs
Interval before normal use	≈ 7 days / ≈ 14 days (permanent water)
Working temperature	from -20 °C to +90 °C
Coverage	≈ 1.15 kg/m² per mm of thickness

Technical Data compliant with Kerakoll Quality Standard	
Safe laying Laminato No Limits	
Pot life:	
- ≈ +5 °C, 80% R.H.	> 2 hrs
- ≈ +20 °C / 65% R.H.	> 1 hrs
- ≈ +35 °C, 40% R.H.	> 30 min.
Waiting time between 1 st and 2 nd coat:	
- ≈ +5 °C, 80% R.H.	> 8 hrs
- ≈ +20 °C / 65% R.H.	> 2 hrs
- ≈ +35 °C, 40% R.H.	> 1 hrs
Foot traffic at 2nd coat:	
- ≈ +5 °C, 80% R.H.	> 12 hrs
- ≈ +20 °C / 65% R.H.	> 4 hrs
- ≈ +35 °C, 40% R.H.	> 2 hrs
Protection time from direct rain:	
- ≈ +5 °C, 80% R.H.	> 24 hrs
- ≈ +20 °C / 65% R.H.	> 8 hrs
- ≈ +35 °C, 40% R.H.	> 6 hrs
Waiting time before laying:	
- ≈ +5 °C, 80% R.H.	> 24 hrs
- ≈ +20 °C / 65% R.H.	> 12 hrs
- ≈ +35 °C, 40% R.H.	> 8 hrs

Values taken at +23 °C, 50% R.H. and no ventilation.
(*) Thickness and weather conditions may extend these times considerably.

Performance		
VOC Indoor Air Quality (IAQ) - Volatile organic compound emissions		
Conformity	EC 1 plus GEV-Emicode	GEV certified 7906/11.01.02
HIGH-TECH		
Shear adhesion Laminato No Limits – Zero Stress after 28 days	≥ 2.5 N/mm ²	ANSI A-118
Initial adhesion	≥ 2 N/mm ²	EN 14891–A.6.2
Adhesion after contact with water	≥ 1 N/mm ²	EN 14891–A.6.3
Adhesion after heat ageing	≥ 2 N/mm ²	EN 14891–A.6.5
Adhesion after freeze-thaw cycles	≥ 1 N/mm ²	EN 14891–A.6.6
Adhesion on contact with lime water	≥ 1.5 N/mm ²	EN 14891–A.6.9
Adhesion on contact with chlorinated water	≥ 0.8 N/mm ²	EN 14891–A.6.7
Water-resistance	no penetration	EN 14891–A.7
Breathable:		
- number of nanopores	≥ 1 billion/cm ²	ASTM E128
- Water vapour permeability coefficient (μ)	≤ 442	UNI EN ISO 7783–1
Crack Bridging in standard conditions	≥ 0.75 mm	EN 14891–A.8.2
Crack Bridging at low temperatures (-5 °C)	≥ 0.75 mm	EN 14891–A.8.3
Specific heat capacity	≈ 1.66 J/m ³	
Thermal conductivity at +10 °C	≈ 520 mW/(m K)	EN 12664
Conformity	CM O1P	EN 14891

Values taken at +23 °C, 50% R.H. and no ventilation.

Warning

→ Abide by any standards and national regulations
→ if necessary, ask for the safety data sheet

→ for any other issues, contact Kerakoll Technical Customer Service:
+ 39 0536.811.516
www.kerakoll.com/contatti

Kerakoll Quality System

ISO 9001 CERTIFIED 1710/0327

Kerakoll Quality System

ISO 40001 CERTIFIED 18586-1

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