Nanoflex® Eco

Certified, eco-friendly, breathable, anti-alkali and chlorine-resistant, mineral membrane for the flexible waterproofing with high levels of adhesion and durability of substrates before laying with adhesives, ideal for use in GreenBuilding. Single-component with low CO_2 emissions and very low volatile organic compound emissions, recyclable as an inert material at the end of its life.

Nanoflex® Eco develops a smooth, fluid mixture that can be adjusted by varying the amount of water in order to obtain optimal workability for the particular site conditions, guaranteeing maximum adhesion of the bonded system.

GREENBUILDING RATING®

Nanoflex® Eco
- Category: Inorganic Mineral Products
- Class: Mineral Waterproofing Products
- Rating: Eco 3

eco3	Regional Mineral ≥ 50 %	Recycled / Regional Mineral ≥ 30 %	CO_2 ≤ 250 g/kg	Low Emission IAQ VOC Indoor Air Quality	Recyclable
			✓	✓	✓
			CO_2/kg emission 108 g	Very low VOC emissions	Can be recycled as inert material

RATING SYSTEM ACCREDITED BY CERTIFICATION BODY SGS

ECO NOTES

- Can be recycled as mineral inert material, avoiding waste disposal costs and environmental impact
- Single-component; avoiding the use of plastic cans reduces CO_2 emissions and the need to dispose of special waste

PRODUCT STRENGTHS

- Floors and walls, for internal and external use
- Breathable
- Crack-Bridging Ability
- Specifically intended for laying ceramic tiles, natural stone and glass mosaic using adhesives from the H40® range
- Suitable for overlaying
- 30% better coverage than two-component systems
- 20 kg paper bags with carrier handle
- Nanotech technology which makes it completely water repellent and gives permanent elasticity and high chemical stability

KERAKOLL WATERSTOP SYSTEM

KERAKOLL WATERSTOP SYSTEM is the brand behind AquaExpert systems, the state-of-the-art waterproofing systems for balconies, terraces and any surface whatsoever where ceramic tiles, natural stone and glass mosaic are to be laid. AquaExpert guarantees 100% water-resistant substrates and the highest possible chemical/physical compatibility ratio with cement-based adhesives that are suitable for laying the floor coverings, thereby ensuring the long life of the entire bonded system.
Nanoflex® Eco eco-friendly membrane is used in the following AquaExpert systems:
AQUAEXPERT 1 Flexible, high-adhesion and superior durability waterproofing system which is easy and fast to apply. Specifically intended for balconies, terraces and horizontal external surfaces that are small in size and with no expansion joints in the screed to be floored with ceramic tiles and natural stone. Guarantees water-resistance without the use of a reinforcing mesh.
AQUAEXPERT 2 Flexible, high-adhesion and superior durability waterproofing system which provides greater shear strength. Specifically intended for balconies, terraces and horizontal external surfaces of any size and with expansion joints in the screed to be floored with ceramic tiles and natural stone.

AREAS OF USE

Use
Terraces, balconies, horizontal surfaces and swimming pools on mineral screeds, monolithic cement-based screeds, existing floors covered with ceramic and marble tiles, dimensionally stable natural stone well-anchored to the substrate and clean, cement-based plasters/renders and cementitious mortars, aged concrete.

Do not use
On gypsum or anhydrite-based substrates without the use of Primer A Eco eco-friendly, water-based surface isolation, on metal or wood substrates, on bituminous sheeting, to waterproof exposed surfaces subject to foot traffic, on insulation layers on inverted roofs made with insulation panels or low-density screeds.

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INSTRUCTIONS FOR USE

Preparation
Prepare Nanoflex® Eco in a clean container by pouring in approximately ¾ of the water required. Gradually add Nanoflex® Eco to the container, mixing the paste from the bottom upwards with a low-rev (≈ 400/min) agitator. Add more water until the desired consistency is obtained.The mixture must be of smooth consistency and without any lumps. The amount of water to be added, indicated on the packaging, is an approximate guide. It is possible to obtain mixtures with a more or less fluid consistency, depending on the type of application.

Application
Nanoflex® Eco 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. Once hardened and after removing any surface condensation, apply the second coat of Nanoflex® Eco. Lay a continuous, even layer about 2-3 mm thick covering the substrate completely. When waterproofing with Aquastop AR1 mesh, submerge the reinforcing mesh fully in the first layer of freshly applied waterproofing product, pressing down with the spreader. The subsequent laying of the covering should be placed at least 24 hours after the last layer of H40® Eco range eco-friendly mineral adhesive has been applied. when working in low temperatures and with high humidity, the waiting time before laying will be longer. If rain falls on the product before it is fully hardened, check it is ready before applying the next coat/covering.

Cleaning
Residual traces of Nanoflex® Eco can be removed from tools with plain water before the product hardens.

ABSTRACT

AquaExpert 1 System
Waterproofing for floor-wall joints - Supply and application of non-woven, alkali-resistant waterproof polypropylene tape with high adhesion, such as Aquastop 70 to be fixed with single-component, eco-friendly, breathable, anti-alkali and chlorine-resistant, mineral membrane with GreenBuilding Rating Eco 3, such as Nanoflex® Eco by Kerakoll Spa.
Substrate waterproofing - Certified supply and application of flexible, single-component, variable rheology, eco-friendly, breathable, anti-alkali and chlorine-resistant, mineral membrane with high levels of adhesion and durability of substrates before laying ceramic tiles and natural stone with adhesives, GreenBuilding Rating Eco 3, such as Nanoflex® Eco by Kerakoll Spa.
AquaExpert 2 System
Waterproofing for floor-wall joints and fractionizing/expansion joints - Supply and application of waterproof polypropylene-coated non-woven polyethylene tape with high levels of adhesion, such as Aquastop 100, to be secured with eco-friendly mineral adhesive such as H40® Eco by Kerakoll Spa.
Substrate waterproofing - Certified supply and application of flexible, single-component, variable rheology, eco-friendly, breathable, anti-alkali and chlorine-resistant, mineral membrane with high levels of adhesion and durability of substrates before laying ceramic tiles and natural stone with adhesives, GreenBuilding Rating Eco 3, such as Nanoflex® Eco in which to embed alkali-resistant 10mm x 10mm reinforcing mesh, such as Aquastop AR1 by Kerakoll Spa.

TECHNICAL DATA COMPLIANT WITH KERAKOLL QUALITY STANDARD

Appearance	light grey ready-mixed waterproofing product	
Apparent volumetric mass	1 kg/dm³	
Mineralogical nature of inert material	silicate - crystalline carbonate	
Shelf life	≈ 12 months in the original packaging in dry environment	
Pack	20kg bags with handle	
Mixing water	≈ 5 – 6 ℓ / 1 bag 20 kg	
Viscosity	≈ 60,000 mPas · sec	
Specific weight of the mixture	≈ 1,5 kg/dm³	UNI 7121
Pot life	≥ 1 hr	
Temperature range for application	from +5 °C to +35 °C	
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	

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

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PERFORMANCE

VOC INDOOR AIR QUALITY (IAQ) - VOLATILE ORGANIC COMPOUND EMISSIONS		
Conformity	EC 1-R GEV-Emicode	Cert. GEV 2353/11.01.02
HIGH-TECH		
Initial adhesion	≥ 2 N/mm²	EN 14891–A.6.2
Adhesion after contact with water	≥ 1 N/mm²	EN 14891–A.6.3
Adhesion after heat ageing	≥ 2 N/mm²	EN 14891–A.6.5
adhesion after freeze-thaw cycles	≥ 1 N/mm²	EN 14891–A.6.6
Adhesion on contact with limescale water	≥ 1,5 N/mm²	EN 14891–A.6.9
Adhesion on contact with chlorinated water	≥ 0,8 N/mm²	EN 14891–A.6.7
Water-resistance	no penetration	EN 14891–A.7
Breathability (No. nanopores)	≥ 1 billion/cm²	ASTM E128
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
Containmnet of drinking water	Suitable	Cert. ARPA 016824/06/RE
Conformity	CM 01P	EN 14891

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

WARNING

- **Product for professional use**
- abide by any standards and national regulations
- technological specifications and application information can be found in the AquaExpert Instructions
- if necessary, ask for the safety data sheet
- for any other issues, contact the Kerakoll Worldwide Global Service - globalservice@kerakoll.com

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