Nanodefense Eco

Certified, eco-friendly, organic, water-based, mineral waterproofing product for absorbent substrates in damp environments.

Nanodefense Eco develops total water-resistance under positive thrust guaranteeing the protection of absorbent substrates or those subject to damp, or in constantly humid environments.

Rating 5

GREENBUILDING RATING
REF. GBR DATA REPORT 12.22
APPROVED

- ✓ Regional Mineral ≥ 30%
- ✓ VOC Low Emission
- ✓ Solvent ≤ 5 g/kg
- ✓ Low Ecological Impact
- ✓ Health Care

1. **Suitable for subsequent laying of ceramic tiles, porcelain tiles and natural stone using mineral adhesives**
2. **High elasticity and chemical stability**
3. **It can be easily applied with a spreader or roller to any substrate**

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Areas of application

→ Use
Waterproofing of smooth, compact and absorbent substrates before laying ceramic coverings with adhesives.
Compatible adhesives:
- gel-adhesives, mineral adhesives and mineral adhesives with SAS technology
- single-component and two-component organic mineral adhesives
- cement-based, water-dispersed, reactive-epoxy and polyurethane two-component adhesives

For internal use. Concrete flooring, compact and smooth cement-based screeds, prefabricated or fresh concrete castings, gypsum, plasterboard and gypsum brick walls, cement-based plasters and finishing products and cement-lime mortar.

→ Do not use in external applications, on wet surfaces or substrates subject to moisture rising; in environments where water is always present, baths, swimming pools and tanks.

Instructions for use

→ Preparation of substrates
Substrates must comply with BS 5385, parts 1-5, be compact, smooth and absorbent, free from dust, oil and grease, free from moisture rising, with no loose and inconsistent debris. Varnishes and paints must be removed completely. The substrate must be stable, non-deformable and with no cracks. Cement-based substrates must have a residual humidity ≤ 2 % CM. Plasters with a gypsum base must present a residual humidity ≤ 1 % CM, and screeds with an anhydrite base ≤ 0.5 % CM, or ≤ 0.3 % CM if an underfloor heating system is installed; measurements should be carried out with a calcium carbide hygrometer. Check for traces of thin finishing, that would interfere with the subsequent laying of heavy surface coverings such as ceramic tiles.

→ Preparation
Nanodefense Eco is ready for use. In any case, before use it is advisable to remix the product inside the pack to ensure the mixture is of an even consistency. Any excess waterproofing product can be kept for later use by putting the lid back on the packaging.

→ Application
Apply a fine, uniform film, preferably using a short bristle, synthetic fibre roller, a steel spreader or brush. When applied with a roller or brush, wait until the first coat has hardened before proceeding with the second one (≈ 1 hr depending on the absorbency level of the substrate and temperature) in order to ensure waterproofing. The distinct light blue colouring of Nanodefense Eco allows the user to check whether the application is complete and uniform. Angles and hydraulic couplings must be joined respectively using Aquastop 120 waterproof treatment and relative accessories applied directly with Nanodefense Eco.

→ Cleaning
Nanodefense Eco can be removed from tools and other surfaces by washing them using water before the product hardens or with solvents once hardened.

Special notes

→ On highly absorbent substrates, apply a base coat by diluting Nanodefense Eco with water depending on substrate absorption (max 5%). After this, apply the second undiluted coat using a steel spreader or roller to ensure the watertightness of the surface.

→ If necessary, Aquastop AR1 special reinforcing mesh made of alkali-resistant glass fibre can be inserted, followed by a further coat of Nanodefense Eco.

Certificates and marks

Technical Data compliant with Kerakoll Quality Standard		
Appearance	light blue paste	
Specific weight	≈ 1.44 kg/dm³	
Chemical nature	co-polymers dispersed in water	
Shelf life	≈ 12 months from production in the original sealed packaging	
Warning	protect from frost, avoid direct exposure to sunlight and sources of heat	
Pack	15 / 5 kg buckets	
Viscosity	≈ 1,100,000 mPa · s, rotor 93 RPM 0.5	Brookfield method
Temperature range for application	from +5 °C to +35 °C	
Dilution for base coat	≈ 5%	
Minimum thickness per coat	≈ 1 mm	
Minimum dry thickness per coat	≈ 500 µm	
Waiting time between 1st and 2nd coat	≈ 1 hr	
Waiting time before laying:		
- min.	≥ 2 hrs	
- max	≤ 48 hrs	
Coverage	≈ 1.5 kg/m²	

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

Performance		
VOC Indoor Air Quality (IAQ) - Volatile organic compound emissions		
Conformity	EC 1 plus GEV-Emicode	GEV certified 2134/11.01.02
HIGH-TECH		
Water-resistance	≥ 3 bar	DIN 1048
Permeability to water vapour μ after 28 days	≥ 20000	Cert.173379 Inst. Giordano
Water absorption after 28 days	≤ 5%	UNI 8202/22
Adhesion to concrete after 28 days	≥ 1 N/mm²	EN 1542
Tensile strength after 28 days:		
- adhesives Class C1	≥ 0.5 N/mm²	EN 1348
- adhesives Class C2	≥ 1 N/mm²	EN 1348
Elongation at break after 7 days	≥ 90%	DIN 53 504
Crack bridging	≥ 1.5 mm	ASTM C 1305
Working temperature	from -40 °C to +90 °C	
Conformity	CSTB	13/12-1142

Values taken at +23 °C, 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.

Warning

→ Product for professional use
→ abide by any standards and national regulations
→ do not apply Nanodefense Eco as an external waterproofing covering
→ use at temperatures between +5 °C and +35 °C
→ it should be stored and transported at temperatures of more than +5 °C
→ apply the subsequent coat only when the previous one is perfectly dry
if necessary, ask for the safety data sheet
→ for any other issues, contact the Kerakoll Worldwide Global Service 01772 456 831 - info@kerakoll.co.uk

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