

Lyksor® Nanomastik PU 200

Flexible Sealant for Concrete and Masonry Facades

Product Definition/ Use

NanoMastik PU 200 is a 1-part, moisture curing, elastic joint sealant suitable for movement and connection joints in facades.

Use

Nano is suitable for use in the connection joints in facades.

Advantages and Properties

Very good weathering- and ageing resistance

- Movement capability of ± 25 (ASTM C719)
- Bubble-free curing
- Low stress to the substrate
- Easy to smooth and very good workability
- Good adhesion to many substrates
- Solvent free and odourless
- Very low emissions
- Suitable for use in hot and tropical climatic conditions

Application Details, Suggestions and Warnings

Joint Design/ Consumption

The joint width must be designed to suit the movement capability of the sealant. In general the joint width should be > 10 mm and < 40 mm. A width to depth ratio of approx. 2:1 must be maintained. Joints deeper than 15 mm must be avoided.

Standard design dimensions for concrete elements as per DIN 18 540 /table 3:

Joint distance	2 mm	2-3,5 mm	3,5-5 mm	5-6,5 mm	6,5-8 mm
Design joint width	15 mm	20 mm	25 mm	30 mm	35 mm
Min. joint width	10 mm	15 mm	20 mm	25 mm	30 mm
Joint depth	8 mm	10 mm	12 mm	15 mm	15 mm

All joints must be properly designed and dimensioned in accordance with the relevant standards before construction. Basis for calculation of the necessary joint width are the technical values of the joint sealant and the adjacent building materials, as well as the exposure of the building, type of construction and its dimensions.

Approximate consumption

Joint width	10 mm	15 mm	20 mm	25 mm	30 mm
Joint depth	8 mm	8 mm	10 mm	12 mm	15 mm
Joint length / 60 ml	~7,5 m	~4,5 m	~2,5 m	~1,6 m	~1,3 m

Backing: Use closed cell, polyethylene foam backing rods.

Substrate Preparation / Priming

Surfaces must be clean, dry and free from oil, grease and dust, loose or friable particles. Cement laitance has to be removed. Grinding the surface of non-porous substrates with an abrasive pad very fine may improve the adhesion performance.

Non- porous substrates

Non-porous substrates such as metals, powder coatings, etc. have to be treated with an abrasive pad very fine and using a clean towel.

PVC has to be pre-treated with Lyksor® Primer by using a clean brush. Before sealing allow a flash-off time of at least 30 min. (max. 8 hrs.)

Porous substrates

Porous substrates such as concrete, aerated concrete and cementitious renders, mortars, brick, natural stone etc. have to be primed with Lyksor® Primer by using a clean brush or a roller. Before sealing allow a flash-off time of at least 30 min. (max. 8 hrs.).

Primers are adhesion promoters. They neither substitute the correct cleaning of the surface nor improve their strength significantly. Primers improve the long term performance of a sealed joint. For further information please contact Lyksor R&D Technical Service.

Application Method / Tools

NanoMastik PU 200 is supplied ready to use

After suitable substrate preparation, insert backing rod to the required depth and apply primer if necessary. Insert foil pack into sealant gun and extrude NanoMastik PU 200 into joint making sure that it is in full contact with the sides of the joint and avoid air entrapment. NanoMastik PU 200 must be tooled firmly against joint sides to ensure good adhesion.

Masking tape may be used where exact joint lines or exceptionally neat lines are required. Remove the tape within the skin time.

If NanoMastik PU 200 is dry-tooled it shows a slightly structured, concrete-like surface. If it is wet-tooled it shows a smooth surface.

Do not use solvent containing products as tooling agents!

Warnings

NanoMastik PU 200 can be over-painted with most conventional paint systems.

The paint must be tested for compatibility by carrying out preliminary trials and the best results are obtained if the sealant is allowed to cure fully first. Please note that non-flexible paint systems may impair the elasticity of the sealant and lead to cracking of the paint film.

Colour deviations may occur due to exposure to chemicals, high temperatures, UV radiation (especially with colour shade white). However a change in colour will not adversely influence the technical performance or the durability of the product.

Before using on natural stone contact our Technical Service.

Do not use NanoMastik PU 200 on bituminous substrates, natural rubber, EPDM rubber or on building materials which might bleed oils, plasticisers or solvents which could attack the sealant.

Do not use NanoMastik PU 200 to seal swimming pools. NanoMastik PU 200 is not suitable for joints with water pressure or permanent water immersion.

Do not expose uncured NanoMastik PU 200 to alcohol containing products as they may interfere with the curing reaction.

All technical data stated in this Product Data Sheet are based on laboratory tests.

Actual measured data may vary due to circumstances beyond our control.

Recommended Dosage

Nano . The optimum dosage should be determined by trials.

Technical Properties

Colours	Grey
Chemical Base	Polyurethane
Density	1.42 kg/lt - 1.46 kg/lt at +20°C
Sag Flow	0 mm
Skin Time	65 minutes approx. at +20°C
Tooling Time	50 minutes approx.
Curing Rate	3 mm/24 h approx. at +20°C
Movement Capability	25% ± 25 %
Shore A Hardness	28 after 28 days approx. at +20°C
Tensile Strength	0.9 N/mm ² approx. at +20°C
Tear Propagation Resistance	5.0 N/mm approx. at +20°C
E-Modulus	0.45 N/mm ² approx. at 100% elongation at +20°C
Elongation at Break	800% approx. at +20°C
Elastic Recovery	> 90% at +20°C
Application Temperature	+5°C to +35°C
Service Temperature	-40°C to +70°C
Packaging	600 ml foil pack, 20 foil packs per box,
Storage Conditions / Shelf - Life	15 months from date of production if stored in undamaged original sealed containers, in dry conditions and protected from direct sunlight at temperatures between +10°C and +25°C.

Cleaning of Tools

Clean all tools and application equipment with thinner immediately after use. Once cured the material can only be removed mechanically.

Packaging

25 kg drum

200 kg tote

Storage and Shelf Life

Shelf life of Nano is 12 months when stored in its original package and recommended storage conditions. Nano should be stored in dry conditions between +5 °C and +35 °C. It should be protected from direct sunlight and frost.

Security and Health

In case of contact with skin, wash with clean water. In case of contact with eye, wash with clean water. Eye contact should be medically consulted immediately. For further information please refer to Material Safety Data Sheet (MSDS) of the product.

Legal Liability

The technical recommendations in this product data sheet are based on the experimental studies performed on reference concrete mixtures designed in the R&D laboratories of LYKSOR. The results may not be applicable to different concrete mixtures produced with different materials than the ones used in the experiments in Lyksor. All customers and users are required to determine the appropriate LYKSOR products for their intended use and to test the suitability of LYKSOR product for their application. Please contact LYKSOR for the appropriate product selection and usage details. LYKSOR is not responsible for the improper usage of the products.