



NEXLER RENOBUD R 103

Concrete repair mortar to be applied in a layer of 10 to 50 mm

TECHNICAL DATA

Composition	dry mixture of top-quality cement binder, quartz fillers and performance additives
Bulk density of dry mix	1,45 - 1,7 g/cm ³
Mixing ratio	3,50 - 3,75 l : 25 kg (water : dry mix)
Maturation time	approx. 5 mins
Processing time	approx. 60 mins
Open time	min. 15 mins
Time between applying successive layers	approx. 4 h
Minimum layer thickness	10 mm
Maximum layer thickness	50 mm
Carrying out further work – entering	after approx. 24 h
Filling layer application NEXLER RENOBUD R 103	after approx. 24 h
Application of NEXLER AQUAMINERAL 2K Ultra / 2K / 2K Pro sealing micro mortar	after approx. 24 h
Load permissible on the surface	after approx. 7 days
Mesh fraction over 3 mm content	≤ 5%
Adhesion to concrete	min. 1.5 MPa with a layer of NEXLER RENOBUD R 102 after 28 days
Compressive strength	class R4 25 MPa after 24 h 30 MPa after 48 h 40 MPa after 72 h 55 MPa after 7 days min. 60 MPa after 28 days
Flexural strength	4 MPa after 24 h 5 MPa after 48 h 5 MPa after 72 h 5 MPa after 7 days

Carbonation resistance	pass, carbonation depth dk less than for control concrete
Chloride ion content	≤ 0,05 %
Adhesive bond	≥ 2,0 MPa
Restrained shrinkage / expansion (dimensional stability) - Bond strength after test	≥ 1,5 MPa
Elastic modulus	≥ 20 GPa
Thermal compatibility - Bond strength after 50 cycles	≥ 2,0 MPa
Skid resistance	class I, class II
Capillary absorption	≤ 0,5 kg·m ⁻² ·h ^{-0,5}
Reaction to fire	class A1
Application temperature	from +5°C to +25°C
Consumption	approx. 20 kg/m ² /10 mm of dry mix
Reference document(s)	PN-EN 1504-3:2005

PROPERTIES

- Easy reprofiling of concrete and reinforced concrete elements
- Resistant to carbonation, which significantly increases the durability and service life of the structure
- High compressive strength, reaching at least 60 MPa after 28 days
- Allows unevenness in the substrate to be levelled, both for spot filling and for full-surface repairs
- Waterproof and diffusive at the same time
- Fire inert
- Resistant to the direct effects of de-icing salts, which is particularly significant for engineering structures



FROST-RESISTANT



VERY GOOD ADHESION



VAPOUR PERMEABILITY

APPLICATION

- Execution of sloping (profiling) layers on terraces and balconies
- Creation of facets on mineral substrates
- Component of the NEXLER RENOBUD system for repairs of structural and finishing elements such as balconies, terraces, ceilings, binding joists, columns, stairs, as well as frame structures, monolithic structures, tanks, cooling towers, chimneys and other concrete elements both structural and non-structural
- For indoor and outdoor use
- Carrying out repairs to engineering structures



TERRACES AND
BALCONIES



REPAIR OF CONCRETE
STRUCTURES



STEEL TROWEL



SPRAY
EQUIPMENT

PACKAGING

- | | |
|----------------------|------------------------|
| • Poland | Export |
| • Packaging: 25 kg | • Packaging: 25 kg |
| Quantity per pallet: | • Quantity per pallet: |
| - 25 kg - 42 pcs. | - 25 kg - 42 pcs. |

METHOD OF USE

CONDITION OF USE

The temperature of the substrate and air during the works should be from +5°C to +25°C.

Works should not be carried out during precipitation and strong sunlight.

SUBSTRATE PREPARATION

Concrete substrate: The surface must be properly prepared before applying **NEXLER RENOBUD R 103**. The concrete substrate must be made of concrete of min. C20/25 grade, with a strength of at least 1,5 MPa measured by the pull-off method. It must be clean and free of oil, grease, cement laitance and other substances that impair adhesion. Clean the substrate mechanically, remove dust and any loose layers. Concrete substrates that are significantly deteriorated, soiled or chemically or biologically corroded should be subjected to special treatments such as sandblasting, shot-blasting, milling, fungi removal.

The substrate should be covered with a bonding layer of **NEXLER RENOBUD R 102** mortar according to its application instructions. **NEXLER RENOBUD R 103** should be applied over **NEXLER RENOBUD R 102** using the 'wet-on-wet' technique.

Rebars: Prior to the application of **NEXLER RENOBUD R 102**, the rebars should be cleaned of any rust film and other elements that can result in separation or accelerate corrosion. The exposed surfaces of the reinforcement elements should be thoroughly cleaned, for example by sandblasting, removing rust and any other dirt, up to a cleanliness grade of SA 2.

In the case of bars with a fully or largely exposed surface, the concrete around them should be chiselled in such a way that after reprofiling the lagging made of **NEXLER RENOBUD R 103** mortar has a minimum thickness of 1,5 cm.

When using a closing layer of **NEXLER RENOBUD R 105**, the total thickness of the layers should be at least 1,5 cm.

PRODUCT CONTROL

Check the production date on the packaging before use. The product should not be incorporated beyond its shelf life. The product should not be objectionable (e.g. contain lumps, clumps, mechanical impurities) after opening. The mortar should be dry after opening the packaging, with no visible signs of moisture. Do not use a product that bears signs of freezing. After mixing with water, the mortar should be homogeneous and free of lumps and clumps resulting from under-mixing. Properly mixed, the product spreads easily over the surface and does not run off.

PRODUCT PREPARATION

Before use, **NEXLER RENOBUD R 103** should be poured into a vessel with a measured quantity of clean water and mixed with a slow speed mixer until a homogeneous consistency is obtained. The mortar can also be prepared in a concrete mixer. If partial use is assumed, the product should be prepared maintaining the weight ratio of the components. Use 1 kg of dry mix per 0,14 - 0,15 l of water. After the maturing time of 5 minutes, mix the material again. The mixed material, ready for processing, should be used within 1 hour. The thickened material cannot be stirred and processed again.

APPLICATION METHOD

Repair layer applied manually: **NEXLER RENOBUD R 103** mortar should be applied evenly with a steel trowel directly onto the fresh bonding layer of **NEXLER RENOBUD R 102** mortar using the 'wet-on-wet' technique. When applying, carefully press the mortar into the substrate, paying particular attention to areas that need filling. Depending on the requirements and intended use, the surface can be smoothed with a steel trowel or given a rough texture using a sponge trowel. Apply the mortar in a layer not thicker than 50 mm. If the depth of the defects to be repaired exceeds the maximum thickness of the mortar to be applied in one cycle, a second layer of **NEXLER RENOBUD R 103** can be applied after 4 hours to a matt-damp substrate. Repeated application of the bonding layer of **NEXLER RENOBUD R 102** mortar is then not required.

Repair layer applied mechanically: Substrate intended for mechanical application should be moistened with water until the surface is matt-damp. For porous and dry substrates, it is necessary to saturate them with water in advance, at least 24 hours before applying the **NEXLER RENOBUD R 103** mortar. The mortar can be applied in a maximum layer thickness of 30 mm in one cycle. When applying, position the nozzle of the unit as close to 90 degrees to the

surface as possible, maintaining a distance of 0,5 to 1,0 m between the nozzle and the substrate.

The mortar layer should be uniform and compact. When applying to a surface with reinforcement, the application is done from a shorter distance and at different angles to thoroughly cover the rebars with mortar, avoiding the formation of 'caps' on their surface. If necessary, the spraying power can be increased.

If the depth of the defects to be repaired exceeds the maximum thickness of the mortar to be applied in one cycle, a second layer of **NEXLER RENOBUD R 103** can be applied after 4 hours to a matt-damp substrate. Repeated application of the bonding layer of NEXLER RENOBUD R 102 mortar is then not required.

The repaired surface, during and immediately after the work, should be protected against precipitation. After applying the **NEXLER RENOBUD R 103** mortar, the fresh surface should be protected for 3 - 5 days against excessive drying, which can be achieved by using water mist or wet geotextile screens. At the same time, direct sunlight, draughts and significant fluctuations in temperature must be avoided and the mortar must be prevented from freezing. In the room where the work is carried out, the intensity of the heating should be reduced to maintain the right conditions for the mortar to dry.

■ CONTROL OF PERFORMANCE

Check that the product is evenly applied and covers the entire surface. Check the progress of drying before further work is carried out. A well applied layer should be permanently bonded to the substrate and should not peel or crack.

Depending on the design requirements, both the smoothness and roughness of the surface should be checked, adjusting for later stages of the finishing work.

■ TOOLS AND TOOL CLEANING

Low-speed mixer, steel trowel, trowel with sponge, spray equipment.

Wash tools with water during work and after its completion, and wipe dry. If the product dries, clean the tools mechanically. Once the material sets, it is difficult to remove.

■ STORAGE AND TRANSPORT

The shelf life of the product is 12 months from production date specified on the packaging. Store in dry and cool rooms, in tightly sealed, original packaging. The product must be protected against damp and frost. The product must be protected from heat and direct sunlight.

■ NOTES

Works should be carried out in accordance with technical conditions, manufacturer's instructions, health and safety standards and regulations.

For information on how to deal with symptoms of disease, allergies or irritation of the skin or eyes, please refer to the Safety Data Sheet (www.nexler.com).

The remaining content of the product and container should be handed over to authorized companies.

■ GENERAL RECOMMENDATIONS

Technical data and information on the method of use are given for a temperature of $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and a relative air humidity of 55%. In other conditions, the setting (drying) time may change significantly.

The drying time of the mortar depends on the degree of absorbency of the substrate and the surrounding temperature and humidity conditions.

The consumption of the product given in this sheet depends on the preparation and type of substrate.

The mixed product is frost-sensitive before setting. The surface covered with the repair layer can be used, stepped on, after about 24 hours, however loading is permissible after approx. 7 days. Work related to application of the putty layer of NEXLER RENOBUD R 105 mortar can begin after 24 hours. A protective coating made of NEXLER AQUAMINERAL 2K Ultra / NEXLER AQUAMINERAL 2K / NEXLER AQUAMINERAL 2K Pro sealing micro mortar can be applied after 24 hours. The commencement of other finishing work depends on the type of cladding planned and should be in accordance with the manufacturer's guidelines for the material used.

■ SAFETY INFORMATION

Causes skin irritation. May cause skin reaction. Causes serious eye damage. May cause respiratory irritation. If medical advice is needed, have product container or label at hand. Keep out of reach of children. Avoid breathing dust. Wash hands and exposed parts of the body thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Dispose of contents/container to according to the instructions of the manufacturer or person authorized to dispose of waste.

■ IMPORTANT INFORMATION

Please refer to the detailed conditions of use of the product before use.

We guarantee the quality of our materials as part of our terms of sale and delivery. For buildings with special requirements that are not covered by this manual, we provide our Customers with our own professional advisory service.

The manufacturer has no influence on the improper use of the material, its use for other purposes or under conditions other than those described above. The guarantee only covers the quality of the delivered product. The correct and therefore effective use of the product is not subject to our control.

Neither the manufacturer nor his authorized representative may be held liable for any loss incurred as a result of improper use or storage of the product.

Employees of the company are authorized to provide technical information only and solely in accordance with this Technical Data Sheet. Information other than that contained in this sheet should be confirmed in writing.

If you have any doubts, consult the manufacturer.

CONTACT DETAILS

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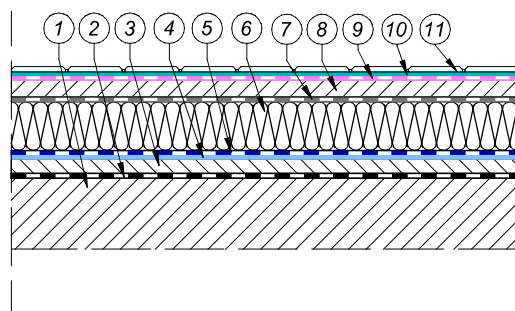
ISSUE DATE

This Technical Data Sheet was issued on 24.02.2025.

Once we have issued a new Technical Data Sheet, this one is no longer valid.

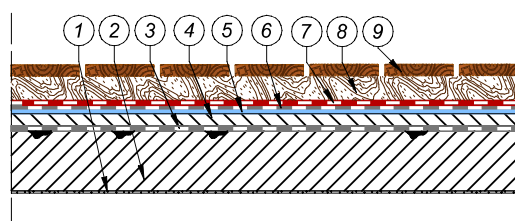
DETAILS

Terrace



1. Reinforced concrete slab
2. Bonding layer NEXLER RENOBUD R 102
3. Sloping layer made of **NEXLER RENOBUD R 103** repair mortar
4. Bituminous primer NEXLER BITFLEX Primer
5. Vapour barrier NEXLER ALU S40
6. Thermal insulation made of EPS or XPS boards
7. Self-adhesive bituminous felt NEXLER PLAN PYE G200 S30 SP
8. Concrete pressure screed
9. Under-tile insulation NEXLER AQUAMINERAL 2K Ultra
10. Adhesive mortar
11. Ceramic tile cladding

Balcony repair



1. Plaster
2. Reinforced concrete slab
3. Bonding layer NEXLER RENOBUD R 102
4. Sloping layer with filling of defects made of **NEXLER RENOBUD R 103** repair mortar
5. Bituminous primer NEXLER BITFLEX Primer
6. Weldable underlayer bituminous felt NEXLER PREMIUM PYE PV200 S40
7. Weldable top layer bituminous felt NEXLER PREMIUM PYE PV250 S53H
8. Joists on bituminous felt pads or supports
9. Wear layer – cladding of wooden or composite boards