

NEXSEAL 1000 CONCENTRATE CRYSTALLINE WATERPROOFING SLURRY

Technical Data Sheet



DESCRIPTION

Nexseal 1000 Concentrate reacts with un-hydrated cement particles to grow millions of needle-like crystals deep into the concrete mass. Over a period of weeks and months, these crystals grow, filling the naturally occurring pores and voids in concrete, and permanently blocking the pathways for water and waterborne contaminants. Later, if cracks form due to settling or shrinkage, incoming water triggers the crystallization process and additional crystals begin to grow, filling cracks and ensuring that the structure's waterproofing barrier is maintained and protected.

The concrete itself becomes the waterproof layer and the surface treatment is not required to remain intact for the system to be effective. **Nexseal 1000 Concentrate** consists of Portland cement, specially treated quartz sand and a compound of active chemicals. **Nexseal 1000 Concentrate** is supplied in powder form and needs only to be mixed with water prior to application.

FEATURES & KEY BENEFITS

- Stops water ingress in concrete
- Replaces unreliable exterior membranes, liners and coatings
- Reaches well below the surface and is not affected by surface wear or abrasion
- Self-seals hairline cracks
- Reactivates in the presence of moisture
- Waterproofing increases with time
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- Waterproofs from any direction (i.e. positive or negative side)
- Treatment may be applied to old or new concrete
- Safe for contact with potable water
- Resistant to the freeze-thaw cycle
- Protects reinforcing steel against corrosion
- Increased durability decreases building maintenance and repair costs

TYPICAL APPLICATION

- Foundation
- Basement
- Tunnels
- Pipes
- Maritime projects
- Submarine works
- Elevator pits
- Concrete walls
- Marine structures
- Swimming pool
- Water treatment plants
- Channels
- Potable water tanks
- Parking structure

PACKAGING

Nexseal 1000 Concentrate is supplied in 20 kg pails

APPLICATION GUIDELINES

All concrete to be treated with **Nexseal 1000 Concentrate** must be clean and have an "open" capillary system. Remove laitance, dirt, grease. Etc. by means of high-pressure water jetting, wet sandblasting or wire brushing.

Surfaces must be thoroughly saturated prior to the **Nexseal 1000 Concentrate** application (remove any free-standing water from the surface before application) **Nexseal 1000 Concentrate** must be applied to saturated concrete

Pour water into a clean suitable mixing vessel, then gradually add the **Nexseal 1000 Concentrate** powder into the water while mixing with a low speed paddle mixer until a consistency of thick oil paint is obtained. Only mix suitable quantities that can be applied within 20 minutes and stir mixture frequently. If the mixture starts to set, do not remix with additional liquid, simply re-stir to restore workability.

Brush Applied Mixing Ratio: Use 5 parts of **Nexseal 1000 Concentrate** powder to 2 parts water by volume for slurry consistency. Use 3 parts of **Nexseal 1000 Concentrate** powder to 1 parts water by volume for slurry consistency over wet surfaces.

Spray Applied Mixing Ratio: Use 4 parts of **Nexseal 1000 Concentrate** powder to 2 parts water by volume for Spray applications. Ensure that the area sprayed is followed by brushing the applied area into the pores and capillaries.

Slurry Consistency: Apply one or two coats (according to specification) of **Nexseal 1000 Concentrate** using a masonry brush or appropriate power spray equipment. When two coats are specified, apply the second coat whilst the first coat is still "green".

Post Treatment – Once the **Nexseal 1000 Concentrate** treatment has reached initial set, moist cure with a fine mist spray of water 2-3 times per day for three days. In hot or windy conditions, it should be cured more frequently. Alternative methods can be employed such as covering the application with wet burlap. During the curing period the **Nexseal 1000 Concentrate** treatment must be protected from rainfall, frost and water puddles.

Nexseal 1000 Concentrate is an effective waterproofing system for rigid concrete structures only and may not reliably seal cracks and joints that experience constant or repeated movement.

COVERAGE

- 1 kg/lm used as "dry pack" as part of the crack and joint repair system
- 1 kg/m² applied as a slurry in one coat
- 0.8 kg per m² when used as a first coat
- 0.7 kg per m² when used as a second coat

The coverage is theoretical and depends on local conditions. On-site testing should be done previous to application

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STORAGE

Nexseal 1000 Concentrate should be stored at room temperature (min 5° C and max 35°C), kept dry and out of direct sunlight. If these conditions are maintained and the product packaging is unopened, then a shelf life of 2 years can be expected.

HEALTH & SAFETY

This product becomes caustic when mixed with water perspiration.

Hazard statements

H315 Causes skin irritation.

H318 Causes serious eye damage

H335 May cause respiratory irritation.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

For more information, please check the safely data sheet for this product.

TECHNICAL DATA

Colour	Grey
Appearance	Powder
Density	1.2 g/cm ³
pH (Mixed with water)	13
Compressive strength	34.5 N/mm ² (Class R3: ≥ 25 MPa)
Adhesion strength by pull-off	2.82 MPa (Class R4: ≥2,0 MPa)
Initial set time at 25°C	60 minutes
Depth of penetration (impregnation)	≥5 mm
Mix ratio (Slurry)	5:2 (By volume)
Mix ratio (Dry pack)	4:1 (By volume)
Capillary absorption and permeability to water	W < 0,1 kg/(m ² x h ^{0.5})
Solids content	100%

DISCLAIMER

Whilst any information and/or specification contained herein is to the best of our knowledge, true and accurate, we always recommend that a trial be carried out to confirm suitability of the product, as no warranty is given or implied in connection with any recommendations or suggestions made by us or our representatives, agents or distributors. The information in this data sheet is effective from the date shown and supersedes all current issue: (May of 2019)

CE	
Nexgen Resources Ltd #76A Frederick Settlement, Industrial Estate, Caroni Trinidad and Tobago, W.I.	
Nexseal 1000 Concentrate Principle 1(PI): Protection against ingress Method 1.2 Impregnation	
EN 1504-2 PRODUCTS FOR PROTECTION AND REPAIR OF CONCRETE STRUCTURES. SURFACE PROTECTION SYSTEMS FOR CONCRETE. Tables 1 & 4 Impregnation	
Essential characteristics	Performance
Water vapour permeability (where relevant)	NPD*
Capillary absorption and permeability to water (according to EN 1062/3)	W < 0,1 kg/(m ² x h ^{0.5})
Resistance to chemicals (where relevant)	NPD*
Thermal compatibility (where relevant)	NPD*
Adhesion strength by pull-off test (where relevant)	NPD*
Reaction to fire	Class A1
Slip/skid resistance (where relevant)	NPD*
Water penetration depth measured on concrete cubes (according to EN 14630)	≥5 mm
Dangerous substances	NPD*
NPD*. No Performance Determined	