

TECHNICAL DATA SHEET OF THE PRODUCT

NOMEA HARD ONE

Product for Hardening, Thickening and Sealing the Concrete Structure

Description of the Product

NOMEA HARD ONE is a water-dilutable agent based on a combination of specially synthesised types of silicates and nanosilicates intended for additional hardening and sealing of porous structure of concrete, machine-glazed concrete floors and ground concrete surfaces. After application by so-called "wet overlay" method, the agent reliably penetrates into the deep parts of the concrete. After soaking into the concrete structure, the resulting chemical reactions ensure that the less hard particles transform into hard reaction products and that the pores in concrete are filled with crystallisation products. When adhering to the application procedure recommendations, the product functions as a thin-layer surface sealer on usual kinds of concrete and prevents efflorescence.

Area of Use

The product is suitable for using:

- ✓ on green, polished concrete
- ✓ on green, surface-hardened and polished concrete
- ✓ on old concrete
- ✓ on glazed concrete
- ✓ on architectural concrete
- ✓ on road concrete
- ✓ on precast concrete
- ✓ on pavements

The product can be used both in indoor and outdoor areas.

Resulting Characteristics after the Treatment – Benefits

- ✓ Resistance improvement to effects of water, frost (even the cyclic kind) and defrosting agents.
- ✓ Reduction of surface dustiness.
- ✓ Reduction of surface pollution.
- ✓ Improvement of floor aesthetics.
- ✓ Facilitation of floor cleaning.
- ✓ Reduction of moss and lichen growth.
- ✓ Improvement of the visual state of the surface.
- ✓ Longer lifespan of concrete elements of the construction.
- ✓ Reduction of costs related to cleaning and maintenance.
- ✓ Quick effect – maximum protection at minimum idle time.



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Technical Data

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| Chemical basis : | A water-dilutable agent based on a combination of specially synthesised types of silicates and nanosilicates |
| Colour : | Translucent liquid without a distinct colour shade |
| Volumetric weight : | 1100 kg/m ³ ± 5 % EN ISO 2811-1 |
| Weight loss after frosting-defrosting in the present of salt : | Class I: < 10mm EN 14630 |
| Depth of penetration : | Class I: < 10mm EN 14630 |
| Absorption of water and resistance to alkali : | Absorption < 7,5 % in comparison with uncured sample Absorption < 10% after immersion into alkaline solution |
| Speed of drying : | Class II: > 10% |
| Resistance to stroke : | Class III: ≥ 20 Nm |
| Speed of water penetration in liquid phase : | w < 0,1 kg/(m ² *h ^{0,5}) |

Application Procedure

Base Preparation

Before applying the NOMEA HARD ONE product on new, polished concrete, make sure to remove any loose, non-cohesive particles and dirt from the surface.

Before applying the NOMEA HARD ONE agent on old concrete, its condition should be evaluated first. The surface must be dried completely before application, without any spots stained with oil and without any residual paint. Based on the kind and degree of staining and degradation, the surface should be cleaned from dust and small particles using an industrial vacuum cleaner, a pressure washer, brushes or pads and any loss or damage must be filled or fixed. It is not necessary to sand the surface before application, unless the executor thinks otherwise. In case of doubt or need of verification, run the test first.

Temperature of the base : +5 °C min. / +30°C max.

Temperature of the surroundings : +5 °C min. / +35 °C max.

Temperature of the agent : +5 °C min. / +30°C max.

It is recommended to apply the agent tempered to 10-25°C at lower temperatures of the base and the surroundings in order to maximise the work efficiency and effects of the product.

Mechanical / Physical Properties

Abrasion resistance : abrasion resistance improvement according to the BCA method by 85% in comparison with uncured concrete sample C25/30 (EN 13892-4).

Surface resistance improvement : effects of water and chemical defrosting agents by 62% in cement concrete in comparison with uncured concrete sample C25/30.



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Consumption

0,1 – 0,25 l / m² (on ground, machine-polished concrete). This value is only indicative, it depends mainly on the quality and absorbency of the surface. The exact consumption values needed to achieve the desired effect should be obtained by applying a test coat sample before use.

Application Instructions

The product is ready to be used and its dilution is not recommended!

Apply a consistent coat with slight excess by spraying using a low-pressure sprayer. To ensure maximum penetration, let the agent work its way through the structure of polished concrete (let it work, based on the ambient temperature, for 20 minutes to 2 hours) and wipe off the excess amount of the agent with a cleaner blade or a micromop only right before gelation of the product. For better quality of the final surface condition, it is necessary to polish it with white polishing pads. We recommend applying at least 2 layers of the product to coarse-structured and porous concrete.

The second coat can be applied only once the first one has become dry. The technological break between two applications of coating layers is approximately 1-4 hours depending on the base and ambient temperatures.

The product may be used in combination with the **NOMEA CONHARD** and **NOMEA SEAL** products.

Cleaning the Tools and Securing the Surroundings

It is necessary to rinse and wash the sprayers and cans out with clean water right after using. The hardened product can be cleaned only mechanically – by brushing. Do not use spraying mechanisms which are contaminated by dissolving agents or agents based on a different basis. Prevent contamination of the environment. If you accidentally contaminate surrounding areas, remove the sprayed material immediately by repeated washing with water.

Packaging and Storage

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| Packaging : | plastic can 25 l, plastic container 1000 l. |
| Storage : | Store in temperatures between +5°C and 30°C. |
| Durability : | 12 months in original, unopened and undamaged packages as of the production date. |

Safety Regulations and Protective Measures

During the application, it is crucial to comply with safety instructions and effective regulations of respective authorities on health protection at work. When applying the product, use protective clothing, safety goggles and gloves. Detailed information about hygiene, work safety and environment protection are stated in the safety data sheet.



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Cleaning and Maintenance of the Treated Surface

The first cleaning should not be done sooner than 24 hours after the final treatment of the surface. The product develops its 100% efficiency 7 days after the application. Maintain the looks after applying the NOMEA HARD ONE product on the surface with cleaning and polishing machines set with non-abrasive polishing pads, using suitable cleaning agents (the NOMEA CLEAN product). The frequency and intensity of wet cleaning affect the lifespan of aesthetic properties of the surface.

Legal Amendment

The information, especially instructions on processing and applying our products, are based on our knowledge of development and application of chemical products and many years of application experience under standardised conditions and proper storage and use. With regard to different circumstances when processing, other external influences and different characters and properties of the surface bases, the methodology based on the above-mentioned information, or any other written or oral recommendations for that matter, does not necessarily guarantee successful results of the work. The client or the executor shall always try themselves whether the products are suitable for the planned purpose of the application.

