

NanoShield® P

Paraffin Based Curing Compound

Product Definition

NanoShield P is a paraffin wax emulsion based curing compound for preventing water loss from concrete surface during hydration process.

Use

NanoShield P is recommended for use in the applications below.

- Large concrete surfaces exposed to high evaporation rate.
- Concreting operations where normal water curing is difficult or impossible.
- Prestressed concrete elements.
- Industrial floors and field concretes.
- Concrete road, highway and runway constructions.
- Concreting in windy, hot and dry weather conditions.
- Concretes for strengthening and rehabilitation purposes.

Advantages and Properties

- NanoShield P helps to prevent water loss due to evaporation by forming an impermeable and thin layer on the applied surface. By this way, it recruits the strength development by providing more effective utilization of the mixing water in the hydration process.
- Does not contain any compounds that may have detrimental influences on the engineering properties of hardened cement paste.
- Reduces the plastic shrinkage crack formation risk.
- Provides economy in curing works requiring time and workmanship.
- Does not contain any substance that may cause corrosion of reinforcing steel.

Application Details, Suggestions and Warnings

- NanoShield P is sprayed onto the concrete surface with spraying tools as a very thin layer after the surface finishing operations of fresh concrete.
- The best time to apply NanoShield P is just after the completion of surface finishing operations and the bleedwater has dissipated (45 minutes to 2 hours depending on the temperature after the surface operations). The application should start before the complete dissipation of surface moisture.
- NanoShield P should be applied just after demoulding in vertical surfaces.
- Excessive delay in application time or the application to dry concrete surface may result in excessive penetration of NanoShield P components hindering the hydration of cement paste. In this case, thin film layer cannot be effectively formed and surface dusting and premature wear problems may have seen in later ages.
- The application should be done in uniform thickness as much as possible.
- NanoShield P is a ready to use product and should not be diluted. The mixture should be mixed effectively before use.

- NanoShield P applied concrete surfaces should be protected from rain, step and traffic for at least 3 - 4 hours.
- NanoShield P prevents bonding of concrete, coatings or treatments to the NanoShield P applied surface. NanoShield P have to be removed by brushing or hot water spraying if a new concrete layer or coating will be cast onto the NanoShield P applied old concrete.
- NanoShield P helps to prevent plastic shrinkage cracks by reducing the amount of water evaporated from the fresh concrete surface. On the other hand, curing compounds are not effective in preventing drying shrinkage cracks occurring in later ages. Standard concrete practices must be applied for design of construction and shrinkage joints.
- The ambient temperature should be higher than +5 °C during the NanoShield P application.

Recommended Dosage

NanoShield P is a ready to use product that is sprayed to concrete surface by spraying tools. The typical consumption of the product is around 0.15 – 0.25 kg/m² depending on the ambient temperature, wind speed and humidity. The optimum dosage should be determined by trials.

Technical Properties

Colour and form	White – Liquid
Chemical base	Paraffin wax emulsion
Density (kg/m ³)	0.95 – 0,99 (at +20 °C)

Cleaning of Tools

Concreting tools contact with NanoShield P can be cleaned by brushing with warm water. Dried NanoShield P layer can be removed by solvents.

Packaging

25 kg drum

200 kg tote

Storage and Shelf Life

Shelf life of NanoShield P is 6 months when stored in its original package and recommended storage conditions. NanoShield P should be stored in dry conditions between +5 °C and +35 °C. It should be protected from direct sunlight and freeze.

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.