

byk®



BYK 1019 TECHNICHARD

Quartz Aggregated Powder Surface Hardener

BYK 1019 TECHNICHARD is a one component, colored, ready to use surface hardener which is consisting cement, specially selected corundum aggregate pigment and additives, and applied by spraying powdered form on freshly screed concrete and screed surfaces.

FIELDS OF APPLICATION

- Indoors and outdoors,
- In depots and hangars,
- In open and closed car parks,
- In shopping malls and public areas,
- Factories and workshops.

ADVANTAGES

- Mixed Easy to apply,
- The applied surface is 2 to 4 times stronger than the normal concrete surface,
- Thanks to the modified polymers in it, it takes the water of the laying concrete to form a monolithic structure with concrete after it is polished.
- Prevent surface dusting,
- Colour options available,
- It is easier to clean than normal concrete surface,
- Resistant to frost-thaw effect.

TECHNICAL FEATURES

| | | |
|---------------------------------|---|--|
| Structure of the Material | Contains Special cement, modified polymer, pigment and quartz aggregate | |
| Colour | Natural, Gray, Green, Red, Yellow | |
| Compression Strength | 28days | 80 N/mm ² |
| Flexural Strength | | >9 N/mm ² |
| Abrasion Resistance | 100 cycles | 1 kg 1000 rpm / H22 disc (weight loss) / 69 mg |
| Fire Resistance | | A1 |
| Application surface Temperature | | +5°C / +35°C |
| Service Temperature | | -20°C / +80°C |

The values above are given for +23°C and 50% relative humidity. While higher temperatures shorten the period, lower temperatures extend it

APPLICATION PROCEDURE

Preparation of the Substrate

Compression Strength of the application concrete must be at least 25 N/mm² (C 25). To obtain the best result, the concrete slump values should be between 75 and 100 mm. The concrete must be adequately cemented (300 - 350 kg / m³) and the floor thickness must be at least 15 cm. Air entrained concrete is not suitable surfaces for applying surface hardener.

Primer

BYK 1103 SBR should be applied as a primer on roughened concrete surface before casting to ensure adherence between old concrete and screed in monolithic screed applications. In floating screed applications, polyethylene cover should be laid on old concrete to prevent sticking of screed concrete to old concrete.

Concrete Casting

In accordance with the project, molds should be placed according to the designated areas. Prior to concrete casting, **BYK 1019 TECHNICHARD** bags should be placed on the main edges in such a way as to meet the prescribed consumption. The screeds **BYK 1019 TECHNICHARD** to be applied must be over 7 cm thick, water / cement ratio over 0.45 and concrete grade at least (C25). Concrete should be compacted using vibrating gauges while concrete is cast between the anodes. Before the water comes out of the concrete surface, the necessary corrections should be made using the control gauge and wooden trowel. Water coming to the concrete surface should be swept with a wooden screed with long sleeves.



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Surface Hardener Application

BYK 1019 TECHNICHARD should be arranged in the amount to be used in the anode. Before the application of the spread, concrete with an approximately 5 x 5 cm triangular cross section along the joints at the anode edges should be removed with a trowel. Instead of concrete **BYK 1019 TECHNICHARD** should be applied with trowel, which is made into mortar with very little water. This will prevent the joint edges from breaking under load **BYK 1019 TECHNICHARD** should not be sprinkled on long distances when applied in order not to dissolve aggregates. According to the weather and weather conditions, the spreading process should be carried out after reaching to a depth of 0,75 - 1,0 cm when the concrete is cured up to the footprint. Material should not be poured on the anode as a heap, sprinkled as homogeneously as possible. At the first stage, 2/3 of the total consumption should be spread on the concrete surface, spread by the pull-off or spread by machine. Moisture (color change) of the spreading material should be expected by taking the water of the concrete and the surface leveling should be done with the concrete by making the disk burnishing (helicopter tray burnishing). Then the remaining material should be spread on the concrete surface as in the first application and the same operations should be repeated. When the disc is being polished, the surface material that has spilled onto the previously spilled anode should be cleaned with a spatula continuously. Otherwise, the elevation difference between the two anodes and the bad joint image will appear. After a rough finish, a thin curtain must be passed. Thin finishing is carried out with a knife. The knife luster should be done until the desired gloss is achieved. After the application of the surface hardener is finished, surface curing material should be applied in order to prevent cracks in the shrinkage and to ensure non-dustiness. Thus, **BYK 1019 TECHNICHARD** achieves the desired maximum performance. Cure application must be done in summer and winter. For suitable curing materials **BYK Binyapi Co.** should be consulted. After the concrete hardens to strength, the anode joints should be cut at least 4 mm wide and joints should be formed. The joints formed must be filled with PU mastics in order to avoid any adverse effects such as fracture and dusting caused by joints. The application of the surface hardener is carried out with the quality and type of the concrete to be applied and the timings vary according to the weather and ambient conditions. Application speed increases in hot weather, application rate decreases in cold weather. When applying, attention should be paid to the steps of concrete setting.

Cleaning of the Tools

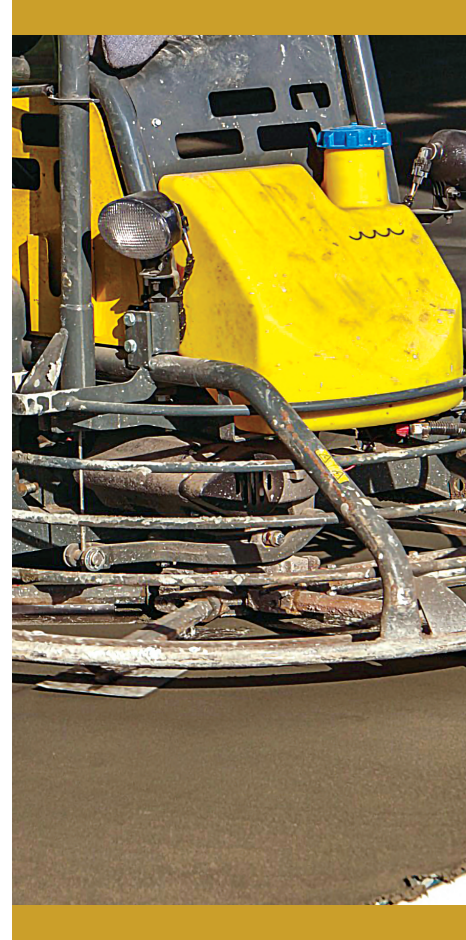
Tools and equipment used after the application should be cleaned with water. **BYK 1019 TECHNICHARD** can only be mechanically cleaned from the surface after hardening.

Consumption

Depending on the intended use and traffic load, it should not be used less than 4 - 8 kg/m², and in light colored applications 7 kg/m².

Package

25 kg Kraft bag



Shelf Life

The shelf life is 12 months from the date of production under suitable storage conditions (+5oC ile +30oC). Opened products must be used within 1 week.

Storage

The product should be stored in its original package, in a cool and dry place protected from frost. For short term storage, maximum 2 palletes should be placed on top of each other and the shipment should be made on a 'first come, first go' basis. Palletes should not be placed on top of each other during long term storage.

Health and Safety Precautions

It is dangerous to approach the application sites with fire. Fresh air should be circulated in the storage and the application sites. During the application, a protective apparel, protective gloves, goggles and masks which comply with the Occupational Health and Safety Rules should be used. Due to the irritation effect of the uncured materials, the mixture should not come into contact with skin and eyes; in case of a contact, the affected area should be washed with plenty of water and soap; in case of swallowing, a physician should be consulted immediately. No food or beverages should be brought to the application area. The product should be stored and kept out of reach of children. For detailed information please consult the Material Safety Data Sheet.

Disclaimer

The technical information given in this publication is based on the present state of our best scientific and practical knowledge. **BYK Binyapi Co.** is only responsible for the quality of the product. **BYK Binyapi Co.** is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones.