EN

# M17

Construction Chemicals > Waterproofing Products > Cement-Based

M17 is a single-component, cement-based, capillary-effective nano mineral chemical waterproofing material. It is composed of carefully selected aggregates and special additives. M17 reacts with moisture and water to penetrate deeply into concrete. It can be applied by brushing or spraying and is effective from both positive and negative sides.

## Fields of Application

- For internal and external waterproofing and damp proofing of reinforced concrete walls
- For internal waterproofing of foundations, basements, and retaining walls
- In elevator shafts
- In galleries and tunnels
- On internal and external surfaces of water tanks
- In clean and wastewater treatment plants.

## Advantages

- It can be easily used for positive and negative waterproofing.
- It has a 7-bar pressure penetration test for spraying and brushing.
- Resistant to sulfate.
- Suitable for contact with drinking water.
- Has capillary permeability properties.
- Integrates with the surface besides forming a layer on the concrete surface, therefore it does not puncture or tear.
- Does not require protective boards as it does not form a layer for insulation.
- Provides high adhesion, penetrating into the concrete surfaces.
- Breathable. Waterproof and vapor permeable.
- Can be applied to fresh concrete.
- Can be applied horizontally and vertically.
- Resistant to freeze-thaw cycles.

## 1 Application

M17 can be applied both by brushing and by spraying under the foundation.

## 2 Spraying

Spraying should be done right after the rebar is tied and just before the concrete is poured. There should be no time gap between the spraying and the concrete pouring to prevent the material from being blown away by the wind. To achieve 3 kg of spraying per $m^2$, each bag should be prepared to cover 6 $m^2$. Accordingly, the area should be gridded into 2x3 m sections, and one bag should be evenly spread over each section.

## 3 Surface Preparation for Slurry

The surface to be applied must be free of oil, dirt, rust, and all loose materials. If necessary, the surfaces should be cleaned with a water jet. The application should be done directly on the concrete. The surface to be applied must have sufficient strength. Wide cracks and tie-rod holes on the cleaned surface should be filled with Merks RP17 special repair mortar. The cleaned surfaces should be lightly dampened, and the application should be protected from direct sunlight and strong wind during the process.

## 4 Packaging

In 20 kg PE reinforced kraft bags.

## 5 Preparation of the Slurry Mortar

M17 waterproofing material is mixed with approximately 7 - 7.5 liters of water using a low-speed drill to achieve a lump-free mixture. The required amount of water should be placed in a clean container, and then M17 should be gradually added. After preparing the mixture, it should be allowed to rest for 3-4 minutes. The mixture may show a false set. It should be remixed without adding more water to obtain the final consistency. The prepared mixture should be used within 25 minutes. Corners should be beveled with RP17. The M17 chemical waterproofing material, brought to a slurry consistency, is applied in 2 coats using a brush or spray. If sprayed, brushing should be applied immediately afterward.

## 6 Curing

In the curing process, only water should be used. The material's surface should not dry too quickly, and if it does, the curing process with water should be started immediately. Generally, the curing process should be done at least 4 times a day. In very hot construction site conditions, the curing period should be extended by 3-4 days. The curing process is crucial for the impermeability performance of the material as it activates the active chemicals in the material. Curing can be done by spraying water on the surface or laying wet burlap. The use of chemical curing materials is definitely not appropriate.

## 7 Consumption Amount

Depending on the surface to be applied and the application method, it is 2 $kg/m^2$ for brush applications. For spray applications, it is 3 $kg/m^2$.

## **TECHNICAL** DATA

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|---|---|
| **Material Structure** | Mineral Fillers, Polymer-Modified Additives, and Cement |
| **Appearance** | Yellow, red, or gray colored powder |
| **Mixing Ratio** | 7.0 - 7.5 liters of water per 20 kg of powder |
| **Application Temperature** | (+5°C) - (+35°C) |
| **Powder Unit Bulk Density** | 1,20 kg/l |
| **Wet Unit Bulk Density** | 1,75 kg/l |
| **Rest Period** | 3-4 minutes |
| **Lifespan** | 25 minutes |
| **Service Temperature** | -200C + 800C |
| **Commissioning Time** | 5 days |
| **Adhesion Strength to Concrete** | ≥ 1,0 N/mm2 |
| **Capillary Water Absorption Value** | ≤ 0,1 kg/m2h0,5 |
| **Water Vapor Permeability** | Class I; Sd < 5 (Sd: Equivalent air layer thickness) |
| **Shelf Life** | Unopened packaging, in a dry environment, for 12 months |
| **Packaging** | 20 kg PE reinforced kraft bag |

### 8 Points to Consider

- It should be applied at temperatures between +5°C and +35°C.
- The amount of water to be used should be measured each time, and if necessary, a measuring cup should be used to prevent using too little or too much water.
- Avoid applying in frozen areas or areas exposed to direct sunlight and wind.
- The applied surfaces should not be kept moist for the first 5 days.
- Crystal formation depends on the quality of the concrete and the absorbency of the surface.

### 9 Storage Life

At least 12 months when stored in closed packaging and protected from frost.

### 10 Health and Safety

During the application, protective goggles and gloves should be used, and all tools used should be washed thoroughly with plenty of water before they dry. Due to its chemical properties, if the product comes into contact with the skin, eyes, or mouth, it should be cleaned immediately with plenty of water. In case of ingestion, a doctor should be consulted immediately.