



The Chemical Company

WATERPLUG® TR

Masterseal® 590

Cement Based Instant Setting Sealant Mortar That Prevents Active Water Leakages by Expanding In Concrete and Walls

Description of Product

WATERPLUG® TR is a high adherence, special cement and mineral filler containing, ready to use sealant mortar that instantly sets and hardens by expanding when mixed with water, and is used in insulation of active water leakages, installations, and repairs.

Fields of Application

- In inner and outer areas for vertical and horizontal applications.
- In repairs of static (non-moving) cracks.
- In insulation of active water leakages.
- In water insulation of pipe and cable crossings.
- In repairs of deformations on concrete.
- In filling and sealing water leakages before insulation.
- In filling tie-rod cavities inside molds.
- In beveling sides of concretes and corner joints, and repairing cold joints.
- For setting metal anchorage and connection components.

Features and Benefits

- Single component, only mixed with water.
- Stops active water leakages by setting instantly.
- Easy to use.
- Expands and forms a water impermeable sealant.
- Highly resistant and stable.
- Insulation materials can be applied on it after 15 minutes.
- Doesn't cause corrosion in steel equipments since it doesn't contain chloride.
- Can be safely used in drinking water tanks (has a test report).

Certified by Hacettepe University Turkish Doping Control Center and Chemical Analysis Laboratory, and consistent with BS 6920 Standard Analysis Report.

Application Procedure

Preparation of Substrate

Application surface has to be strong, dry, bearing, dustless, and clean. Surface must be cleaned off all kinds of oil, grease, rust, pitch, paint, and curing materials that can weaken adherence.

Technical Data

Structure of the Material	Mineral sealants and special cements.		
Color	Gray		
Resistance to Pressure	30 minutes ≥ 7 N/mm ²	24 hours ≥ 10 N/mm ²	28 days ≥ 30 N/mm ²
Adhesion Strength (EN 1542)	≥ 0,50 N/mm ² (28 days)		
Working Temperature	+5°C +25°C		
Usage Period	1 - 1.50 minutes		
Final Drying	2 - 3 minutes		

Obtained in +23°C, 50% relative humidity conditions. Higher temperatures decrease the time, lower temperatures increase the time.



WATERPLUG® TR

Masterseal® 590

Existing cracks and spaces have to be cut in 20 mm width and with perpendicular sides. Spaces must not be formed in "V" shape, sharp corner details must not be left over.

Mixing

After putting an amount of **WATERPLUG® TR** you can use it in 60 seconds into a clean mixing container and add necessary amount of water, mix it with your hand by using a suitable glove. Do not mix it for more than 30 seconds. **ATTENTION: Use warm or hot water in cold air.** Do not add aggregate, any chemicals or foreign materials to the mixture.

Mixing Ratios

WATERPLUG® TR	7 kg
Amount of Mixture	1,70 - 2,00 liter
Density of Mixture	~2,14 kg/liter

*1 kg **WATERPLUG® TR** is mixed by adding 0.24 - 0.28 liters of clean water. (Water ratio varies with environmental conditions)*

Application Method

Repairing Active Water Leakages

Open the crack that has active water leakage with minimum 20 mm width and depth or until reaching to the solid ground. Mix **WATERPLUG® TR** with necessary amount of water and make it conical shape in your hand, and apply it on the leaking region with a single motion when the mixture starts to heat. Apply pressure with your hand for at least 60 seconds by keeping your hand still. After the material hardens, slowly take your hand away. If the space is too large to be filled in one time, then repeat this procedure by going from the perimeter of the space to its center. Right after the application, clean the extra material around the space by suitable equipment.

To Insulate Wall Ground Cold Joint In An Existing Structure

Open the cold joint with minimum 20 mm width and depth or until reaching to the solid ground. Remove wires, wooden wedges or similar materials from the surface. Fill the joint appropriately with **WATERPLUG® TR**.

Setting Metal Anchorage or Connection Components to Reinforced Concrete

Anchorage hole has to be opened with appropriate puncturing tools on reinforced concrete surface with greater diameter than the anchorage component's diameter. Afterwards, all the dust and weak materials inside the hole must be cleaned. Before the application, anchorage hole has to be filled with water. Prepared anchorage holes has to be filled with sufficient amount of **WATERPLUG® TR**. Anchorage component is then set by turning quickly towards its vertical axis, and **WATERPLUG® TR** is cured.

Coverage

Varies

Watchpoints

- If surface temperature is below +5°C or over +25°C in **WATERPLUG® TR** application, then suitable temperatures must be waited for.
- As a result of rising hydration temperature, **WATERPLUG® TR** sets quickly. It must be kept humid for 15 minutes. This period has to be 30 minutes in dry and absorbent surfaces.
- Working and reaction time of special cement containing systems are affected by environment and ground temperature, and relative humidity in the air. Low temperatures slow down the chemical reaction, and increase working period, coating time, and work time. Also coverage decreases because viscosity increases. High temperatures accelerate the chemical reaction and times stated above are reduced depending on this. For the material to complete its curing,

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environment and ground temperatures must not fall down below the minimum allowed value.

- In applications in cold weather, packages must be conditioned in +20°C - +25°C and mixture must be prepared by hot water in order to increase workability to maximum.

Cleaning of Tools

All the tools and equipments must be cleaned by water after the application. After **WATERPLUG® TR** is hardened, it can only be removed from the surface mechanically.

Packaging

7 kg tin.

Storage

Must be stored in unopened original packing, and in cool and dry environment protected from freezing. In short-term storing, maximum 3 palettes can be stowed on top of each other and delivery has to be according to first in first out system. In long-term storing, the palettes must not be stowed on top of each other.

Shelf Life

6 months after the production date under appropriate storing conditions. Opened packages have to be stored by tightly sealing the cover, and must be used in one week.

Health and Safety Precautions

Work cloth, protective gloves, goggles and masks concordant with Work and Worker Health rules must be used during the application. Due to irritant effects of the non-cured material, avoid contact to skin and eyes during storing and application. If such a contact occurs, it must be washed by soap and plenty of water. Consult a physician urgently if swallowed. Food and drink must be kept outside the application areas. Must be stored away from children. Please look at the Material Safety Data Sheet for detailed information

Disclaimer

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