# **CRYSTALLINE WATER INSULATION MORTAR**



#### **DESCRIPTION**

• Cement based, single-component, crystalline water insulation mortar that reacts to concrete to provide water impermeability and can be applied to both positive and negative sides.

## **INTENDED USES**

- Interior and exterior of horizontal and vertical applications,
- On foundation and basement walls.
- In the negative and positive sides of waterproofing of old and new structurally strong concrete surfaces,
- Waterproofing of structures under the ground and above
- Used in water tanks, elevator shafts and swimming pools.

#### **TECHNICAL DATA**

Appearance Application temperature Application thickness Pot life

Time required to become waterproof

Time required in-between layers Cavity unit volume mass

Capillary water absorption and water vapour

permeability

Adhesion strength through pull-off test

Grey powder (+5°C) - (+30°C) 2-3 mm

20 minutes Until it reaches a point

of saturation with water

2000 kg/m³±100 kg/m³

 $< 0.1 \text{ kg/m}^2.h0.5$ 

 $\geq 0.8 \text{ N/mm}^2$ 

- These values are obtained under laboratory conditions ((23±2) °C temperature, 50% relative humidity) and may
- differ due to worksite conditions.

  MYFIX YILDIZ YAPI KİMYASALLARI SANAYİ VE TİCARET LİMİTED ŞİRKETİ is not responsible for the application

#### **PROPERTIES**

- Provides waterproofing on concrete surfaces by applying from negative or positive sides.
- Protects concrete and reinforcement from the corrosive effects of
- The mixture, which is prepared by mixing only water, reacts with the free lime particles on the concrete surfaces it is applied to produce crystals and provides water insulation by penetrating the concrete structure.
- When applied to fresh concrete surfaces, it slows down the hydration process and reduces shrinkage crack formation.
- Suitable for drinking water use. (METU Drinking Water Conformity Report-BS 6920)
- Resistant to 5 bar water pressure against concrete. (ITU Pressurized waterproofing report-TS EN 12390-8)
- Has high water impermeability feature.

# **SURFACE TREATMENT**

- The surface must be clean, dry and smooth.
- The surface must be cleaned from oil, dirt and paint residues that will prevent adhesion.
- Cracked and hollow areas on the surface must be repaired with REPAIR SW Waterproof structural repair mortar at least 24 hours before application.
- At the joints of sharp corners and structural elements, chamfering should be applied with REPAIR SW Waterproof structural repair mortar and any holes leaking water should be filled with STOPPER Active water sealant.
- Application surface must be saturated with water and must be kept moist during application.
- Moisturizing is done by fully saturating the surface with water 24 hours before and 2 hours before the application. Care should be taken that there is no puddle on the surface.
- Consult us for all other application substrates.

# **APPLICATION**

WET MORTAR:

- Slowly pour 20 kg K-24 powder into 6.4-7.0 litre of water and mix with a low speed mixer until a homogeneous mixture is obtained.
- Do not add any additional additives, unless mentioned in the instructions.
- The prepared mortar should be rested for 1-2 minutes to mature.
- Since it hardens in the container within 20 minutes, the material should be prepared by paying attention to the time.
- It should be mixed again before application. The prepared mortar should be applied on the surface with a brush or suitable spraying device at least in 2 layers. The layers should be homogeneous and smooth, the application should be done in the same direction in each layer. After the first layer dries, the second layer should be applied perpendicular to the first one.
- It should be waited at least 6 hours between layers.
- KA-24 Crystallized waterproofing mortar special primer should be applied against high water resistance and chemicals before application.
- In application, 2 layers of K-24 are applied on the crystalline primer, the second crystallized mortar should be applied before the final layer of crystalline primer is applied. After application, the surface should be protected from rain and frost for 24-48 hours. When drying is complete, wet the surface 3 times a day for 5 days. DRY-SHAKE (From the Negative side):
- Once fresh concrete is poured and then slightly dried, sprinkle K-24 directly on concrete. K-24 sprinkled concrete is thoroughly impregnated using trowelling machine.

DRY-SHAKE (From the positive side):

Just before pouring concrete, K-24 is sprinkled on the concrete to be poured and concrete is poured on it. Surface must be protected from rain and frost for 24 hours after application. After the K-24 coating hardens, it is continued to be wetted 3 times a day for 3 days. Thus, it is ensured that crystals fully penetrate and work in the structure.

# **CRYSTALLINE WATER INSULATION MORTAR**



## WARNINGS AND RECOMMENDATIONS

- For the K-24 product to reach the desired performance, it must be used with complementary products.
- Primer must be used before applying wet mortar. The primer provides salt vomiting and chemical resistance as well as water permeability between the product and the surface. The amount of consumption will decrease with the use of primer.
- It is not suitable for metal, wood, plywood surfaces.
- Since it has no UV resistance, it should not be left as a top layer and should be covered after 7 days of curing.
- Do not breathe the powder or contact with skin or eyes as it is cement-based.
- In applications made from the negative side, coating should not be applied on building elements containing lime, the application should be made on concrete surfaces.
- After application, hands and applications tools should be thoroughly washed with water.
- Do not apply to surfaces that have been exposed to sunlight for too long or that are frozen.
- The indicated consumption amount is general information and may differ due to application conditions and surface features.

#### **QUALITY CERTIFICATES**

- METU DRINKING WATER COMPLIANCE REPORT-BS 6920
- ITU PRESSURISED WATER IMPROVEMENT REPORT TS EN 12390-8



YILDIZ YAPI KİMYASALLARI SAN. ve TİC. LTD. ŞTİ.

İstanbul Mermerciler Küçük San. Sit. 18. Cad. No: 22 Köseler Köyü - Ďilovası / KOCAELÍ 18

DoP number: 03.PB 1504-2.006

2163-CPR-0560-2

## TS FN 1504-2

#### K-24 CRYSTALLINE WATER INSULATION MORTAR

Products and systems for the protection and repair of concrete structures - Definitions, requirements, quality control and conformity assessment - Part 2: Surface protection systems for concrete

Principle 2: Moisture control, Method 2.2 Coating application

Water vapor permeability Capillary water absorption and water

permeability
Adhesion strength through pull-off test

Fire reaction class Dangerous materials

Class I; SD< 5 m

< 0.1 kg/m².h<sup>0.5</sup> Without a traffic load: ≥0.8 N/mm<sup>2</sup>

Α1 Suitable

### **PACKAGING**

20 kg Kraft bag (Pallet 64 bags, 1280 kg)

## **SHELF LIFE**

• Shelf life of an unopened package stored in a dry, cool place is 12 months from the date of manufacture. Protect from frost.

### CONSUMPTION

- 2 kg/m² for 2 layers application against moisture
- 3 kg/m<sup>2</sup> for 2 layers application against pressureless water
- 6 kg/m² for 3 layers application against pressurised water
- 3.0-3.5 kg/m² for dry-shake