



THERMOSAN®



MACROPOROUS CEMENT-BASED MORTAR FOR COATING SUBSTRATES DAMAGED BY RISING DAMPNESS

DESCRIPTION

Pre-mixed, macroporous one-component mortar composed of hydraulic binders, fibers and light aggregates with thermo-dehumidifying and sound-absorbing performance that forms a coating suitable for the treatment of substrates damaged by rising dampness.

APPLICATION FIELDS

- Treatment and elimination of rising dampness or the condensation caused by cold wall effect. It is applied over damp substrates, interior or exterior, underground, or not, for walls and wall footings.
- Prevention of efflorescence on concrete and masonry unit.

ADVANTAGES

- Very permeable to water vapour.
- Delays the appearance of salts on concrete and masonry.
- Very low thermal conductivity provides insulation against extreme changes in temperature, preventing the cold wall effect.
- Excellent adhesion to substrate, no bonding agent required.
- Its self-ventilating property drains and dries the substrate.
- Suitable for layered applications up to 5 cm.

APPLICATION INSTRUCTIONS

Surface preparation

The substrate to be treated must be firm, rough, and structurally sound, without poorly adhered parts, superficial grouts and as uniform as possible. Likewise, it must be clean, free of paint, efflorescence, loose particles, grease, release agents, oils, dust, plaster, etc., or other substances that could affect the adhesion of the product. If the surface had previously been coated with temper, lime, or acrylic treatments, etc., these must be removed, leaving only the strongly adhered remains. In any case, remove any remaining

previous coatings up to at least 90 cm above the mark of the capillary rising dampness. To clean and prepare the substrate, use high pressure sandblasting or water pressure, aggressive mechanical means are not advisable.

The honeycombs, gaps, and non-active cracks, once opened and manifested to a minimum depth of 2 cm, will be repaired with **THERMOSAN®** without tightening the material excessively. On very uneven, weak, or non-absorbent substrates, mechanically fix a reinforcing mesh before applying the mortar. Before applying **THERMOSAN®**, saturate the surface with water, avoiding free standing water, and begin the application once the surface acquires a matte appearance. If it dries, proceed to saturate it again with water. To minimize the possible damage caused by the crystallization of salts from the substrate, previously apply the **MAXCLEAR® SULFALT** an anti-efflorescence treatment (Technical Bulletin No. 163).

In case of severe cases of humidity due to raising dampness and/or presence of salts from the substrate, treat the area with horizontal barriers such as **MAXCLEAR® INJECTION** (Technical Bulletin No. 152).

Mixing

A 25 kg bag of **THERMOSAN®** requires 4,5 to 5,0 l (18-20%, by weight) of clean water depending on the environmental conditions and the desired consistency. A mechanical mixer or stirrer will preferably be used. Add the powder to 4,5 litres of water and mix for 10 minutes. Let the product rest for 5 minutes and re-mix for 5 minutes, adding 0,25 to 0,5 litres of water until getting the suitable consistency for application. Mixing by hand or concrete mixer does not provide enough mixing to the product to give it all its properties. Never exceed the maximum amount of water indicated.

Application

Apply a thin first layer, pressing well or a slurry coat with **MAXBRUSH®** type brush to improve adhesion. Before this coat dries, spread the mortar with a trowel by spattering on the surface without pressing excessively, to a thickness between 2,0 to 5,0 cm and in a single layer if possible.

If greater thickness is required, allow one day before applying another layer over it, which will previously be left rough to ease the bonding of the next one. Finally, if it is to be left as finished surface in interiors, it can be smoothed with an aluminium straight edge, without pressing excessively so as not to reduce the porosity of the mortar.

Application conditions

Avoid exterior applications if rain is expected within 24 hours after application.

The optimum working temperature range is from 5°C to 30°C. Do not apply with substrate and/or ambient temperatures below 5°C or if lower temperatures are expected within 24 hours after application. Likewise, do not apply on frosted, frozen, or flooded surfaces.

In high temperature applications, strong wind and/or low relative humidity, thoroughly dampening the substrate with clean water. Avoid direct exposure to the sun with extreme heat

Curing

In conditions of high temperature (>30°C), low relative humidity and/or strong wind, avoid the rapid drying for **THERMOSAN®** by maintaining its humidity for at least 24 hours after application, spraying it with water, without causing it to be washed or using polyethylene sheets or wet burlap.

After 7 days of application, **THERMOSAN®** can be covered with a final layer of the **THERMOSAN® -F** protective and finishing microporous mortar. Lower temperatures and/or higher R.H. levels will extend the cure time.

Cleaning

Tools are cleaned with water immediately after use. Once it has set, it can only be removed by mechanical means

CONSUMPTION

The estimated consumption for **THERMOSAN®** is 1,0 to 1,2 kg/m²·mm with a thickness per layer between 2,0 and 5,0 cm. The higher the humidity contained in the support, it is recommended to apply a greater thickness, thus achieving greater ventilation capacity.

Consumption may vary depending on the texture, porosity, and conditions of the substrate, as well

as the application method. Perform an in-situ test to know their exact value.

IMPORTANT INDICATIONS

- Do not add cements, additives or aggregates that may affect the properties of the product.
- Observe the indicated mixing water ratio.
- Never use leftovers from previous batches to make a new batch.
- Observe consumption and thickness: 2 to 5 cm, preferably in a single application.
- Do not apply on waterproof substrates, bituminous materials, metal, wood, plaster, or paints.
- Do not cover **THERMOSAN®** with coatings that prevent breathability: ceramics, paintings, etc.
- For any application not specified in this Technical Bulletin or further information, consult our Technical Department.

PACKAGING

THERMOSAN® is supplied in 25 kg bags and it is available in standard grey colour.

STORAGE

Twelve months in its original unopened and undamaged packaging. Store in a cool, dry covered place, protected from humidity, frost and direct exposure to the sun's rays with temperatures of 5 to 35°C.

SAFETY AND HEALTH

THERMOSAN® is not a toxic product but it is an abrasive compound in its composition. Avoid contact with eyes and skin. Gloves and safety goggles must be used during the mixing and application. In case of eye contact, rinse thoroughly with clean water but do not rub. In case of skin contact, wash affected area with water and soap. If irritation persists, seek medical attention.

It is available Safety Data Sheet of **THERMOSAN®** by request.

Disposal of the product and its empty packaging must be made by the final user and according to official regulations.

TECHNICAL DATA

Characteristics of the product	
CE Marking. EN 998-1	
Description: Industrial mortar for rendering/plastering for renovation. R	
Intended uses: Walls, ceilings, columns, and partitions in interior and exterior constructions	
Appearance and colour	Grey powder
Maximum aggregate size, (mm)	1,0
Density for powder, (g/cm ³)	1,3 ± 0,1
Mixing water, (% by weight)	19 ± 1
Application and curing conditions	
Minimum application temperature for substrate and environment, (°C)	>5
Open time at 20°C and 50% R.H., (hours)	1
Initial/Final setting time at 20 °C (hours according to thickness)	6/ 8 - 24
Waiting time for next layer of THERMOSAN® at 20°C and 50% R.H., (h)	24
Waiting time for covering with THERMOSAN® -F at 20°C and 50% R.H., (d)	7
Characteristics of the cured product	
Density hardened mortar, EN 1015-10 (g/cm ³)	1,4 ± 0,1
Compressive strength at 28 days, EN 1015-11 (MPa) - Class	8 - CS IV
Flexural strength at 28 days (MPa), EN 1015-11	3,0
Adhesion strength and fracture pattern, EN 1015-12 (MPa - FP)	> 0,5 - A
Water absorption after 24 hours, EN 1015-18 (kg/m ²)	≤ 0,3
Water penetration after water absorption test, EN 1015-15 (mm)	≤ 5
Water vapour permeability, EN 1015-19	
- Water vapour permeance, (kg/m ² ·s·Pa)	17·10 ⁻¹⁰
- Water vapour permeability, Λ (kg/m ² s Pa)	17·10 ⁻¹²
- Water vapour permeability, (μ)	12
Reaction to the fire, EN 13501-1, (Class)	A1
Consumption* / Thickness	
Minimum-Maximum thickness per layer (mm)	20-50
Consumption, (kg/m ²)	1,0 to 1,2

* Consumption may vary depending on the texture, porosity, and conditions of the substrate, as well as the application method. Perform an in-situ test to find out its exact value.

GUARANTEE

The information contained in this leaflet is based on our experience and technical knowledge, obtained through laboratory testing and from bibliographic material. **DRIZORO®**, **S.A.U.** reserves the right to introduce changes without prior notice. Any use of this data beyond the purposes expressly specified in the leaflet will not be the Company's responsibility unless authorised by us. We shall not accept responsibility exceeding the value of the purchased product. The data shown on consumptions, measurement and yields are for guidance only and based on our experience. These data are subject to variation due to the specific atmospheric and jobsite conditions so reasonable variations from the data may be experienced. In order to know the real data, a test on the jobsite must be done, and it will be carried out under the client responsibility. We shall not accept responsibility exceeding the value of the purchased product. For any other doubt, consult our Technical Department. This version of bulletin replaces the previous one.