

# Capatect Naturstein

Natural stone with adhesive coating on the reverse side for decorative façade design in Capatect façade systems

## Product Description

Field of Application

Natural stone panel in the Capatect façade systems.

Material Properties

- High design variety
- Wide range of surface finishes
- Durable
- Color and light fast
- Frost resistant

Colours

Depending on the natural stone and the type of surface finish.

Storage

Dry, protected from moisture.  
Do not expose to the weather without protection.

Technical Data

- Formats: Small format max. 0,12 m<sup>2</sup>, max. side length: 0,60 m  
Large format max. 0,50 m<sup>2</sup>, max. side length: 1,20 m
- Side length to width ratio: L/W ≤ 1:3
- Tensile strength under flexion: ≥ 4,5 N/mm<sup>2</sup> acc. to DIN EN 12372
- Thickness: Thickness without back coating:  
min. average thickness: 8 mm  
max. average thickness: 12-18 mm depending on the bulk density.
- Frost-resistant: according to DIN EN 12371 after 48 stress cycles
- Capillary water absorption: ≤ 9 % according to DIN EN 13755 when used on EPS insulation board  
≤ 6.5 % according to DIN EN 13755 when used on MW insulation board



Sales programme

Designation Natural stone	Standard formats (mm)	Standard Surface finishing
Granit BSO Granit GVO Granit CRD Anorthosit LAE Granit VOO Granit SGY GABBRO NIA	610 x 305 x 10	polished, ground C220, satin finish
Schiefer MAG	600 x 300 x 10	rough, cleft
Sandstein REM Sandstein OBK Sandstein OBB	600 x 300 x 10	ground C220
Vulkanit BST	600 x 300 x 10	ground C220
Kalkstein AMA Kalkstein JGB	610 x 305 x 10	ground C220, sandblasted, satin finish
Kalkstein GOK Kalkstein KRM Kalkstein KUR Kalkstein SSN Travertin TBE	600 x 300 x 10	ground C220, sandblasted, satin finish

Max. producible formats on request.

Special formats, surface (e.g. blasted) and edge finishing (e.g. sawn or lightly honed) and minimum order quantities on request.

Note

The general building approval / general type approval of the underlying ETIC systems and the Technical Information of the products must be observed.

On the construction project, the approved planning documents, in particular the joint and installation plan, must be observed.

The application is generally carried out according to the rules of the trade for the installation of mortared tiles and slabs (according to DIN EN 18515-1).

The total quantity for a construction project must be ordered as a coherent batch.

## Application

Consumption  
Application Conditions

Depending on the format and laying scheme.

During application and in the curing phase, the ambient and base coat temperatures must not be below +5° C and above +30° C. In this context, we refer to the comment ATV DIN 18345 item 3.1.3 Unsuitable climatic conditions. In this context, we refer to the leaflet "Verputzen, Wärmedämmen, Spachteln, Beschichten bei hohen und niedrigen Temperaturen" (Rendering, thermal insulation, filling, coating at high and low temperatures) from the Bundesverband Ausbau und Fassade (Federal Association for Finishing and Facades).

In case of unfavorable weather conditions, suitable measures must be taken to protect the processed facade surfaces.

Drying/Drying Time

Laying adhesive: approx. 4 days depending on temperature, layer thickness and relative humidity. Depending on the weather conditions, longer standing times are possible.

Tool Cleaning

Immediately after use with water.

Laying and Jointing

### Levelling layer

For natural stones with a side length  $\geq 49$  cm, the evenness of the surface of the hardened base coat must not exceed a pitch of 2 mm, based on the maximum edge length of the cladding to be applied.

To ensure sufficient evenness, an additional approx. 2 mm thick leveling layer must be provided if necessary. The levelling layer, which at the same time safely covers anchor heads, is to be made of "Capatect Klebe- und Armierungsmörtel 170" or "Capatect Klebe- und Spachtelmasse 190".

### Preparatory work

Observe fixed lines (e.g. windows, doors, roll layers, etc.) when dividing the dimensions.

Divide the surfaces to be laid evenly with continuous height markings (chalk line) to determine working sections and exact joint dimensions.

To achieve the planned appearance, it is recommended to take the material from several pallets or boxes and lay it out in such a way that the desired natural stone appearance is created.

## **Bonding by the buttering-floating method**

Capatect Naturstein can be bonded with "Capatect 2K-Verlegemörtel Naturstein 085" or "Capatect Verlegemörtel Uni 086" using the buttering-floating method. The adhesive is applied as a scratch coat to the back of the natural stone (no toothing), as well as to the cured base coat horizontally toothing, using an applicator trowel with center bed toothing, preferably 20/15 mm, so that an almost full-surface bonding can be achieved.

The natural stone slabs are pressed on with a pushing movement in vertical and horizontal direction. For the application of large-format natural stone, the use of glass suction cups is recommended, insofar as this is permitted by the natural stone surface.

## **Note**

"Capatect Verlegemörtel Uni 086" may only be used in combination with EPS boards and base coat "Capatect Klebe- und Armierungsmasse 170".

## **Grouting**

After a minimum standing time of approx. 4 days, grouting can be carried out with natural stone compatible grout "Capatect Fugenmörtel Naturstein 087" Longer standing times are possible depending on weather conditions.

To improve the working properties and minimize shrinkage, the mortar must be mixed beforehand with 10 % by weight of "Dispo ADD 942" quartz sand mixture with a grain size of 0.1 - 0.4 mm.

Joint flanks must be clean and free from separating substances. Remove loose residues of dried laying adhesive. Ensure uniform joint depth and width.

For grouting, use slurry methods or injection methods. In order to select the method and to assess the visual result, it is recommended that a test area be created and accepted by the customer.

When using the "facade panel" in large format, the grout must be applied and compacted in two working steps using the injection method.

Absorbent joint flanks must always be pre-wetted.

The proportion of joints should be at least 6 % of the covering area. If this is not achieved, proof of the long-term absence of condensation must be provided by means of a calculation method (transient heat and moisture transport). In any case, mathematical proof of water vapor diffusion is necessary.

The recommended joint widths are 6-12 mm for small format and 12-20 mm for large format.

## **Installation of movement joints**

Building expansion joints are to be adopted in the same width. In this case, a complete system separation up to the raw wall takes place. Field boundary joints must be planned and executed in accordance with the formats and colors of the natural stone, the compass direction of the facade and the selected system structure of the ETICS. Connection joints between the ETICS with ceramic surface and structural components with other expansion coefficients, e.g. window and door frames, can be dimensioned according to DIN 18540.

## **Embedded cladding in the ground**

Ground contact of the cladding (strongly material-dependent) can result in disruptive moisture markings. This can be avoided by ending the cladding at least 2 cm above the top edge of the ground and not embedding it in the area in contact with the ground.

If a bound-in design is carried out, moisture protection measures must be implemented in accordance with the plinth protection guideline.

## **Plinth area**

All base coats used in insulation systems require an additional moisture protection coating at least in the areas in contact with the ground.

The natural stone ending approx. 2 cm above the edge of the ground must be coated or protected with a moisture protection coating (e.g. with Waterflex Carbon) permissible in the system structure up to the lower edge of the natural stone.

Care must be taken to ensure that the surfaces are not subjected to constraints, press adjacent surfaces made of concrete, bitumen, paving etc. must be safely avoided.

## **Notes on jointing material**

Use material from one batch number on continuous surfaces.

Natural color shifts and color shade differences are possible with changing batches and different drying conditions.

Inhomogeneous material, fluctuating quantities of mixing water and failure to observe the maturing time may result in an uneven joint color, especially in the case of highly pigmented or dark joint colors.

In ETICS "Capatect System Naturstein", the tightness of the joint must be checked with the "Karsten's test tube". Within the first 28 days after jointing, a maximum water absorption of 3 ml per minute and 3 cm<sup>2</sup> test area (maximum single value) must not be exceeded.

In addition to rigid grouting, elastic joints with natural stone-compatible grout must be implemented in the system.

## Notes natural stone

Natural stone is a natural product, so each stone is unique.

Natural stones always show natural deviations in terms of color, texture, surface drawing, surface, quartz inclusions, etc., even within a block. These deviations, which may take the form of cloudiness, veining, pores, open areas, cracks, quartz veins, etc., are therefore no reason for complaint, even if they occur in varying amounts within a delivery.

Natural stone can have inclusions of pyrite, which can result in rust runners. This is natural and cannot be influenced.

When sampling a natural stone, it should be noted in any case that the sample can only show general colors and structure of the type of stone. No guarantee can be given that the material ordered or supplied by us will match the samples provided.

Samples should always be ordered which are sampled close to the actual order, as otherwise major color deviations due to changed quarrying situations and quarrying positions in the quarry cannot be ruled out.

## Limestone and sandstone for exterior use

When used properly and avoiding tagnant moisture and permanent dampness, there is virtually no risk of frost damage. Limestone and sandstones are not resistant to de-icing salt.

## Dimensional tolerances

The permissible dimensional tolerances of individual natural stone tiles are documented in DIN EN 12057. Unevenness in the surfaces of Cladding or cladding that is visible in grazing light is permissible if it is within the dimensional tolerances specified in DIN 18202.

## Impregnation

For materials with a high sensitivity to moisture (e.g. some limestones or sandstones), it is recommended to apply a suitable protective system after completion of the facade work. Since the application of e.g. impregnation may result in optical changes to the stone surface (color shade, gloss), a test area should always be made in advance.

It is important that the natural stone is clean and completely dry before the impregnation is applied. If the pores are not completely dry, the impregnation cannot penetrate and is ineffective.

## Cleaning and maintenance

There are numerous methods for cleaning natural stone facades. The recommendation of a cleaning method can only be made depending on the existing natural stone and the type and extent of soiling. For the selection of a suitable cleaning method, extensive preliminary investigations of the soiling as well as extensive knowledge of the natural stone are generally always required. Therefore, the selection of a cleaning method should always be left to an expert. Natural stone specialist companies will be pleased to advise on the respective cleaning possibilities. (Instructions according to BTI 3.2 from DNV).

Use only alkali-free, non-caustic, acid-free and non-scratching cleaning agents. When cleaning natural stone, use sufficient fresh (lukewarm) water. Often cleaning without cleaning products is sufficient simply with a brush and water.

## Advice

Approval

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