

## 11 | BREAKAGE AND DETACHMENT

It can be noted in the following pages how most problems have transpired when installing panel models, as they are often considered similar to tiles and therefore easy to install. The installation of Geopietra® wall coverings is completely different however, as a double application is required in addition to a careful assessment of the installation base. Geocoll® adhesive has special characteristics for dealing with the various stresses created between bases and wall coverings (see section 4).

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### 1. CENTRAL BREAKAGE IN PANEL MODELS.

The crack shown in the photograph, found on the longer sections of panel models, can be caused by two installation errors:

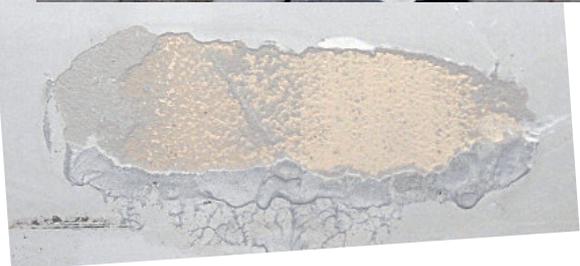
- 1) applying adhesive between two spacers at the ends of the piece, where the stresses due to different thermal expansions cause breakage.
- 2) installing using a rubber mallet to make the section adhere to the base, resulting in the section cracking.



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### 2. INCORRECT INSTALLATION ON A SKIM COAT.

A skim coat was applied to a plastered surface then the stone was glued without using a double application of adhesive. This resulted in the covering coming off completely (note the marks left by the adhesive in the lower part of the photo). The pull-off test carried out afterwards also shows the unstable condition of this base and the effectiveness of adhesion provided by the Geocoll® adhesive.



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### 3. INCORRECT INSTALLATION ON EXTERNAL BRICK.

Structures subjected to bad weather are not usually implemented with absorbent materials. The case illustrated shows the results of a wall covering placed on an external brick base.






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**4. INCORRECT INSTALLATION ON A WET SKIM COAT.**

Installation on plasterboard with a continuous glue skim coat newly applied caused the stone and adhesive to come off completely. When a fixing coat is applied to the base it is not possible to apply adhesive until it is set completely.




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**5. DETACHMENT WITH SURFACE PRIMERS.**

The back sections of the P16 Scaglia model shown in the photograph had bonded perfectly, with adhesive spread well with a double application. The only issue is the blue mark which is due to the surface primer. It is crucial to distinguish between surface primers and deep primers. The former offer no support and the latter function with an absorbent base. If in doubt avoid using them and adopt another solution.

(See section 6 - Preparation of the Base).




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**6. DETACHMENT WITH PAINT.**

Installation on any kind of paint causes the wall covering to come off through time.

**7. INCORRECT INSTALLATION WITH 'DOTTED' ADHESIVE**

resulting in the possibility of longer sections breaking near gaps. A double application has not been put on the piece and the base, in accordance with the wet-on-wet installation technique. It can also be clearly noted that the adhesive has overheated due to installation during the summer on a base which was too hot and absorbent.

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**8. INCORRECT INSTALLATION WITH 'DOTTED' ADHESIVE ON REINFORCED CONCRETE**

in winter with the wall temperature close to or lower than 0°C and the presence of a film of water due to washing the base with a pressure washer and applying adhesive without waiting for it to be completely dry. The same issue can transpire in the presence of release agents, waterproofing treatments or bonding additives that form a film. A double application has not been put on the piece and base, in accordance with a wet-on-wet installation technique.

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**9. INCORRECT INSTALLATION WITH TOO LOW TEMPERATURES**

and resulting frost shattering of the adhesive. It can also be noted that a double application was not carried out, even though in this case it would only have prolonged adhesion by a few years and would not have prevented detachment in any case.

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**10. INCORRECT INSTALLATION USING SPATULA WITH TEETH**

and application of **Geocoll®** on the base only, with the piece simply being fitted with a ceramic tile technique. Grip is insufficient for withstanding the forces resulting from the various thermal expansions between the wall covering and the loadbearing base. A double application has not been put on the piece and base, in accordance with a wet-on-wet installation technique.



**11. DETACHMENT DUE TO WATER INFILTRATION.**

The photographs show a typical example of detachment due to water infiltration. Note the dark mark near the coping joint and the formation of a small area of limescale lower down, both due to the water running through the joint over time. It can also be clearly noted that a double application was not carried out, even though in this case it would only have prolonged adhesion by a few years and would not have prevented detachment in any case.



**12. DETACHMENT WITH FILM FINISH.**

The use of a surface waterproofing treatment instead of a deep primer has caused the covering to come off, in addition to the failure to apply a double coat of **Geocoll®**. (See section 6 - Preparation of the Base).