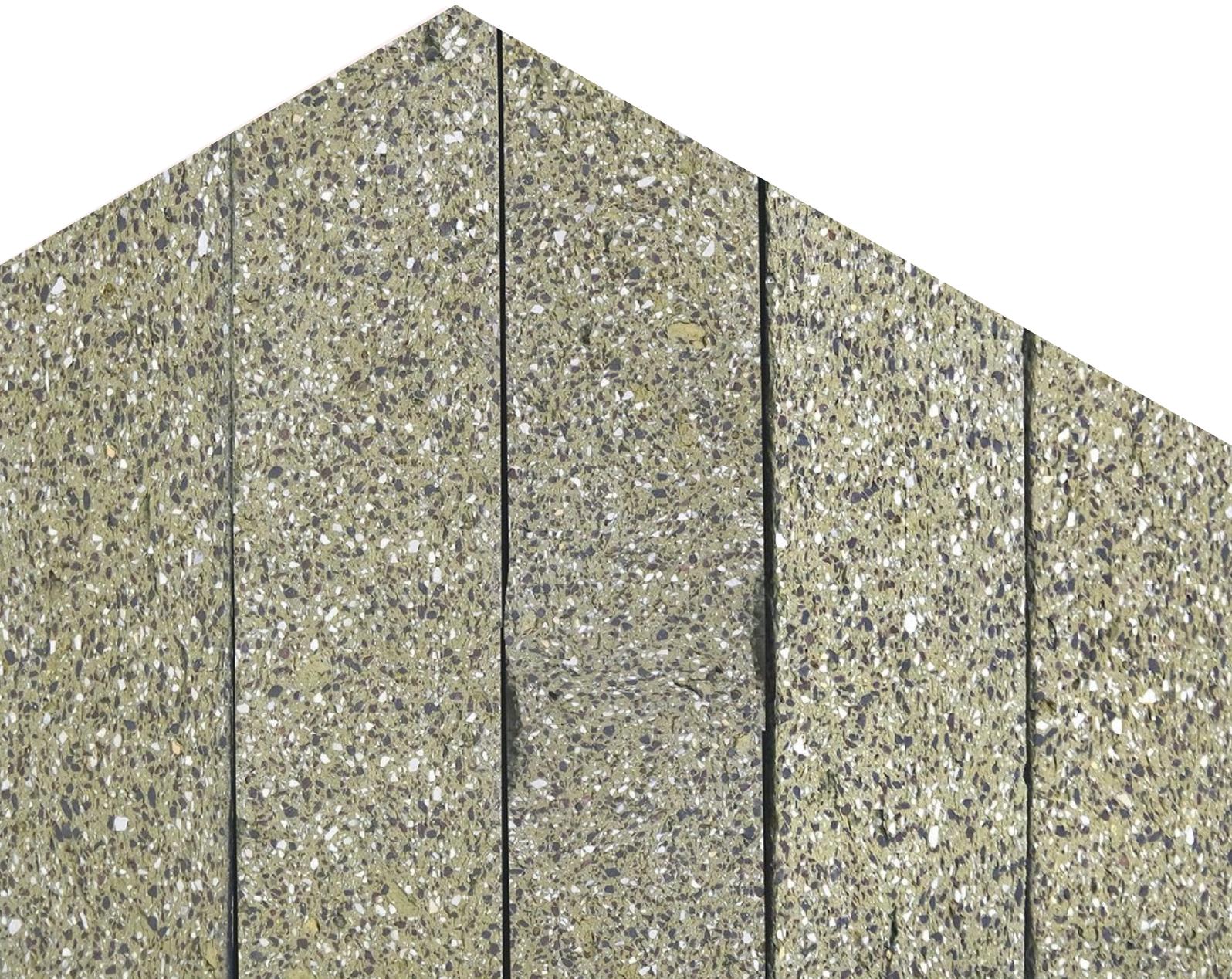


**STONE[®]
CYCLING**

WasteBasedSlip[®]

PROCESSING GUIDELINE





At StoneCycling we work hard on the next generation of sustainable building materials. Here's how to use them in your next project.

CHOICE OF SYSTEM

Ceramic brick slips are never used singly, but always as ceramic brick slip systems. That is the combination of ceramic strip, connecting agent, carrier and where necessary fasteners for this carrier. The quality of a system is decisive for, among other things, the lifespan, weather resistance and fire safety, but also for mechanical properties and aesthetics.

For the facade, StoneCycling recommends always researching the durability of the facade system. This investigation can take place according to BRL1330 and can be facilitated by StoneCycling in consultation with the client. This research tests:

1. Thermo-shock resistance of the facade system
2. Moisture and freeze-thaw resistance of the facade system
3. Adhesion strength of the facade system

RECOMMENDED SYSTEMS WALL AND FACADE APPLICATION

- Weather-resistant cementitious panel.
- Cast in concrete (pre-fab).
- Plasterboard (for interior only).
- Weatherproof insulation panels.

RECOMMENDED SYSTEMS FLOOR APPLICATION

- Reinforced concrete base.

ADHESIVE CHOICE

We recommend using a cementitious or elastic adhesive. The best glue choice depends on the system used. The system supplier can make the right choice of adhesive based on the technical specifications of the WasteBasedSlip®. A frost-resistant adhesive must be used for the facade.

IMPREGNATING

For application in intensively used areas and flooring, StoneCycling recommends impregnation surfaces after processing to minimise contamination of the work.

DILATIONS

There are no indications that surfaces with ceramic brick slips have different building-physical material properties than those with traditional masonry. This means that even surfaces with ceramic brick slips cannot indefinitely be executed uninterrupted. There is an influence of shrinkage and expansion due to temperature differences and changes in shape in the main supporting structure. This means that stresses can arise that the processed ceramic stone strips must be helped with to absorb. StoneCycling recommends taking over dilatations in the subsoil, such as plate seams and building dilatations, so that possible settlements and/or movements can be followed. The position and width of dilatations must be agreed with the manufacturer of the facade system and must be approved by the structural engineer. StoneCycling offers its customers dilation advice. This advice is carried out on behalf of the client by TCKI in accordance with the calculation rules drawn up by the KNB. The invoice for this advice is paid for by StoneCycling.

DELIVERY AND STORAGE

Place the packages on a clean, dry and flat surface (for example on scaffolding parts), so that the brick slips are stable and no water and dirt can penetrate into the brick slips. Protect the packages against watering and contamination by covering; aeration must be possible. Keep the packaging film of the brick packages open on the non-rainy side during storage.

STACKING

Stack and process brick slips from several packaging units at the same time to prevent undesired colour differences in the facade and to achieve an even distribution of the colour nuances in the masonry.

SAWING LOSS AND BREAKAGE

It is recommended to take into account a minimum of 5% loss of sawing and breakage during the processing.

PROCESSING MOISTURE

The moisture of brick slips during processing may not be higher or lower than the glue adapted to the brick slips. Guidelines for this can be agreed in consultation with the glue supplier.

GLUEING

Before processing, check whether the ceramic brick slips meet the specified specifications, such as colour and structure. Also check for dimensions and damage in accordance with the requirements in EN-771-1 / BRL1007. For good adhesion, the strips must be brushed dry before glueing so that sawdust and/or sand and any dirt present is removed.

Always glue on a clean, dust-free surface, keep an eye on the manufacturer's requirements and check whether an adhesive layer (primer) is required beforehand. Also keep an eye on the maximum time in which the glue can be used. When this 'open time' is exceeded, the end quality decreases drastically. This 'open time' or 'hardening time / hydration time' partly depends on the execution temperature, the temperature of the parts to be bonded and the air humidity. Also take into account the water-absorbing behaviour of the load-bearing structure. An absorbent substrate can ensure that water is extracted from the (cement-bound) adhesive, which means that the adhesive capacity significantly decreases.

Cement-bound adhesives must be applied according to the 'full surface' method, also known as the 'buttering floating' method. The adhesive is applied to both the WasteBasedSlip® and the substrate. The WasteBasedSlip® is applied in the adhesive bed with a sliding movement. This should prevent air entrapment. The continuous closed adhesive layer on the insulation material is important both for watertightness as a good bonding strength of the WasteBasedSlip®. There must be no moisture or condensation on the substrate between the ceramic brick slip and the substrate.

With elastic adhesives it is important that the adhesive is applied in such a manner that no water inclusions can occur (this is to prevent possible frost damage). This can be done with the help of vertical strips of glue, point-by-point glueing (dotting) or the horizontal application of glue in a draining manner. Always follow the manufacturer's guidelines. According to BRL 1330, the adhesive surface must be at least 80% of the surface to be bonded. The advantage of elastic adhesives is that they are better able to absorb vibrations than cement-bound adhesives.

JOINTING

For jointing, the WasteBasedSlips® must not be too dry or too wet. The ideal situation is that the system has been cured for 28 days or more, after which it is liberally moistened (one day before jointing). Wait, especially with a low water-absorbing WasteBasedSlip®, as long as possible with jointing. This greatly reduces the risk of later leaching. It is recommended to allow at least a period of two weeks between glueing and jointing.

Before starting the jointing, dust and glue residues must be removed. The square section of the joint must be completely filled and the joint mortar must be well pressed. For standard jointing, this means that the joint must be approximately 10 to 12 mm deep.

During jointing, avoid filling the expansion joints and open head joints and check after jointing whether all open expansion joints and open head joints are completely free of mortar. The occurrence of colour differences in the jointing ("scaffolding strokes") as a result of varying weather conditions must be taken into account. To prevent this, it is recommended to take protective measures.

Avoid soiling the WasteBasedSlip® during jointing. Special attention deserves the processing of glazed WasteBasedSlips®. The caustic effect of calcium hydrate must be taken into account, which can cause dull spots on the glazed surface. Mortar stains on glazed WasteBasedSlips® must be removed immediately.

Prevent the soiling of the work. Protect the underside of the masonry against splash water if there is a risk of this. In order to protect the masonry against splashing water from the scaffolding, it is recommended to fold down the first scaffolding section at the facade. Preferably do not work with the single scaffold system.

It is recommended not to joint bricks at daytime temperatures lower than 5° C. If jointing is continued nevertheless, it is recommended to take protective measures. When using prefab joint mortar, follow the instructions of the joint mortar manufacturer in that case.

WORKING CONDITIONS

Construction work is often tough. For a correct working method in which the physical load is limited as much as possible, it is recommended to work in accordance with the A-sheet "Bricklaying and Glueing" of Stichting Arbow.



WORKABILITY

Fine dust can be released during the treatment and processing of stone-like materials. This is also the case when working with and processing WasteBasedSlips®. Think of mechanical actions such as drilling, milling, chopping, sanding, grinding or sawing. It is therefore recommended that you always take personal protective measures (dust face covers type P3/FFP3) during mechanical processing of bricks and WasteBasedSlips® that prevent the inhalation of potentially harmful dust particles. Furthermore, it is always recommended to carry out the operations with a water supply so that dust cannot spread. If this is not possible, the dust must be extracted close to the source. In general, good ventilation limits dust concentrations in rooms. In mechanical processing of stone-like materials, tools are used.

Always use the necessary personal protective equipment and observe the safety instructions of the suppliers of the tools. Wear safety gloves, safety glasses, safety shoes and also good hearing protection.

We invite you to discover the possibilities of the WasteBasedBricks® and together make sustainable building the standard.

StoneCycling

Sustainable Building Materials

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