



## General Information

On delivery, the product should be inspected. If there are **any** issues, please report them immediately and do not commence installation.

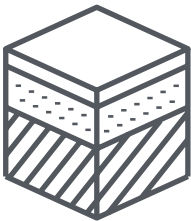
Before installation commences a certain amount of sorting of the product may be required to ensure consistency of colour, texture and dimensional tolerance.

Natural stone products are unique and you can expect colour and veining variances between each unit. Please note that preformed step units are not suitable for use near to or surrounding swimming pools.



## Health and Safety Information

Safe working practices should be employed at all times during the construction process and all necessary Personal Protective Equipment (PPE) should be worn.



## Foundation

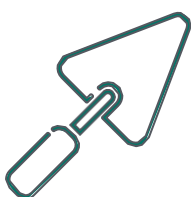
The foundation for the step units should be formed from a suitably constructed foundation, designed to take into account site conditions and loads. The design for the stepping foundation will need to consider the required step tread and riser dimensions. The preferred dimensions for the risers are between 150mm – 170mm, and the preferred dimensions for the stair treads are between 280mm – 425mm.

## Laying

Before laying, ensure that the step surface is dry and free from dirt and detritus, which may influence and compromise the adhesion characteristics between the foundation and the step unit. To prevent trapped moisture becoming dispelled, which may lead to discolouration to the finished surface, apply a suitable moisture retardant primer evenly over the foundation so as to form a moisture barrier.

Step units should be supported on a full 'wet' workable mix mortar bed (1:4 cement/sharp sand). The mortar bedding should be laid to give a thickness between 15mm and 30mm. To increase adhesion to the mortar bed and prevent separation, Marshalls Paving Primer or similar flexible bonding agent compound should be applied to the back of the flag prior to installing onto the mortar bed.

Gently tamp down onto the mortar bed using an appropriate rubber maul. Adjustment may be necessary to ensure that the units are fully supported and do not rock or move, and that desired levels and falls are achieved.



## Jointing

For most paving units, where a minimum of 10mm joint and minimum 22mm thick paving unit, a damp mortar mix of 1-part cement to 4-parts building sand can be used. If mortar gets onto the surface of the units, clean off immediately using a damp sponge frequently rinsed in clean water.

Alternatively, Marshalls Exterior Jointing Grout can be used.

Under no circumstances should dry or semi dry sand/cement mixes be brushed into the joints. This practice leads to staining of the paving and does not constitute a true rigid joint.

Butt jointing is not recommended for any of these paving products.



### **Cutting**

Cutting may be carried out using a water and dust suppressed diamond tipped power saw. It must however be noted that the aesthetic finish achieved will depend greatly upon the choice of cutting mechanism and level of skill. Specific equipment or blade types should be used when cutting natural stone units as those designed for cutting concrete only may blunt easily.



### **Inclement Weather**

Laying and jointing operations should be discontinued (and any open work face covered) if weather conditions are such that the performance of the paving may be jeopardised. Laying operations should not be undertaken when the temperature is below 5°C on a falling thermometer. (Night time temperatures must be taken into account). All unfinished areas and stockpiles of materials should be covered in the advent of inclement weather to prevent saturation.



### **For more information**

Please contact Marshalls Group Technical Services on **0370 411 2233** or email [grouptechnicalservices@marshalls.co.uk](mailto:grouptechnicalservices@marshalls.co.uk)