

PaveJoint^{plus} Jointing Compound

PaveJoint^{plus} is an easy to use, brush-in sand suitable for providing decorative jointing between natural stone or concrete paving. Available in 2 natural colours, it can be used all year round, in all types of weather conditions be it sunny, wet or freezing. It is suited for use on domestic paving applications or light non trafficable commercial areas. For heavy commercial applications we recommend the use of UltraScape flowpoint flowable grout in accordance with the BS 7533 specification.

Before using PaveJoint^{plus} it is important to understand the installation being considered, the design of the base, the paving materials being used and the conditions in which you will be working.

PaveJoint^{plus} once cured, provides jointing between paving that is permeable, meaning it will allow air and rain water to penetrate through.

There are two methods of applying PaveJoint^{plus} which focus on whether the bedding material below the paving is permeable (free draining) or whether it is impermeable (non-draining).

1. Permeable Bed (Wet Application Method)

When the paving is fixed using permeable bedding materials, PaveJoint^{plus} can be applied using the "Wet Application" method.

This is by far the most popular method of application which is generally used for patios and walkways. This method uses copious amounts of water during application hence "Wet Application". Hosing down the fixed paving with water initially and during application of PaveJoint^{plus} :

- saturates the paving and prevents oils from PaveJoint^{plus} penetrating the paving
- ensures ease of application
- assists with deep penetration of the product into the joint
- aids removal of excess material

This water **has to be drained** free from the jointing before PaveJoint^{plus} will cure and harden, it will **only cure hard** when all traces of moisture have gone from the full depth of the joint.

It is therefore important that for "Wet Application" the base of the new paving installation is permeable to allow water to free drain through into the ground below. Any retained moisture or dampness within the jointing fresh after application, will delay curing of the product. Once the jointing has cured and hardened it is unaffected by further rain water.

Permeable Bedding Materials - Patios & Walkways:

For such areas carrying normal domestic foot traffic loadings the bedding material used should be permeable. Therefore a suitable bedding compound for the paving should be no more than 6 or 7 parts clean sharp sand mixed with 1 part Portland Cement. Bedding materials



Features & Benefits

- Use in all weather
- Resistant to freeze/thaw weather conditions
- No waste, left over material can be re-used
- Fast and easy application



containing cement are classed as “bound” as they harden due to the cement. Add enough water to ensure that the bedding mix just holds together in a ball when squeezed gently in a clenched (gloved) hand. Dot & dab methods of fixing paving should not be used. Apply the bedding compound in a continuous solid bed, deep enough to support the paving. This will be strong enough to support the paving for foot traffic but will also remain permeable creating a free draining base. Higher levels of cement to sand will reduce the permeability of the bedding compound, reducing water drainage and potentially extending the drying time of *PaveJoint plus*. This should be avoided.

Prior to applying the bedding compound, the sub-base should be suitably compacted to ensure it is firm and even, using recognised techniques.

NB: Other examples of permeable bedding materials that can be used below paving are compacted sand bed and compacted type 1 stone or combinations of both. In such instances, to ensure this type of bedding (known as “unbound”) is suitable for use with *PaveJoint plus* jointing compound, the paving needs to be stable and edged on all sides with a fixed kerb or fixed edging stones (fixed with bedding mortar) that prevent movement.

2.Impermeable Bed (Dry Application Method)

This method is used to apply *PaveJoint plus* where (i) the bedding materials used to fix the paving are impermeable and therefore will not allow drainage of application water (Wet Application) or (ii) where the temperature conditions are dropping below 3°C, with concern that the water application (Wet Application) will freeze and expand in the joint, before it has drained away, making it weak.

Once the paving is firmly secured and set, gently pre-wet the surface using a mist spray of water, avoid wetting the joint. This prevents the jointing staining the paving. Open the *PaveJoint plus* and pour the material along the joint, brushing it into the joint at the same time. As there is no water to wash the product into the joint, using this method with a pointing trowel and jointing iron will enable the material to be compressed into the joint.

Impermeable Bedding Materials - Domestic Driveways:

Where there is requirement for additional strength in the bedding materials for paving to support increased loadings, such as standing cars on driveways, then the resulting higher cement ratio to sand bedding material will be impermeable to water. Therefore the Dry Application method would, in this instance, be the preferred method for applying *PaveJoint plus*. The same method would be used for existing substrates with poor drainage or poor drying conditions.

Freezing conditions:

There is a potential that if using the “Wet Application” method in conditions nearing or below freezing at the time of application of *PaveJoint plus*, then the freezing application water will cause damage to the uncured joint due to expansion. In such conditions the Dry Application method would be preferred.

Jointing

All paving joints should be a minimum width of 3mm and up to a maximum width of 20mm. Joint depths should be a minimum of 20mm (a deeper depth will increase the strength of the jointing compound). Deeper joints may extend drying times. It should always be ensured that *PaveJoint plus* penetrates the full depth and width of the joint, without voids, to provide maximum stability. Voids left in the body of the jointing will cause permanent weakness in the joint. Prior to applying *PaveJoint plus* ensure all mortar is raked free from joints to ensure clean and full depth. Once *PaveJoint plus* has been freshly installed, unless the moisture has completely drained free from the joint, the material will remain soft. It needs to drain free of moisture before it will begin to cure. (See drying section).

Key notes for jointing

- *PaveJoint plus* is not meant to stabilise loose paving. All paving should be firm and stable, on a stable base before jointing commences.
- When filling the joint with *PaveJoint plus* always finish the material slightly below the surface of the paving. Never leave it proud of the surface. The paving should always be the wear surface, not the jointing.
- Before filling the joint make sure it is clear of any debris that will reduce the width of the joint or prevent the material making contact with the walls of the joint. This is particularly important when re-jointing existing paving.
- All joints should be raked to their full depth to ensure they are free of bedding materials before commencing jointing.
- Some natural stone paving is cut with a sloping edge. This creates a “V” joint shape when all paving is positioned together. To add greater stability of the jointing, run the end of a pointing trowel along the joint making a channel in the bedding material below. When the *PaveJoint plus* is added into the “V” joint the penetration of the material into the channel secures the jointing below the paving, providing greater anchorage and stability when cured.
- All dried mortar residues on the surface of the paver should be removed from paving before commencing jointing. Please see Cleaning section below.
- It is good practice to run a grouting tool over the face of the finished jointing before it has cured. This firms up and smooths the face of the product giving an additional resilience.

Curing Of Pavement Joint^{plus}

Pavement Joint^{plus} is an air cured product.

In good drying conditions (20°C / 65% rh) and where water is free draining, Pavement Joint^{plus} will firm up in approximately 24-48 hours, sufficient to accommodate foot traffic. It will continue to harden over the next 28 days. The rate of cure is dependent on both temperature and residual moisture.

Application in conditions of poor drainage, where water lingers in the joint and freezing conditions, will delay curing of the product.

Once the water has dried away from the joint, curing will re-commence.

Cleaning

Mortar removal: Paving should be cleaned of any dried mortar prior to application of the jointing material. Please ensure that all residues of mortar and cleaning chemicals have been completely washed away before jointing begins. Residues of acid based cleaners can have an adverse affect on both paving and jointing if they come into contact. Consult the paving supplier for advice.

Pavement Joint^{plus} will discolour in contact with acid based materials, as can some paving materials – this is related to iron compounds within the products causing an orange / brown discolouration. Limestone, marble, amongst other paving, as well as cementitious bedding mortars can dissolve when in contact with acid cleaners. It is therefore essential that extreme care should be taken before use of any cleaning materials and a discreet area is tested and assessed before continuing.

Organic material, dirt & debris removal:

Pavement Joint^{plus} should only be cleaned after it has fully hardened. The material in its cured state is permeable and will therefore allow the passage of air and rain water. To remove build up of surface dirt & debris, the area can be cleaned using a gentle jet wash spray with clean soapy water, periodically (use domestic washing liquids - non-acidic). Only domestic pressure washers should be used at the lowest pressure (100 -130 bar). The nozzle should be held at least 30cm from the surface with the fan of water at a 45° angle to the jointing. Alternatively soft bristle sweeping brushes can be used.

Under no circumstances should motorised or mechanical sweepers be used – these machines are too abrasive for the jointing. Proprietary water based biocides, to kill moss and lichen, can be used but always try a sample area first to ensure compatible.

General specification considerations

- As indicated previously, whether paving onto permeable or impermeable bedding, it is essential that all edge paving/details are bedded into mortar to fix and stabilise.
- When fixing preformed gullies, grids or access cover frames, these all need to be firmly fixed in bedding mortar as per the manufacturer's instructions to prevent movement. Additionally pave edging that butts up to these areas should be bedded into mortar.

- When using metal recess trays within the design feature of any paving it should be ensured that the paving is fixed into position within the tray using an epoxy mortar. Once cured Pavement Joint^{plus} can then be applied using the Dry Application method. It must however, be ensured that the jointing is allowed to fully cure before locating the tray into position.

Limitations

- Pavement Joint^{plus} uses natural aggregates which may vary slightly in colour. Our best efforts are made to maintain consistency. However it is the responsibility of the user to satisfy themselves that the jointing and paving are as required. If in doubt always trial a small section to confirm.
- Some paving materials are more porous than others and may continually hold water. Such types may delay the curing of Pavement Joint^{plus} if excessive.
- Some paving materials that are porous are also more sensitive to staining. Such instances may require the paving to be sealed before jointing begins.
- Consult the paving supplier before using the jointing material with porcelain as a separate process of needs should be followed for alternative jointing, including the use of slurry primer. Consult the paving supplier.

Health, Safety and Environmental

Please ensure that appropriate PPE is used when preparing, mixing and applying products. Always wash hands before consuming food and make sure that materials are kept safely out of reach of children and animals. Please dispose of packaging and waste responsibly and in accordance with local authority requirements. A full material safety data sheet relating to this product is available from instarmac.co.uk

Quality Assurance

All products are manufactured in a plant whose quality management system is certified / registered as being in conformity with BS EN ISO 9001, ISO 14001 and OHSAS 18001. Our products are guaranteed against defective materials and manufacture and will be replaced or money refunded if the goods do not comply with our promotional literature. We cannot however accept responsibility arising from the application or use of our products because we have no direct or continuous control over where and how projects are used. All products are sold subject to our conditions of sales, copies of which may be obtained upon request.

Product Details	
Unit/Packaging	20kg buckets delivered on shrink-wrapped pallets
Storage	Store in a cool, dry and frost free area at temperatures between 5°C and 30°C.
Coverage*	Joint width x joint depth: 12sqm based on a paving size of 450mm x 450mm x 25mm (depth) for an 8mm joint gap.
Shelf Life	Shelf life from date of manufacture in correct conditions for sealed bags is 12 months. Please note: the use of this product after the end of the declared storage period may increase the risk of an allergic reaction.
Colour**	grey, natural

* The above coverage is provided as a guide only and reflects typical paving applications without any wastage. It should not be used as an exact material requirement calculation.

**As with all raw materials, colour variation may occur. Please note that this does not affect the consistency or characteristics of the product.

Technical Data	
Density	1.80g/cm ³
Joint width	3-20mm
Minimum joint depth	20mm minimum depth, a deeper depth will increase the strength of the jointing compound
Working time at 20°C*	35-45 minutes
Working temp	3°C to 35°C
Walk on time	24-48 hours (dry, ambient conditions with free draining base)
Full strength	28 days
Dry compressive strength	1 day: 0.80N/mm ² 7 days: 5.80N/mm ² 28 days: 6.70N/mm ²
Dry flexural strength	1 day: 0.56N/mm ² 7 days: 4.33N/mm ² 28 days: 5.91N/mm ²

*Depending on temperatures - tests carried out at 20°C. Cool temperatures retard, warm temperatures accelerate product performance.

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