

## tuffflow Fully Permeable SuDS Jointing Mortar

tuffflow permeable jointing mortar is a two-part product. The dry powder binder is packed in 24 kg bags each containing 3no. sealed moisture proof sachets. The aggregate is packed separately in 25 kg bags, as a 2-6 mm graded, angular crushed igneous rock (tuffgrit). Ordered at the ratio of 1x 24 kg bag of binder for every 3x 25 kg bags of aggregate. (see 'Ordering and Storage' below). Mixing is carried out on site at the ratio of 1x 8 kg sachet of Binder to each 25 kg bag of aggregate.

To achieve a functioning 'bound construction permeable modular pavement' tuffflow is designed to be used with tuffbed 2-pack fully permeable, Type 35 bedding mortar as the laying course and tuffbond priming mortar used to permanently bond together the paving units and laying course and the concrete base where used. Refer to the separate Method Statements for tuffbed 2-pack and tuffbond priming mortar. After laying work is complete, protect the area from use and allow 12 hours before commencing the jointing work with tuffflow.

### Preparation

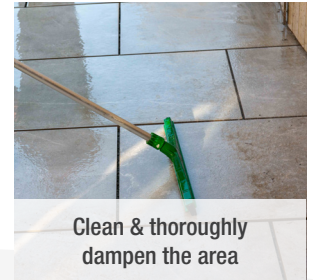
Jointing work should not be carried out in ambient temperatures of less than 2 °C and when night frosts are expected. The area to be jointed should be thoroughly clean with the surface and joints entirely free of debris. The paving surface should be wetted before installation. This helps to prevent residual staining and makes installation easier.

Note: Immediately prior to applying tuffflow, excess water should be removed from the surface.

### Mixing

Each mix (33 kg) will require 1 x 25 kg bag of aggregate (tuffgrit bag) to 1x 8 kg sachet of tuffflow binder and 1 litre of water.

- The mixer should be clean, dry and should not be running. Do not add any water at this stage.
- Add one 25 kg bags of tuffgrit aggregate and one 8 kg sachet of tuffflow binder to the mixer. DO NOT add water.
- Start the mixer and mix until the tuffgrit aggregate is evenly coated with the tuffflow binder. This typically takes around 30 seconds to 1 minute.
- Once the aggregate is evenly coated with binder, slowly add exactly 1 litre of water.
- While mixing, tilt a Belle® mixer forward as far as possible without spilling the mix. This is necessary to ensure a thorough even mix, without lumps or dry clumps.
- After approximately 4 minutes of mixing the final consistency should be a damp mix with a glossy appearance.



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### Application

- Wet the surface of the paving.
- Remove excess/standing water from the surface using a soft foam rubber squeegee.
- Immediately apply the mixed tuffflow to the surface of the paving/joints.
- Draw the tuffflow across the surface of the paving so that it fills the joints.  
Slowly work the squeegee diagonally at 45° to the direction of the joints. This is to ensure that mortar fully fills the joints.
- Remove excess mortar and aggregate from the paving surface using a clean squeegee.

The surface for each mixed batch should be fully cleaned before mixing and spreading another batch.

### Cleaning and Finishing

Commence cleaning immediately after application, do not delay.

- Damp the surface of the paving with a mist/spray, taking care not to saturate the joints.
- Clean the surface of the paving using a Washboy sponge float, or for larger areas a powered continuous sponge belt cleaning machine (Pergo 880), to completely wipe away residual mortar from the pavement surface.
- Finally, keep the surface damp for as long as possible whilst the jointing mortar sets.

During the entire jointing application and cleaning process keep the surface damp with a mist/spray.

Do not use excessive water as this may reduce the permeability of tuffflow.

Only use enough water to keep the mortar damp to aid the curing process.

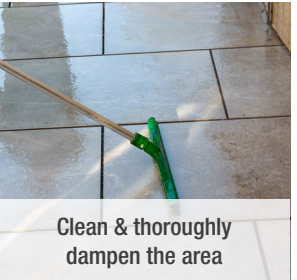
Please ensure that you contact our technical team for toolbox training prior to installation.

### Initial and Ongoing Maintenance

Small patches of jointing that have closed up are not necessarily a problem, this is quite normal. They are caused by excess water during either mixing or cleaning. It is likely that there will be more detriment in structural damage done by removing and re-jointing than any gain in permeability. As long as the patches are few, small and spread apart water will simply run off to adjacent permeable joints. This should have been allowed for in the overall permeability calculations at the design stage when using published flow rates.

Joints that have recessed or that have been damaged can be easily topped up. They are caused by spent jointing mortar having been applied to the joints instead of being removed during the jointing process. A small amount of tuffflow permeable jointing mortar can be mixed by hand with a twin paddle mixer. The patch of paving including the joints should be damp. The jointing mortar is applied to the joint with a trowel and excess material removed. The surface of the paving is cleaned using a "Washboy" sponge float.

Periodic maintenance can be carried out by lightly pressure washing the surface of the paving and joints to remove debris, dirt and detritus that could reduce permeability. A domestic pressure washer or equivalent low pressure washer is recommended. This is recommended twice each year (Spring / Autumn).



Clean & thoroughly dampen the area



Mix binder and aggregate  
1 binder sachet : 1 aggregate



Add 1L of water to mix



Squeegee tuffflow into the joints. Remove excess



Immediately clean surface

