



tuffset G - Fully trafficked pavement in 3hrs Specialist Multi-Purpose Rapid Mortar

tuffset G is a specialist product with exceptional strength and durability characteristics that can be used for bedding, priming and grouting. It is typically employed to meet the following extreme construction requirements,

- a fully trafficked pavement in 3hrs (*this method statement*)
- a fully trafficked pavement overnight
- Installation of ironworks, permanent modular paving repairs

Preparation for Construction

If the pavement base is going to be primed ahead of the bedding mortar, make sure all loose debris is swept clear before mixing the tuffset G bedding mortar and the tuffset G priming mortar.

Likewise the pavers, must be cleaned by individually wiping/washing the underside with a damp sponge to remove any dust or particles that could affect the adhesion performance.

Mixing tuffset G as a Bedding Mortar

Avoid mixing more than will be used within 15 minutes at an ambient 20°C.

To ensure consistency of a batch, the bedding mortar should ideally be mixed using a forced action mixer in the following sequence;

- Add **two** 25 kg bags of tuffgrit aggregate to the running mixer. Do not add any water at this stage.
 - Add 1x 25 kg bag of tuffset G. Do not add any water at this stage.
- Mix until the tuffgrit aggregate is evenly coated with the tuffset G powder. This typically takes around 30 seconds to 1 minute.
- Once the aggregate is evenly coated with tuffset G powder, slowly add 1 to 2 litres of water to get the desired consistency.
 - The final consistency of the mix should be such that tuffset G bedding mortar can retain the form of a 'snowball' in the hand and not be dripping wet.

NOTE: Occasionally, ball-shaped clumps can begin to form during mixing. This is usually because the tuffgrit aggregate is too wet when the dry mortar is added. However, these clumps will break up by running the mixer longer: until they've broken up and even mixing is achieved. The problem is reduced by using a forced-action mixer, which is more thorough, efficient and better suited to the task than a 'drum mixer'.

Mixing tuffset G as a Priming Mortar

tuffset G is mixed to form a thick smooth creamy paste.

Add 4.5 litres of water to a large plastic tub and then add the 25 kg of tuffset G powder. Thoroughly mix with a drill with a spiral mixing paddle or twin paddle mixer. On reaching a thick creamy, lump free, paint-like texture tuffset G is ready to use.

Alternatively half batches can be prepared. 2.25 litres of water per 12.5 kg of tuffset G (half a bag).

With a working life of around 15 minutes at 20 °C, the material may start to settle in the bucket. This is avoided by stirring it once or twice after each application and if necessary, refreshed by adding an occasional splash of extra water. It is important that the primer is always in the form of a smooth paste before it is applied.



Clean the area



Mix binder and aggregate
1 binder : 2 aggregate



Add water to mix



Apply tuffset G to concrete base and paving unit



Lay mixed mortar onto the base and bed the paving unit



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Laying Process: Using tuffset G Bedding & tuffset G Priming Mortars

tuffset G priming mortar is applied as a 1-2 mm thick coat and MUST NOT be allowed to skin over or dry before being applied.

- When laying over a concrete base tuffset G priming mortar should be brush applied to the entire clean surface of the concrete base, immediately prior to tuffset G bedding mortar being placed.
- Place the freshly mixed tuffset G bedding mortar to the required depth, allowing a surcharge for placing and positioning. Do not compact the freshly placed tuffset G bedding mortar before placing the paving unit and only place sufficient bedding mortar for paving units to be laid immediately.
- tuffset G priming mortar is brush applied to the entire underside of every cleaned paving units as they are immediately placed on to the fresh tuffset G bedding mortar. The units are then tapped into their final line and level.
- Do not walk on and protect newly laid areas from pedestrian and vehicle access until the bedding mortar has gained sufficient strength, after which jointing work can commence. This is typically not less than 1 hour, longer in cold weather.

Mixing tuffset G as a Jointing Mortar

To ensure consistency the jointing mortar should be mixed to the following sequence;

- Pour 4 litres of water into a large mixing bucket/tub.
- Progressively add the contents of the 25 kg bag to the water while mixing.
- Add no more than 0.5 litres extra to achieve the desired consistency.
- Mix using a powerful paddle mixer, or a more-effective twin paddle mixer. For larger areas the use of a forced action mixer is advisable.
- The mixture should be thick, but remain just pourable.

The sequence of; water first, followed by tuffset G mortar powder helps to avoid inconsistencies and clumps of unmixed material forming at the bottom of the bucket.

Jointing Process: tuffset G as a Jointing Mortar

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

tuffset G jointing can start after a one-hour quarantine of the paving elements being placed, and the surface will be strong enough for full trafficking within three hours.

- Wet the surface of the paving. Use plenty of water across the entire area and keep wet. Excess water will be displaced by the tuffset G jointing mortar, and wet paving will help prevent staining and make cleaning easier.
- Immediately apply the mixed tuffset G to the surface of the paving/joints.
- Draw the tuffset G 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 no air is trapped and the mortar fully fills the joints. Constantly spray the surface with a light spray of water to prevent it drying.
- Constantly spray the surface with a light spray of water to prevent it drying. Do not use a direct jet of water, as this will wash out the jointing mortar.
- Remove excess mortar from the paving surface with a clean squeegee using the same diagonal motion.

Commence cleaning immediately after application, do not delay.

- Keep the surface of the paving wet with a mist/spray, taking care not to wash out the joints.
- Remove excess water and mortar from the paving surface using a clean squeegee.
- Repeat this process several times until the surface is clean.
- A final clean can be carried out 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 surface.
- Finally, keep the surface damp for as long as possible whilst the jointing mortar sets.
- Do not walk on the finished surface and protect from disturbance for approximately 2 hours after which the pavement will be ready for use.



Clean and wet the area



Mix tuffset G



Pour tufftop onto surface and squeegee into joints



Remove excess with a squeegee



Keep paving damp and clean the surface