

stein<sup>®</sup>tec

high performance paving mortars

Product Range and Installation Guide

O<sup>2</sup> Arena, London



## About Us

The UK's leading supplier of high performance paving mortars.

Supplying the commercial and domestic markets.

We have many years experience nationally and internationally, contributing to projects with outstanding longevity and visual appeal. We recognise that paving projects represent a major investment to all involved so we're committed to helping ensure the outcome for every project is a success.

Leicester Square, London

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Case Studies, Technical Data, Method Statements and NBS Clauses are available on our website.

Phone: 0203 598 9800  
Fax: 0203 384 9036

Email: [mail@steintec.co.uk](mailto:mail@steintec.co.uk)  
Web: [www.steintec.co.uk](http://www.steintec.co.uk)

Address:  
1 Northwick Road, Canvey Island, Essex, SS8 0PU

# tuffbed<sup>®</sup> 2-pack

# High Performance Permeable Low Carbon Bedding Mortar



tuffbed 2-pack is a high performance bedding mortar exceeding the requirements of BS 7533 for type A & type B mortars and BS 7533-101:2021 for type 25 & type 35 bedding mortars.

This two-part product requires no pre-drying or pre-blending of the aggregate content. The binder is packaged separately avoiding the need for energy intensive central processing. This reduces overall energy use and haulage.

## Key Features

- Fully water permeable and frost resistant
- Low carbon footprint ([visit www.steintec.co.uk](http://www.steintec.co.uk) for information on low carbon construction)
- 40 min working time (10°C)
- 30-70 mm bedding depth
- Helps prevent moisture related paving issues
- Fully complies with BS 7533 type A & type B and BS 7533-101:2021 type 25 & type 35.
- Suited to commercial and public realm projects
- Compatible with all types of paving; granite, natural stone, concrete and porcelain units



Ealing Broadway Shopping Centre

All mixing is carried out on site which makes tuffbed 2-pack suitable for commercial and larger public realm projects.

Bedding depths of between 30mm and 70mm can be placed in a single layer. Greater depths can be achieved by placing successive layers. Optimum versatility and workability is achieved with a minimum layer depth of 30mm.

It is a requirement of BS 7533 that 'The laying course should be frost resistant and allow the passage of water through it after it has cured.'

tuffbed 2-pack meets this requirement and ALL other requirements of BS 7533.



## Technical Specification

<b>Colour</b>	Grey	<b>Compressive strength (20°C)</b>	14 days: ~25 N/mm <sup>2</sup> 28 days: ~35 N/mm <sup>2</sup>
<b>Packaging</b>	Bag	<b>Flexural strength</b>	~7 N/mm <sup>2</sup>
<b>Packaging weight</b>	25 kg	<b>Permeability</b>	~18 x 10 <sup>-4</sup> m/s
<b>Bed depth</b>	30 - 70 mm	<b>Storage life</b>	12 months from manufacture date
<b>Typical water used</b>	4-7 litres per 125 kg batch	<b>NBS sections</b>	M10 Q24 Q25
<b>Typical coverage</b>	30 mm: 60 kg/m <sup>2</sup> 40 mm: 80 kg/m <sup>2</sup> 50 mm: 100 kg/m <sup>2</sup>	<b>Compliance</b>	BS 7533
<b>Packages per pallet</b>	40		
<b>Pallet weight</b>	1,030 kg		
<b>Working time</b>	40 min at 10°C 30 min at 20°C		
<b>Working temperature</b>	2-30°C		



# tuffbed<sup>®</sup> 2-pack

## Application



Commercial

**Step 1**  
Prepare equipment



**Step 2**  
Clean paving and base



**Step 3**  
Add the aggregate



**Step 4**  
Add and mix the binder



**Step 5**  
Add water



**Step 6**  
Apply bonding mortar to base



**Step 7**  
Place the tuffbed 2-pack



**Step 8**  
Brush on the bonding mortar



**Step 9**  
Tap unit down to level



### Key Information

100kg of the aggregate (4x25kg bags) is mixed with one 25kg bag of the binder.

Mix thoroughly with a forced action mixer.

Add the water when the aggregate is evenly coated with tuffbed 2-pack. The mix consistency should be sticky, but not wet so that a ball can be formed in the palm of ones hand.

Allow 24 hours for tuffbed 2-pack to set before walking on or starting jointing of the paving.

For trafficked applications, where there is a concrete base, a layer of tuffbond priming mortar should be applied to the concrete before the mixed bedding mortar is put in place. Bonding mortar where required, should be applied using a stiff brush.

# tuffbed®

# High Performance Pre-blended Bedding Mortar



A high performance bedding mortar pre-blended for ease of use, in smaller scale commercial, public realm and domestic projects. tuffbed high performance bedding mortar is suitable for use in pavements constructed in concrete or natural stone paving units.

It is a requirement of BS 7533-101:2021 that proprietary bedding mortars meet all requirements of Table 9 and Annex C with a maximum capillary rise of 20mm. tuffbed meets the requirements of BS 7533-7:2010 and BS 7533-101 in all respects.

## Key Features

- Pre-blended bedding mortar
- Suitable for shallow bedding depth of 30-70 mm
- Helps prevent moisture related paving issues typically associated with conventional mortars
- Fully complies with BS 7533 type A & type B and BS 7533-101:2021 type 25 & type 35
- Suitable for heavily trafficked areas
- Compatible with all types of paving; granite, natural stone, concrete and porcelain units
- Suited to commercial and public realm projects



European Investment Bank, Luxembourg

## Technical Specification

<b>Colour</b>	Grey
<b>Packaging</b>	Bag
<b>Packaging weight</b>	25 kg
<b>Bed depth</b>	30 - 70 mm
<b>Typical water used</b>	3-4 litres per 25 kg
<b>Typical coverage</b>	15 mm: 27 kg/m <sup>2</sup> 30 mm: 54 kg/m <sup>2</sup> 50 mm: 90 kg/m <sup>2</sup>
<b>Packages per pallet</b>	40
<b>Pallet weight</b>	1,030 kg
<b>Working time</b>	40 min at 10°C 30 min at 20°C
<b>Working temperature</b>	2-30°C
<b>Compressive strength (20°C)</b>	14 days: ~25 N/mm <sup>2</sup> 28 days: ~35 N/mm <sup>2</sup>
<b>Storage life</b>	12 months from manufacture date
<b>NBS sections</b>	M10, Q24, Q25
<b>Compliance</b>	BS 7533

**Step 1**  
Clean paving units



**Step 2**  
Mix with water in a forced action mixer



**Step 3**  
Clean area



**Step 4**  
Place tuffbed bedding mortar



**Step 5**  
Brush on the bonding mortar



**Step 6**  
Bed unit onto tuffbed mortar



## Key Information

Add the water to achieve a mix consistency which should be sticky, but not wet and so that a ball can be formed in the palm of one's hand. Bonding mortar where required should be applied using a stiff brush. Allow 24 hours to set before walking on the paving.

For trafficked applications, where there is a concrete base present, a layer of tuffbond priming mortar should be applied to the concrete base before the mixed bedding mortar is put in place.

**tuffbond**

# High Performance Bonding and Priming



A high performance bonding and priming mortar suitable for natural stone and pre-cast concrete paving units used in bound/rigid construction in commercial and public realm projects.

tuffbond greatly enhances the bond between the paving units and the laying course and where applicable between the laying course and supporting concrete structure/road-base.

tuffbond is brush applied as a 1-2mm thick layer to the underside of paving units and to the surface of the base/roadbase.

## Key Features

- Creates the essential adhesion bond between bedding and the paving element
- Applied to supporting concrete structures
- High resistance to shear forces and thermal stresses
- Polymer and resin free
- Provides full BS 7533 compliance in conjunction with tuffbed or tuffbed 2- Pack and tufftop jointing mortar



The Shard, London

## Technical Specification

Colour	Grey
Packaging	25 kg Bag
Adhesion	~2 N/mm <sup>2</sup>
Consumption	~1.5 kg/m <sup>2</sup> per layer
Typical water used	6.75 litres per 25 kg
Length of working time	40 min at 10°C 30 min at 20°C
Packages per pallet	40
Pallet weight	1,030 kg
Shelf life	12 months from manufacture date
Compliance	BS 7533

### Step 1 Prepare equipment



### Step 2 Mix water and tuffbond



### Step 3 Clean area



### Step 4 Brush apply tuffbond mortar to the base\* and to the underside of the paving units



### Step 5 Place paving unit on the bedding



\* Where the base is in situ concrete or reinforced concrete

**tufftop**®

# High Performance Jointing Mortar



tufftop is a high performance non-permeable, self compacting free flowing slurry applied jointing mortar suitable for pavements constructed in natural stone or concrete paving units.

The elastic modulus of tufftop is optimised to provide the correct supporting stiffness whilst continually absorbing the thermal and dynamic stresses inherent in bound pavements.

tufftop provides pavements with exceptional performance and durability including those in heavily trafficked environments.

tufftop jointing mortar available in four colours



N.B. colours are indicative only

Online calculator available at  
[www.steintec.co.uk/calculator](http://www.steintec.co.uk/calculator)

Paving unit size	Joint width	m <sup>2</sup> per (25kg) bag
600 x 900 x 20 mm	4 mm	56.73 m <sup>2</sup>
600 x 900 x 50 mm	6 mm	15.19 m <sup>2</sup>
600 x 600 x 65 mm	8 mm	7.36 m <sup>2</sup>
600 x 900 x 65 mm	10 mm	7.07 m <sup>2</sup>
600 x 400 x 80 mm	8 mm	4.81 m <sup>2</sup>
600 x 600 x 80 mm	10 mm	4.81 m <sup>2</sup>
600 x 900 x 80 mm	10 mm	5.74 m <sup>2</sup>
100 x 100 x 100 mm	10 mm	0.72 m <sup>2</sup>

## Key Features

- Self compacting jointing slurry mortar
- Four colours available
- Exceeds requirements of BS 7533 and BS 7533-101:2021 for Type 25 & Type 40 jointing mortars
- Compatible with all types of paving; granite, natural stone, concrete and porcelain units
- Extremely high durability and low maintenance
- Polymer and resin free
- Easy to clean



Broadgate Circle, London

## Technical Specification

<b>Colour</b>	Beige, Natural Grey, Mid Grey & Dark Grey	<b>Compressive strength (20°C)</b>	14 days: ~30 N/mm <sup>2</sup> 28 days: ~45 N/mm <sup>2</sup>
<b>Packaging</b>	25 kg Bag	<b>Flexural strength</b>	~7.5 N/mm <sup>2</sup>
<b>Joint width</b>	>3 mm	<b>Elastic modulus</b>	(20,000 ± 4,000) N/mm <sup>2</sup>
<b>Typical water used</b>	4-5 litres per 25 kg	<b>Adhesive bond</b>	~1.5 N/mm <sup>2</sup>
<b>Typical coverage</b>	<a href="http://www.steintec.co.uk/calculator/">www.steintec.co.uk/calculator/</a>	<b>Storage life</b>	12 months from manufacture date
<b>Packages per pallet</b>	40	<b>NBS sections</b>	Q24 Q25
<b>Pallet weight</b>	1,030 kg	<b>Compliance</b>	BS 7533
<b>Set time</b>	24 hours		
<b>Working time</b>	30 min at 20°C		
<b>Working temperature</b>	2-30°C		



Cornhill Exchange, Ipswich

# Application



**Step 1**  
Prepare equipment



**Step 2**  
Wash and wet paving



**Step 3**  
Add water to a bucket or mixer



**Step 4**  
Add tufftop and mix together



## Key Information

Adding the water first helps avoid lumps, inconsistency, and unmixed material forming at the bottom edge of the bucket.

Use a paddle mixer.

It is important the pavement is entirely wet, to aid application, the complete filling of the joints and the final cleaning process.

Do **NOT** let mortar dry on the surface, spray with a light mist to keep moist while applying and cleaning, if necessary.

**Step 5**  
Pour tufftop over wet paving



**Step 6**  
Spread into joints



**Step 7**  
**Clean with sponge belt or float**



# tuffbed<sup>®</sup> Utility

## Pre-mixed Bedding Mortar



tuffbed Utility is a pre-mixed bedding mortar packaged in moisture resistant 25 kg bags for convenience in storage, handling, mixing and application. Designed for use in domestic driveway, paths and patios as well as public realm, commercial projects which only have a requirement for Type A (now BS 7533-101:2021 Type 25) bedding mortar.

It is a requirement of BS 7533-101:2021 that proprietary bedding mortars meet all requirements of Table 9 for Type 25 mortars and Annex C with a maximum capillary rise of 20mm. tuffbed meets the requirements of BS 7533- 7:2010 and BS 7533-101 in all respects for Type A mortars.

### Key Features

- Pre-mixed bedding mortar in a single bag
- Suitable for bedding depths of 30-70 mm
- Reduces the effect of efflorescence, frost damage and picture framing on paving
- Fully complies with BS 7533 Type A and BS 7533-101:2021 Type 25 requirements for bedding mortar
- Suitable for natural stone, porcelain, concrete and granite paving units
- Ideal for domestic and local authority utilities projects



3 Merchant Square, London

### Technical Specification

<b>Packaging</b>	25 kg Bag
<b>Bed depth</b>	30 - 70 mm
<b>Typical water used</b>	2 - 2.5 litres per 25 kg
<b>Typical coverage</b>	30 mm: 60 kg/m <sup>2</sup> 40 mm: 80 kg/m <sup>2</sup> 70 mm: 140 kg/m <sup>2</sup>
<b>Packages per pallet</b>	40
<b>Pallet weight</b>	1,030 kg
<b>Working time</b>	40 min at 10°C 30 min at 20°C
<b>Working temperature</b>	2-30°C
<b>Compressive strength (20°C)</b>	28 days: ~25 N/mm <sup>2</sup>
<b>Flexural strength</b>	~3.5 N/mm <sup>2</sup>
<b>Permeability</b>	~18.8 * 10 <sup>-4</sup> m/s
<b>Storage life</b>	12 months from manufacture date
<b>Compliance</b>	BS 7533 type A BS 7533-101:2021 Type 25

**Step 1**  
Clean area and paving units



**Step 2**  
Mix with water in a mixer



**Step 3**  
Check mix consistency



**Step 4**  
Place tuffbed Utility bedding mortar



**Step 5**  
Brush on the bonding mortar



**Step 6**  
Bed unit onto tuffbed Utility bedding mortar



### Key Information

Add the water to achieve a mix consistency which should be sticky, so that a ball can be formed in the palm of one's hand. Bedding mortar must be applied as a full bed; min. 30 mm. tuffbond should be applied using a stiff brush; 1-2 mm. Allow 24 hours to set before walking on the paving.

For trafficked applications, where there is a concrete base present, a layer of tuffbond priming mortar should be applied to the concrete base before the mixed bedding mortar is put in place.

# tuffbond Utility

## Bonding and Priming Mortar



Utility

tuffbond Utility is a bonding and priming mortar used to enhance the adhesion bond between the paving units and bedding mortar and where present, between the bedding mortar and supporting concrete structure.

For ease of use tuffbond Utility has been packaged in pre-measured sachets contained in a reusable, recyclable tub. With individual sachets only the required amount of tuffbond Utility is used and wastage is minimised.

### Key Features

- Creates the essential adhesion bond between bedding and the paving element
- For small scale paved areas in; natural stone, porcelain, concrete and granite paving units
- A 1–2 mm thick coat of tuffbond utility, enhances adhesion by 100%
- Polymer and resin free
- Provides full BS 7533 compliance used in conjunction with tuffbed Utility and tufftop Utility jointing mortar



### Technical Specification

Colour	Grey
Packaging	12 kg Tub (4x 3 kg Sachets)
Adhesion	~2 N/mm <sup>2</sup>
Consumption	~1.5 kg/m <sup>2</sup> per layer 8 m <sup>2</sup> per tub
Typical water used	1 litre per 3 kg sachet
Length of working time	40 min at 20°C
Packages per pallet	36 - 45
Pallet weight	462 - 570 kg
Shelf life	12 months from manufacture date
Compliance	BS 7533

#### Step 1 Prepare Equipment



#### Step 2 Wash underside of paving units



#### Step 3 Add 1 L of Water per sachet to tub



#### Step 4 Add sachet to tub and mix



#### Step 5 Brush apply 1-2mm thick coat to the paving unit



#### Step 6 Place primed paving unit on bedding



### Key Information

Do **NOT** allow tuffbond Utility to dry, apply immediately prior to placing paving unit.

When laying on an in-situ or reinforced concrete base, tuffbond Utility should also be applied to the clean surface prior to placing the bedding mortar.

tuffbond Utility is applied with a stiff brush to the entire underside of each individual paving unit.

# tufftop<sup>®</sup> Utility

## Jointing Mortar



Dark Grey  
Mid Grey  
Natural Grey  
Beige



N.B. colours are indicative only

Convenient and easy to use jointing mortar.

Requires just 2 litres of clean water added to the tub and mixed with a paddle mixer, to be ready to go.

Ease of use makes tufftop Utility ideal for smaller projects including driveways, pavements and patios.

tufftop Utility has been developed to make things as easy as possible for all users. Supplied in a reusable and recyclable tub.

The individual sachets in each tub ensure the correct amount of tufftop Utility is used and wastage is minimised.

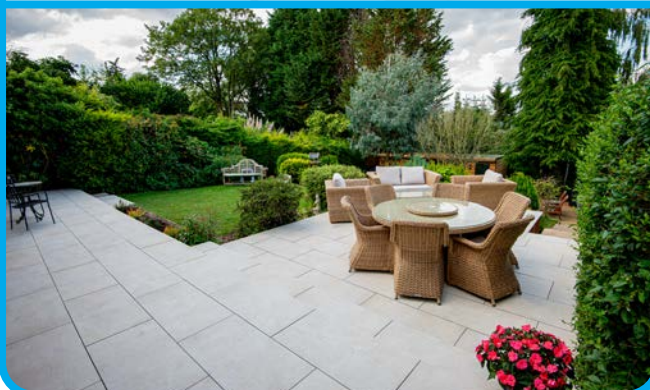
The carefully measured contents of each sachet are mixed with exactly 1 litre of water.

Paving unit size	Joint width	m <sup>2</sup> per (12kg) tub
600 x 1200 x 20 mm	4 mm	27 m <sup>2</sup>
600 x 900 x 20 mm	4 mm	24 m <sup>2</sup>
600 x 600 x 20 mm	4 mm	20 m <sup>2</sup>
600 x 900 x 20 mm	6 mm	16 m <sup>2</sup>
600 x 900 x 24 mm	8 mm	10 m <sup>2</sup>
600 x 900 x 24 mm	10 mm	8 m <sup>2</sup>
600 x 600 x 24 mm	10 mm	7 m <sup>2</sup>
600 x 900 x 50 mm	10 mm	4 m <sup>2</sup>
600 x 600 x 50 mm	10 mm	3 m <sup>2</sup>

Online calculator available at [www.steintec.co.uk/Utility-calculator](http://www.steintec.co.uk/Utility-calculator)

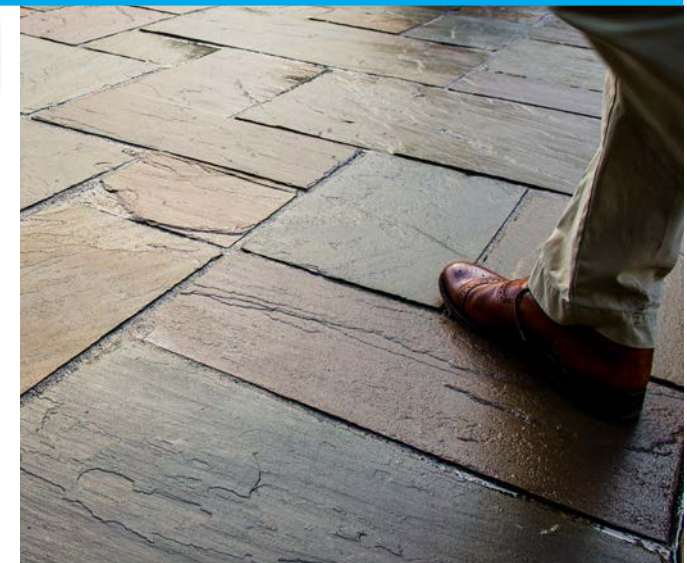
### Key Features

- Self compacting jointing slurry mortar
- For smaller commercial, domestic bound construction pavements, driveways and patios
- Four colours available; Natural Grey, Mid Grey, Dark Grey, Beige
- For paved areas in; natural stone, porcelain, concrete and granite paving units
- Complies with BS 7533
- Minimal maintenance required
- Polymer and resin free.



### Technical Specification

<b>Colour</b>	Beige, Natural Grey, Mid Grey & Dark Grey	<b>Compressive strength (20°C)</b>	7 days: ~20 N/mm <sup>2</sup> 28 days: ~25 N/mm <sup>2</sup>
<b>Packaging</b>	12 kg Tub (2x 6 kg Sachets)	<b>Flexural strength</b>	~3.5 N/mm <sup>2</sup>
<b>Joint width</b>	>4 mm	<b>Elastic modulus</b>	(20,000 ± 4,000) N/mm <sup>2</sup>
<b>Typical water used</b>	1 litre per 6 kg sachet	<b>Adhesive bond</b>	~1.5 N/mm <sup>2</sup>
<b>Typical coverage</b>	<a href="http://www.steintec.co.uk/Utility-calculator/">www.steintec.co.uk/Utility-calculator/</a>	<b>Storage life</b>	12 months from manufacture date
<b>Packages per pallet</b>	36 - 45	<b>Compliance</b>	BS 7533
<b>Pallet weight</b>	462 - 570 kg		
<b>Set time</b>	24 hours		
<b>Working time</b>	30 min at 20°C		
<b>Working temperature</b>	2-30°C		



# Application



**Step 1**  
Prepare Equipment



**Step 2**  
Wash and wet paving



**Step 3**  
Add 1L of water per sachet to tub



**Step 4**  
Add sachet to tub and mix



## Key Information

It is important the pavement is entirely wet, to aid application, the complete filling of the joints and the final cleaning process.

Do **NOT** let mortar dry on the surface, spray with a light mist to keep moist while applying & cleaning, if necessary.

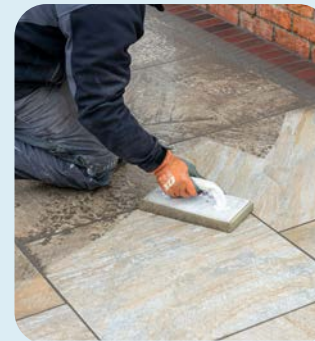
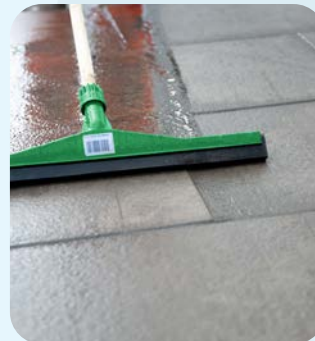
**Step 5**  
Pour mortar over wet paving



**Step 6**  
Spread tufftop Utility to fill joints



**Step 7**  
Clean using a squeegee with water and/or a sponge float



**tuffix**

# High Performance Paving Repair Mortar



tuffix can rejuvenate old paving, giving it a new lease of life, alleviating the need to fully lift and re-lay.

Old paving, often laid on sand/cement, which has cracked and broken joints and rocking pavers can be renovated with tuffix.

The thick flowable slurry mortar fills voids and replenishes joints to provide a structural repair.

The longevity of a repair carried out with tuffix will depend on the condition and quality of the existing structure, how heavily it is trafficked, and how well it is prepared.

- Three simple steps to replenish damaged paving with tuffix;
1. Remove all loose material from joints and thoroughly clean, ideally with a pressure washer.
  2. Pour tuffix in to the joints.
  3. Remove any excess using a sponge float.



## Key Features

- Economically extends life of old paving.
- Dramatically improves appearance.
- Quick and easy to apply,
- Saves time and money.
- Repairs cracked, broken and missing jointing mortar.
- Stabilises loose and rocking pavers.
- For all types of paving module; Setts, slabs, flags, blocks, etc.
- Paths, patios, pavements and driveways.

Portions of the existing jointing mortar that are still sound and secure can be left in place and the tuffix applied over and around.

## Technical Specification

<b>Colour</b>	Natural Grey	<b>Flexural strength</b>	~7.5 N/mm <sup>2</sup>
<b>Packaging</b>	Tub	<b>Elastic modulus</b>	(20,000 ± 4,000) N/mm <sup>2</sup>
<b>Packaging weight</b>	11 kg (2x 5.5 kg Sachets)	<b>Storage life</b>	12 months from manufacture date
<b>Joint width</b>	>3 mm	<b>Compliance</b>	BS 7533
<b>Typical water used</b>	1 L per 5.5 kg sachet		
<b>Packages per pallet</b>	36 - 45		
<b>Pallet weight</b>	426 - 525 kg		
<b>Set time</b>	3 hours		
<b>Working time</b>	15 min at 20°C		
<b>Working temperature</b>	2-30°C		
<b>Compressive strength (20°C)</b>	1 hr: ~27 N/mm <sup>2</sup> ; 24 hrs: ~50 N/mm <sup>2</sup>		



The Golden Eagle, Portsmouth

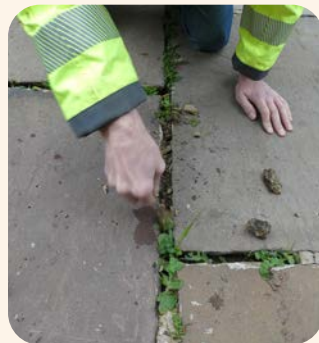
# Application



**Step 1**  
Prepare equipment



**Step 2**  
Remove organic material and loose jointing



**Step 3**  
Thoroughly prepare joints



**Step 4**  
Add 1L of water per sachet used



## Key Information

It is important the pavement is entirely wet, to aid application, the complete filling of the joints and the final cleaning process.

Do **NOT** let mortar dry on the surface, spray with a light mist to keep moist while applying & cleaning, if necessary.

Only mix and apply one sachet at a time. Do not mix more material than will be used within about 15 minutes at an ambient 20°C.

**Step 5**  
Add sachet and mix



**Step 6**  
Pour mortar onto wet paving



**Step 7**  
Spread mortar **to fill joints and** remove excess



**Step 8**  
Clean using a squeegee or **sponge float**



**tuffset<sup>®</sup>G**

# Specialist Rapid Mortar



A specialist multi-purpose paving mortar.

tuffset G can be used for top to bottom reinstatement of an entire paving structure.

Ideal for overnight rapid repairs and raised traffic tables. Capable of being subjected to heavy trafficking in 3 hours.

Bedding mortar

Use as a high-speed early strength gain bedding mortar. Suitable for three hour trafficking at 20°C.

Bonding mortar

Mixed as a high adhesion slurry paste, for application with a trowel or stiff brush.

Jointing mortar

Add water to tuffset G and use a paddle mixer or forced action mixer to produce a highly plastic, pourable jointing grout.

As Rapid / overnight concrete re-instatement  
Renewal of an entire paving structure.

## Key Features

- Ready for heavy traffic within 3 hours
- 30-70 mm bedding depth
- Multi-purpose: bedding, priming, jointing, emergency repairs & filling around gully and manhole frames in carriageways
- Available in three colours
- Free of chemical admixtures, polymers & resins
- Exceeds BS 7533 requirements for bedding, bonding and jointing.



King's Cross, London

## Technical Specification

<b>Colour</b>	Natural Grey, Mid Grey & Dark Grey	<b>Elastic modulus</b>	(20,000 ± 4,000) N/mm <sup>2</sup>
<b>Packaging</b>	25 kg Bag	<b>Adhesive Bond</b>	~3 N/mm <sup>2</sup>
<b>Bed depth layer range</b>	30 mm - 70 mm	<b>Storage life</b>	12 months from manufacture date
<b>Joint width</b>	>3 mm	<b>NBS sections</b>	Q24 Q25
<b>Packages per pallet</b>	40	<b>Compliance</b>	BS 7533
<b>Pallet weight</b>	1,030 kg		
<b>Set time</b>	3 hours		
<b>Working time</b>	15 min at 20°C		
<b>Working temperature</b>	-2-30°C		
<b>Compressive strength (20°C)</b>	(1:1 mix) 1 hr: ~27 N/mm <sup>2</sup> ; 24 hrs: ~50 N/mm <sup>2</sup>		
<b>Flexural strength</b>	~7.5 N/mm <sup>2</sup>		

tuffset G is available in three colours.



*N.B. colours are indicative only*



Sidcup High Street

# Application



## Installed as bedding

Mix aggregate and tuffset G using a forced action mixer.

Do not mix more material than will be used within about 15 minutes at an ambient 20°C.

After laying, the paving surface must be thoroughly washed with water to remove any surplus mortar from the surface.

Quarantine the newly laid paving units for 60 minutes before commencing the jointing process with tuffset G.



## Installed as bonding

To prepare as priming mortar, tuffset G should be mixed with just enough water to form a thick, pasty slurry.

Only quantities that will be used within approximately 15 minutes at an ambient 20°C, should be mixed.

Use a stiff brush to apply the mortar to the cleaned underside of the paving unit.



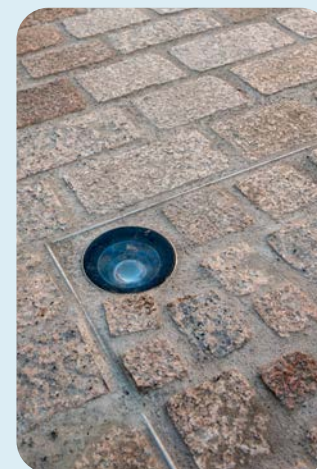
## Installed as jointing

Do not mix more material than will be used within about 15 minutes at an ambient 20°C.

It is important the pavement is entirely wet, to aid application, the complete filling of the joints and the final cleaning process.

Do NOT let mortar dry on the pavement surface, spray with a light mist to keep moist while applying and cleaning.

Clean with a sponge belt or sponge float.



## Installed as concrete

tuffset G can be used as a rapid repair concrete when mixed with tuffgrit aggregate.

# tuffset 60

## Sixty Minute Multi-Purpose Rapid Setting Mortar



A supportive high performance mortar for the placing and levelling of iron works and street furniture in carriageways and pavements.

Suitable for public realm and commercial areas, carriageways and pavements, especially in locations subject to constant heavy vehicle trafficking.

System installation of tuffset 60 with Steintec's tuffset G achieves compliance with DMRB HD27/04 3.11.

### Key Features

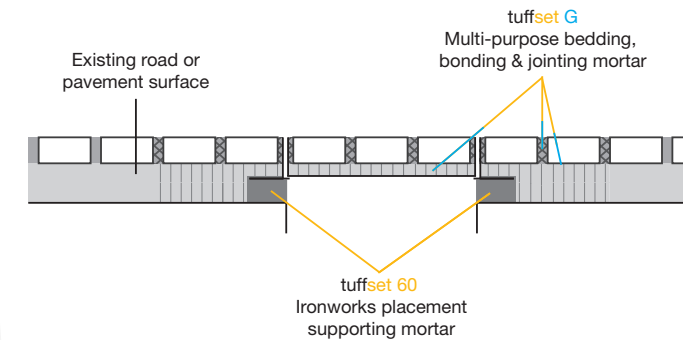
- Rapid setting (60 minutes) and strength gain
- 20 minute working time
- Placing and levelling of ironwork in areas of heavy traffic
- Durable solution for emergency works
- Frost resistant & highly durable
- Higher performance alternative to sand and cement mixtures
- Polymer and resin free



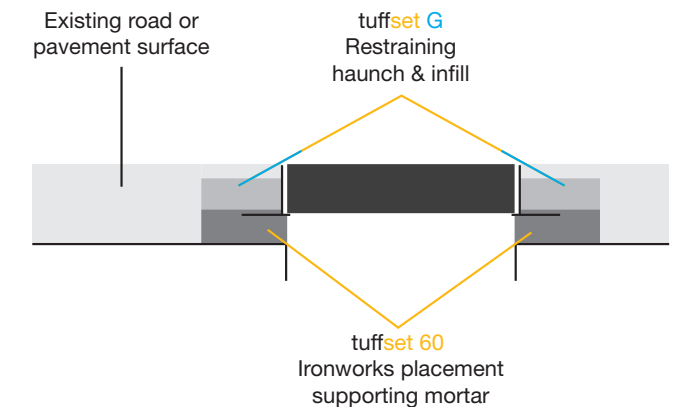
Luton Town Centre



Recessed cover in a paved area



Standard Ironworks cover in a carriageway



### Technical Specification






<b>Colour</b>	Grey	<b>Compressive strength (20°C)</b>	1 hr: ~25 N/mm <sup>2</sup> ; 3 hrs: ~30 N/mm <sup>2</sup> ; 24 hrs: ~40 N/mm <sup>2</sup>
<b>Packaging</b>	Bag	<b>Storage life</b>	12 months from manufacture date
<b>Packaging weight</b>	25 kg	<b>NBS sections</b>	P31 R12 Q24 Q35
<b>Bed depth</b>	10 - 50 mm		
<b>Typical water used</b>	3 litres per 25 kg		
<b>Typical coverage</b>	40 mm: 90 kg/m <sup>2</sup>		
<b>Packages per pallet</b>	40		
<b>Pallet weight</b>	1,030 kg		
<b>Set time</b>	1 hour		
<b>Working time</b>	20 minutes		
<b>Working temperature</b>	2-30°C		


# tuffset 60 tuffset G

with

# Using tuffset 60 and tuffset G for ironworks in paved areas

tuffset 60 combined with tuffset G provides a solution for the rapid structural placement of ironwork frames in heavily trafficked carriageways and paved areas with a return to trafficking in just 4 hours. On-site mixing of tuffset 60 and tuffset G is quick and easy.

<p><b>Step 1</b> Prepare equipment</p> 	<p><b>Step 2</b> Mix Water and tuffset 60</p> 	<p><b>Step 3</b> Build up supporting bed and position ironwork</p> 	<p><b>Step 4</b> <b>Confirm correct level and adjust</b></p> 	<p><b>Step 5</b> Allow 60 minutes to set</p> 
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<p><b>Step 6</b> Mix and pour tuffset G to level</p> 	<p><b>Step 7</b> Lay surface course</p> 
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### Key Information and Features

If reinstating an existing installation, remove all loose/failing brick/blockwork.

Ensure tuffset 60 fills any voids beneath the frame.

Once the tuffset G becomes hard, a surface course can be laid e.g. a bituminous wearing course or granite setts on a BS7533 Type B bedding mortar (tuffbed) laying course.

Alternatively tuffset G can be used as the surface course.

Open to full traffic after 4 hours of placing tuffset G mortar.

Advantages are:

- Rapid strength gain (similar products have a rapid set but don't gain strength so quickly, leading to premature failure if trafficked too soon).
- Workability  
tuffset 60; a supportive mortar with a consistency similar to a stiff sand/cement mix.  
tuffset G; a flowable mix that adheres to surrounding substrate and fills voids to structurally secure the ironwork frame.
- Ease of use (quickly and easily mixed on site in a mixer or tub with only the addition of water).

**tuffgrit**

**Permeable Aggregate**



A crushed igneous rock aggregate suitable for use as the laying course material for conventional unbound modular pavements and as the laying course and jointing material in SuDS permeable unbound modular pavements.

Applications include driveways, public realm, commercial areas, patios and pavements using any paving units.

tuffgrit is blended for optimum interlock of the angular particles, actively extending the durability of unbound/flexible pavements.

**Key Features**

- Water permeable (SuDS)
- 2-6 mm natural aggregate
- Available in 25kg bags or bulk bags
- Highly durable
- As described in EN 13242
- Complies with BS 7533



**Technical Specification**

Colour	Grey
Packaging	Bag or Bulk bag
Packaging weight	25 kg or 850 kg (dry weight)
Aggregate size	2-6 mm
Packages per pallet	40 bags or 1 Bulk bag
Joint width	8+ mm
NBS sections	Q24 Q25
Compliance	BS 7533

**tuffgrit**

**Application**

**Clay pavers & concrete blocks with nibs**

**Step 1**  
Screed tuffgrit and compact bedding before laying units



**Step 2**  
Units laid tightly together with ≥ 5mm nibs



**Cropped Setts**

**Step 1**  
Spread loose tuffgrit bedding



**Cropped Setts**

**Step 2**  
Tap setts down tightly together and to level



**All**

**Step 3**  
Sweep tuffgrit into joints



**Step 4**  
Compact and repeat steps 3 & 4 until joints are full



# Tools & Equipment

While few special tools are required to use tuffbau's range of products, there are some that can make life easier and massively improve efficiency on site. The range of products illustrated here is a selection of favourites based on our own experience and feedback from the trade.

## Mixing

### Forced action mixer

Paddles are driven through the mixing pan, combining materials in a way that a kitchen mixer would mix the ingredients for a cake.



### Paddle mixers

The electric paddle mixer is ideal for the rapid, thorough and even mixing of many of our mortars.



### Paver's mallet

Durable weighted mallet with two non marking head options. Rubber and Super-plastic heads with either a cast iron or aluminium housing.



## Cleaning & Hand Tools

### Pergo®

The Pergo® range of grout cleaning machines have a continuous sponge belt that is fed through a water bucket and rollers. Assisting in finishing large paved areas.



### Washboy kit

The 23-litre bucket comes supplied with a sponge faced hand trowel. It is very simple to use and has an easy to clean double roller that sits on top of the bucket and makes light work of cleaning the sponge.



### Washboy Pro kit

The 24-litre bucket comes supplied with a sponge faced floor float. The long aluminium handle makes it easier to clean mortar from paving without constant bending.



### Spare belts and accessories

Replacement continuous sponge belts, parts and Weiss ES100 defoamer.



### Soft Foam Rubber Squeegee

For the application of slurry grout. Designed to push materials into the paving joints, as well as removing surface residues. As easy to use as a stiff broom.



# weoss<sup>®</sup>

## Pavement Care

### Protection

#### FT Plus

A wet-look colour enhancer for natural stone and concrete paving, that also provides stain protection against marks made by grease, oils, fats, fast food, tyre rubber and footwear. It is an excellent and effective impregnator.



#### Stain Protect Profi

Absorbed into the pores of the paving surface, Stain Protect Profi provides excellent protection for natural stone and pre-cast concrete against stubborn pavement grime.



#### Onex Concentrate

Removes and helps prevent algae and moss stains within hours of application. Continues to work for weeks after to prevent further regrowth.



#### Install

A pre-construction protection for all paving units. It helps to protect against contaminants often associated with construction sites.



### Cleaning

#### Grundreiniger

Used for the routine surface cleaning of all types of natural stone and concrete pavements. Ideal for general or intensive spot cleaning. pH neutral and solvent free.



#### Extra KT

Removes deep and stubborn oil stains from all types of pavement surfaces.



#### Onex Power

A powerful alkaline surface cleaner that removes, kills and prevents growth of moss, weeds, etc.



#### RCI Rust Remover

Removes rust stains from a variety of natural stone including granite and some sandstone.



#### Cement Stain Remover

Removes cement stains from natural stone surfaces. Suitable for most types of granite and acid-resistant natural stone and man-made paving and flooring elements such as ceramic tiles and terracotta.



Please contact our technical support team to check on product compatibility before purchasing.



# Technical Advice, Sales and Support

In preparation for construction, we will brief contractors and layworkers on specific mixing, laying requirements, techniques, tips and tricks, tools and equipment and logistical issues. Our advice will help save time and money on site. During construction we can provide on-site assistance and layworker training specific to the unique requirements of your project.

We offer this valuable technical support free, because Steintec are as keen as you are to be associated with successful professional projects. Contact us at the earliest possible stage of your project and our experienced technical team will be delighted to assist you in any way we can.

**Telephone: 0203 598 9800    Email: [mail@steintec.co.uk](mailto:mail@steintec.co.uk)**

## CPD Sessions

Steintec manufacture specialist high performance mortars for paving systems, as well as providing extensive technical support and guidance. There are three accredited CPDs available online or at your place of work when conditions allow.



### Modular Pavement Design

- Modular pavement design & specification
- BS 7533 overview
- Bound, unbound, concrete & natural stone construction
- Pitfalls and myths

### SuDS and Permeable Pavements

- SuDS overview
- Permeable pavements
- Technical developments
- Legislative contexts for England, Scotland & Wales

### Managing Moisture in the Pavement

- 'The standards' and guidance
- Dynamics of moisture ingress
- Effects of moisture when unmanaged
- Effective design solutions

## NBS Clauses

NBS clauses for steintec products are available at [www.steintec.co.uk/technical/nbs-clauses/](http://www.steintec.co.uk/technical/nbs-clauses/)

## Affiliations



**Ing. Steven Burton** *B.Eng (Hons), GMICE*

**Technical Director**

07748 652 206  
[steven.burton@steintec.co.uk](mailto:steven.burton@steintec.co.uk)

**Darius Broga** *B.Eng (Hons)*

**Specification and Technical Manager**

07919 051 247  
[darius.broga@steintec.co.uk](mailto:darius.broga@steintec.co.uk)

**Phil Crichton** *BA (Hons), DipLA, CMLI*

**Specification and Technical Consultant (UK North)**

07748 900 704  
[phil.crichton@steintec.co.uk](mailto:phil.crichton@steintec.co.uk)

**Troi Boorman**

**Technical Coordinator**

07919 051 243  
[troi.boorman@steintec.co.uk](mailto:troi.boorman@steintec.co.uk)

**Peter Turner**

**Sales and Marketing Director**

07919 051 246  
[peter.turner@steintec.co.uk](mailto:peter.turner@steintec.co.uk)

**Tim Rushton**

**Regional Sales Manager (Midlands, N. England & Scotland)**

07917 400 408  
[tim.rushton@steintec.co.uk](mailto:tim.rushton@steintec.co.uk)



Bicester Village, Bicester

***Steintec***<sup>®</sup>  
high performance paving mortars

1 Northwick Road  
Canvey Island  
Essex  
SS8 0PU  
UK

Email: [mail@steintec.co.uk](mailto:mail@steintec.co.uk)

Web: [www.steintec.co.uk](http://www.steintec.co.uk)

Phone: 0203 598 9800

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