

TGSI – TACTILE PAVERS

Installation & Trade Information

About Chelmstone

Chelmstone is Australia's leading manufacturer of precast concrete tactile tiles, supplying councils, civil contractors, government authorities and major infrastructure projects throughout Australia. Our tactile ground surface indicators are manufactured under strict quality control procedures, using premium raw materials to deliver long-term durability, dimensional accuracy and consistent performance in demanding public environments.

1. QUALITY ASSURANCE

Chelmstone is committed to delivering products manufactured to consistent quality standards.

Quality control procedures include:

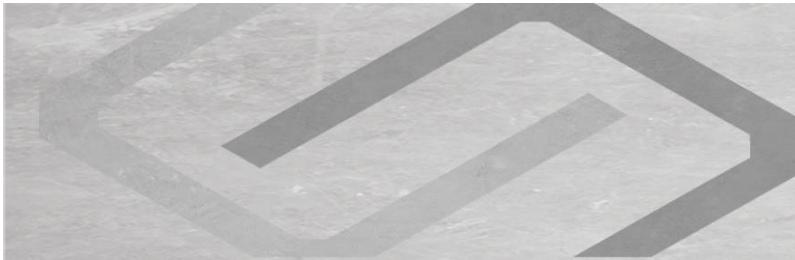
- Inspection of incoming raw materials.
- Controlled manufacturing processes.
- Chelmstone incorporates an advanced efflorescence-reducing admixture during manufacture
- Dimensional and visual inspection throughout production.
- Final inspection prior to packaging and dispatch.
- Protective packaging to ensure safe transportation.

2. PRODUCT FEATURES

Chelmstone TGSI pavers are designed for long-term performance in commercial and public environments.

Key features include:

- Durable precast concrete construction.
- Suitable for external pedestrian applications.
- Excellent wear resistance.
- Integral colour throughout the concrete matrix.
- Slip-resistant surface suitable for use with penetrating sealers.
- Compatible with cementitious adhesive installation systems.
- Suitable for installation on properly prepared concrete substrates.



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Please read before installation

It is critical to the success of your project and our product that the following information is read and understood clearly before any installation commences. If you have any further questions or queries do not hesitate to contact us directly.

3. GENERAL GUIDELINES ONLY

The following information is a general guideline only and is to be used as an addition to relevant Australian Standards and Association and industry practices. It is to be used as a guide only and should not be solely relied upon, as installation methods will vary with each specific project. These guidelines in no way replace the services of professional consultants and contractors.

4. PALLET, PACKAGING & DELIVERY

Our strict quality procedure ensures Chelmstone's TGSi pavers leave our factory in first quality condition. We use the best available packaging materials and pallets to ensure all products arrive on site in first class condition. You may experience some very minimal chips; these pavers should be used for cutting in. Please make sure all products are well protected while waiting to be installed on site. Pavers must be contained in their original shrink wrapping until installation is ready to commence. Unwrapping pallets prior to commencement, leaving pavers exposed to the elements prior to installation may inhibit moisture ingress, creating avoidable efflorescence.

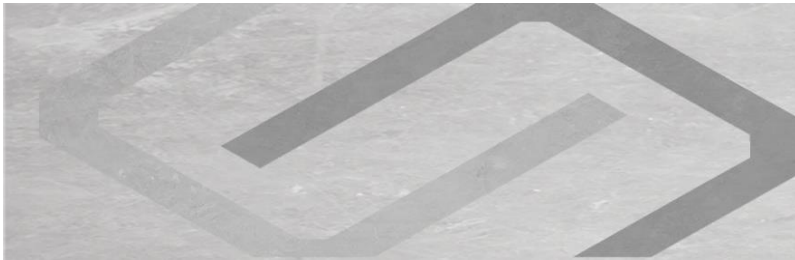
As a hand made product using natural materials, Chelmstone tactile pavers will have small surface imperfections, colour variation and small thickness variation up to +/- 3mm.

Careful handling is required at all times – before, during and after installation. Clean gloves must be used to carry Chelmstone; otherwise there is a risk of unnecessary marking the product. It is recommended that Chelmstone Pavers are stacked directly on-top of each other. The standard diagonal paver tacking method can leave marks if left for a period of time.

Do not install any product that is thought to be defective. All claims must be reported to Chelmstone for an onsite inspection where possible before they are installed.

Please check the order for size, colour, and quantity. Discrepancies will not be recognised unless notified within 48 hours of delivery. Goods unpacked or pallets moved – relocated from the place of delivery will not be considered under any circumstances in the event of a return. Pallets & packaging are non-returnable.

Delivery - We will do our utmost to meet all delivery requirements, if at all possible, but we make no guarantees for things beyond our control. Deliveries are to roadside only; we take no responsibility for damage to property if the driver is asked to enter the property.



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5. CUTTING

Chelmstone TGSI pavers can be easily cut with a brick-saw or masonry blade grinder-saw. The product must be thoroughly wet down before sawing for safety reasons and a dust mask should be worn. All dust and milky cutting residue must be washed off immediately before the paver dries, as it will stain.

6. LAYING

Always adopt good, licensed paving and tile-laying practices.

7. FIXED METHOD OF LAYING TGSI

We recommend the use of a cement-based tile adhesive suitable for external use. Chelmstone recommends a Mapei adhesive Keraquick - a high-performance rapid setting cementitious adhesive. Prior to installation, Chelmstone strongly recommends that the TGSI pavers are pre-sealed with a suitable penetrating sealer. Pre-sealing provides additional protection during installation and assists in reducing the potential for staining and moisture ingress.

TGSI pavers must be laid onto a concrete slab suitably engineered to support expected traffic flow. The concrete slab must be clean and free of any dirt/oil and any loose material.

Use a 12mm notched trowel to evenly cover the area the TGSI pavers are to be laid on. Use a separate small bucket of Keraquick water down to brush on the underside of the TGSI paver prior to bedding into the Keraquick. Bed in the TGSI paver to the correct level. Make sure all excess Keraquick is sponged off any exposed face of the TGSI immediately.

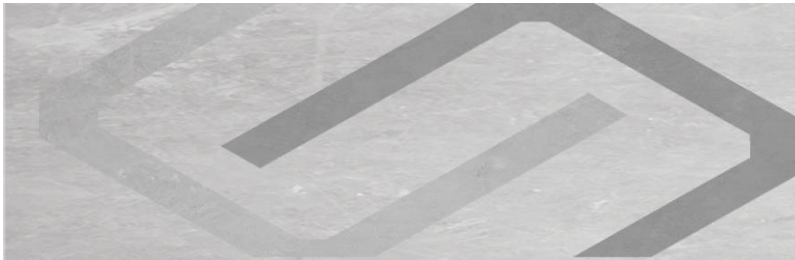
Note: Correct installation and sealing practices are essential. Moisture ingress beneath or around the pavers due to inadequate sealing, poor drainage, substrate movement, or incorrect installation may result in efflorescence or other moisture-related surface discolouration. Efflorescence is a naturally occurring phenomenon in cementitious products and is not considered a manufacturing defect.

8. FILL THE JOINTS

There are primarily 3 recommended techniques to complete jointing depending on your desired finish and surface area, including:

Option 1:

For commercial areas or areas that require pressure cleaning, we recommend grouting with a mortar jointing compound. Joints must be a minimum of 3mm wide. Read the manufacturer's instructions thoroughly before commencing. Immediately clean off any excess grout to prevent staining the pavers.



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Option 2:

Polymeric Sand (dry, fine sand in 20kg bags, stabilised with a form of gel which sets reasonably hard in the joints but maintains some flexibility), can be used to reduce incidence of ants, weeds, and wash outs in small joints. Read the manufacturer's instructions thoroughly before commencing. Immediately clean off any excess Polymeric Sand to prevent staining the pavers.

Option 3:

Sweep a fine, clean, Silica Based Jointing Sand over the finished dry paving, working the sand in to ensure all joints are full. Dry sand/cement mixes are not recommended for use by DIYers as they can cause permanent cement stains on the surface if handled incorrectly. Flexible joints can last longer too as they're not affected by cracking. Read the manufacturer's instructions thoroughly before commencing. Immediately clean off any excess Polymeric Sand to prevent staining the pavers.

9. EXPANSION JOINTS

As with all paving it is important that appropriate expansion joints be used to allow for natural movement. These should be incorporated every 4 meters or roughly every 20 m². Control joints are recommended for the substrate (concrete sub-base). The joints in the concrete base should be continued through the mortar bed and grout joint. Chelmstone do not recommend laying masonry units over any control or expansion joint. There should be expansion joints between the pavers and any other products or surface.

10. SITE CARE

Remember it is important to ensure that the laid area is protected from other trades. No foot or vehicle traffic should be allowed on the newly laid pavers/for at least 48 hours.

11. ADDITIONAL INSTALLATION INFORMATION

Go to the Mapei website for additional installation information found in the Keraquick data sheet.



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Cleaning & Sealing (general guidelines only)

Chelmstone recommends that experienced cleaning and sealing contractors attend to the paved areas as soon as they are laid. **It is essential to keep the pavers or tiles clean** and free from soil oxides, cement, mortar droppings, leaves, bark, rubber marks, etc during and after laying as these will possibly stain the pavers. To help prevent staining, the pavers should be sealed with a penetrating sealer.

1. SEALING

Important: Tactile indicators must be sealed using a penetrating sealer. Chelmstone recommends Stainblock Enricher WB from CCS Concrete Colour Systems for optimal performance. It is imperative to follow the manufacturer's recommendations when sealing. Alternatively, installers may use another high-quality penetrating sealer suitable for masonry products, provided it is a product they are familiar with and is applied in accordance with the manufacturer's recommendations.

2. CLEANING

Cleaning frequency should be determined by the location, pedestrian traffic volumes and surrounding environment. Chelmstone recommends experienced cleaning contractors complete routine cleaning to maximise the performance of the tactile.

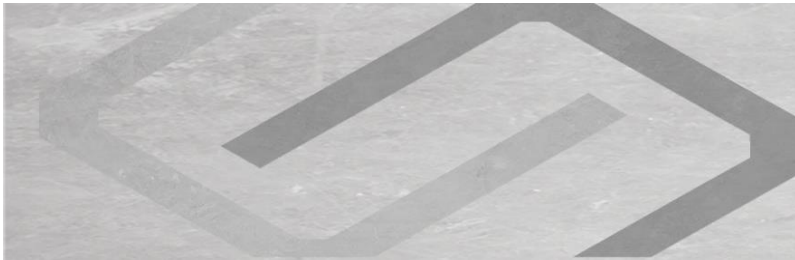
General Cleaning Method

- Routine cleaning to be carried out using low to moderate pressure water washing equipment with cleaning agent (e.g. Gerni).
- A fan spray nozzle must be used at all times to avoid concentrated jetting.
- Minimum stand-off distance: 600 mm from surface to prevent erosion, dislodgement, or surface damage.
- Water pressure must be sufficient only to remove surface dirt and debris—no aggressive high-pressure cutting jets permitted.
- Cleaning should follow the direction of drainage to avoid pooling or re-depositing debris.

Restrictions

- No rotating turbo nozzles or zero-degree jets.
- No acidic or alkaline cleaning agents unless approved for the specific tactile material.
- No mechanical scraping or metal brushes that may damage surface texture.
- Avoid directing water into grout joints or undermining bedding material.

Do not use acid. As with many products such as stamped or stencilled concrete unglazed Terracotta tiles and various other masonry products we recommend sealing. Always use a test section first before completing various cleaning method across the entire section.



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Stain	Cause	Suggested Cleaning Method
Mortar / Cutting Residue	Inadequate sponging during installation, washing during cutting	Techni-Seal, Phosphoric acid (25% solution), High-pressure Gerni (no less than 24" from the surface)
Soil	Wearing dirty boots, unwashed jointing / bedding sands, poor drainage	Light bleach and brushing, 15:1 Diluted liquid pool chlorine
Efflorescence	Salts (Calcium carbonates) from natural hydration of new masonry products	Techni-Seal Cleaner, Anti Eff from Environex (to be used according to manufacturer's instructions)
Moss & Mould	Continual damp shaded areas	Light bleach and brushing, 15:1 Diluted liquid pool chlorine
Rubber marks, Tar, Oil	Rubber boots, wheelbarrows, car tyres	Prevention first, Light bleach and brushing, 15:1 diluted liquid pool chlorine, scrubbing brush, emulsifying agent (degreaser), Gerni (no less than 24" from the surface)
Graffiti/Paint	Inadequate protection during installation	Prevention first, Generic paint stripper (test first)
Food	Spills	Light bleach and brushing, 15:1 diluted liquid pool chlorine, brushing, Selly's concrete cleaner
Red Wine	Spills	Prevention first, Light bleach and brushing, 15:1 diluted liquid pool chlorine, brushing, Selly's concrete cleaner
Rust	Outdoor furniture, nails	Techni-Seal Rust Remover, Oxalic Acid (5%)
Timber	Water spreading tannins and resins from wood	AvSyntac Sapless St

3. MAINTENANCE

For high traffic commercial areas, Chelmstone recommends the site be cleaned on a yearly basis by experienced cleaning and sealing contractors.

To ensure the product remains protected over its life and to prevent staining, Chelmstone recommends re-applying a sealer every 3 years for high traffic commercial areas as a minimum or as per the manufacturer's recommendations, whichever is earlier.

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