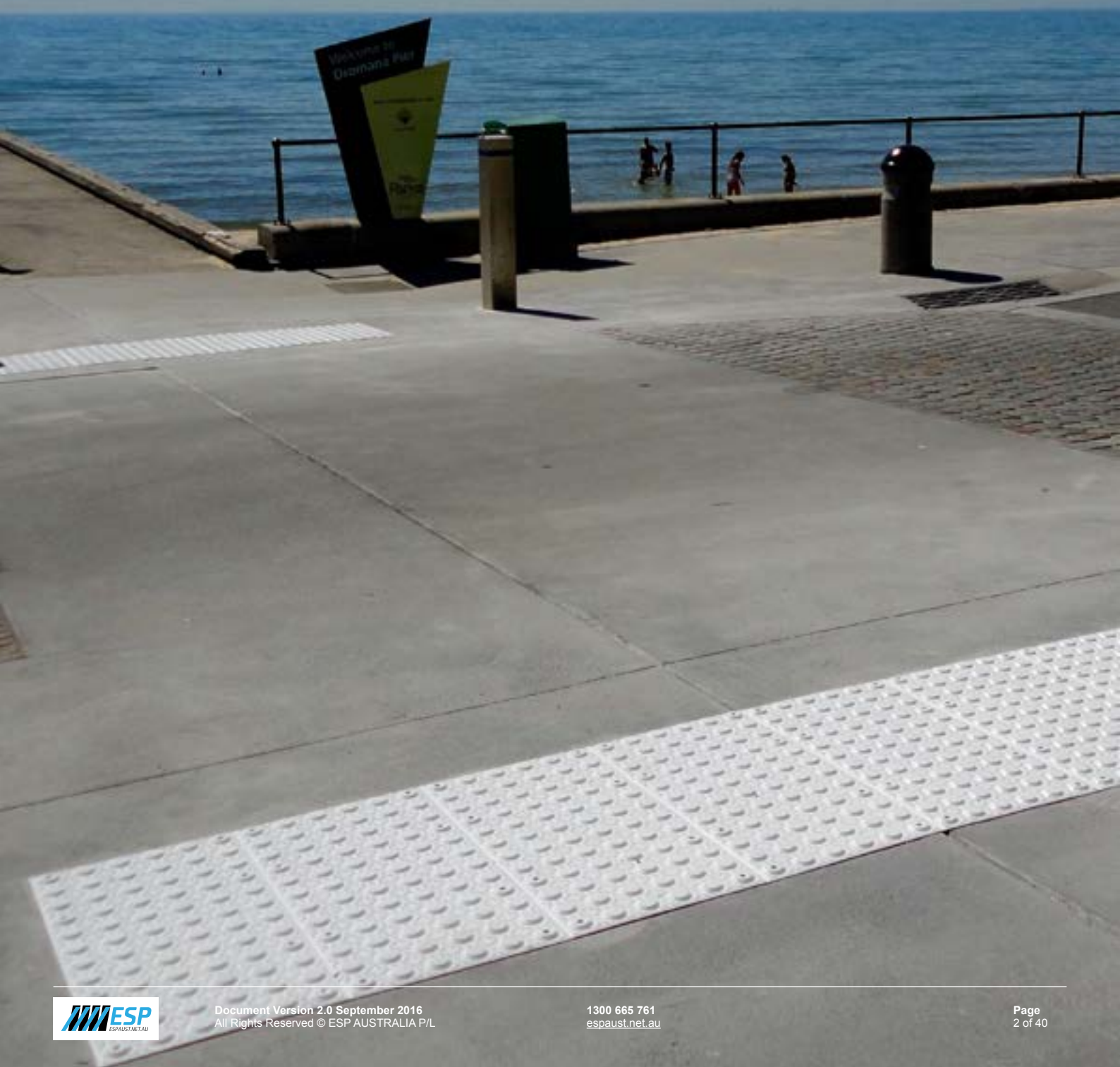


Warning & Directional Integrated TGSI Product Catalogue



*Made from durable fibre reinforced Herculite polymer, the ESP TGSI Tiles are fast to install, simple to retrofit & withstand the toughest pedestrian use. They have been independently tested for slip resistance achieving a very high rating of **R12***



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*Co-founder & CEO of ESP
Australia P/L, Richard Vernon,
pictured holding a **Cast In
Place 1200 x 600 (CIP)**
TGSI Warning Tile*

Be The Solution

*Having used
tactiles in my
construction
company,
I became
frustrated with
the absence of
quality, care
and compliance
knowledge from
tactile suppliers.
I was let down
many times
wasting a lot of
time and money.*

*As a problem-
solver, I personally
decided to solve
the problem and...*

*During the creation of the ESP surface mounted
and cast in place tactile indicator systems,
I got to know first hand just how litigious and
compliance-driven tactile ground surface
indicators (TGSIs) actually were. I learned of the
responsibilities and The Code requirements that
affect the design, application and maintenance of
TGSIs.*

I now pass my experience and expertise to you



Richard Vernon
Founder and Director
Eco Safety Products Australia Pty Ltd
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5

Facts

About Tactile Ground Surface Indicators (TGSIs)

1. Why are TGSIs mandatory on footpaths and in buildings?

The practical need for accessible built environments is evident in the fact that 20% of Australians will experience a permanent or temporary disability over their lifetime.⁽¹⁾ That's an astounding four million people who require universal access in Australia.

Australian Federal Legislation, The Disability Discrimination Act (DDA), passed into law in 1992 making it unlawful to discriminate against any person with a disability.⁽²⁾ This law paved the way for many ingenious Australian innovations in this field, including Tactile Ground Surface Indicators (TGSIs) and prepared the way for inclusion of Universal Access in many other codes and standards.

The use of TGSIs, their design and their application, is primarily founded on AS/NZS 1428.4.1. ESP Australia uses this Australian Industry Standard as the benchmark to its TGSi product design, procedures and policies.

2. What do TGSIs achieve for our footpaths?

TGSIs assist persons with a temporary, permanent, full or partial vision-impairment to negotiate a built environment.⁽³⁾

They provide guidance and/or warning of an obstruction or hazard in any location where insufficient alternative or 'Natural' Tactile cue exists, in a built environment. When combined with other environmental information, TGSIs assist people who are blind or vision-impaired with their orientation.⁽⁴⁾

3. Why must we have TGSIs in our buildings and on our streets?

The Australian Bureau of Statistics states that in 2010, approximately 600,000 Australian were blind or living with some form of vision-impairment.⁽⁴⁾ These persons who are classed as experiencing a vision impairment are mostly over the age of 65 years of age.⁽⁵⁾ According to Vision Australia, these figures are expected to be 1,200,000 by the year 2035.⁽⁶⁾

4. Who and what governs the use of TGSIs within Australia?

Australian Federal Legislation, Australian & New Zealand Standards, Australian State & Territory Codes, and self governing legal entity guidelines that may apply, affect and, or govern the design, use, application and placement of TGSIs are set out below:

1. Australian Federal Legislation (requires mandatory compliance) The Federal Disability Discrimination Act 1992 (DDA) - provides protection for everyone in Australia against discrimination based on disability
2. Access to Premises (Buildings) Standard (APS) (Mandatory for New Building work or when a permit is required for a building upgrade) - A Guideline on the Application of the Premises Standards, Version 2 February 2013
3. The National Construction Code (NCC) The Building Code. The Building Code of Australia (BCA) Section D Clause 3.8 (Mandatory Compliance)
4. Australian State & Territory Codes, and self governing regulatory entity guidelines
5. AS/NZS 1428.2009 Design for Access and Mobility Part 4.1 - Means to assist the orientation of people with vision impairment - TGSIs, including:
 - AS/NZS 1428.4.1. Amndt 1- 2010-11-26
 - AS/NZS 1428.4.2. Amndt 1 & 2 - 2014-12-10
 - AS 1428.1 Part 1 - Design for access and mobility - General requirements for access - New building work
 - AS 1428.2 Part 2:1992 - Design for access and mobility - Enhanced and additional requirements - Buildings and facilities
 - AS 1657:2013 - Fixed platforms, walkways, stairways and ladders - Design, construction and installation
 - AS 1735.5:2015 - Lifts, escalators and moving walks, Part 5: Escalators and moving walks
 - DR AS 1428.4.2:2015 - Design for access and mobility - Wayfinding (draft)
 - AS 1742.7:2016 - Manual of uniform traffic control devices - Railway crossings

5. When and where are TGSIs used in the built environment?

According to Australian & New Zealand Standard AS/NZS 1428.2009 Design for Access and Mobility Part 4.1 - Means to assist the orientation of people with vision impairment - TGSIs, TGSIs should be used at a 'minimum' in the following situations ⁽⁷⁾:

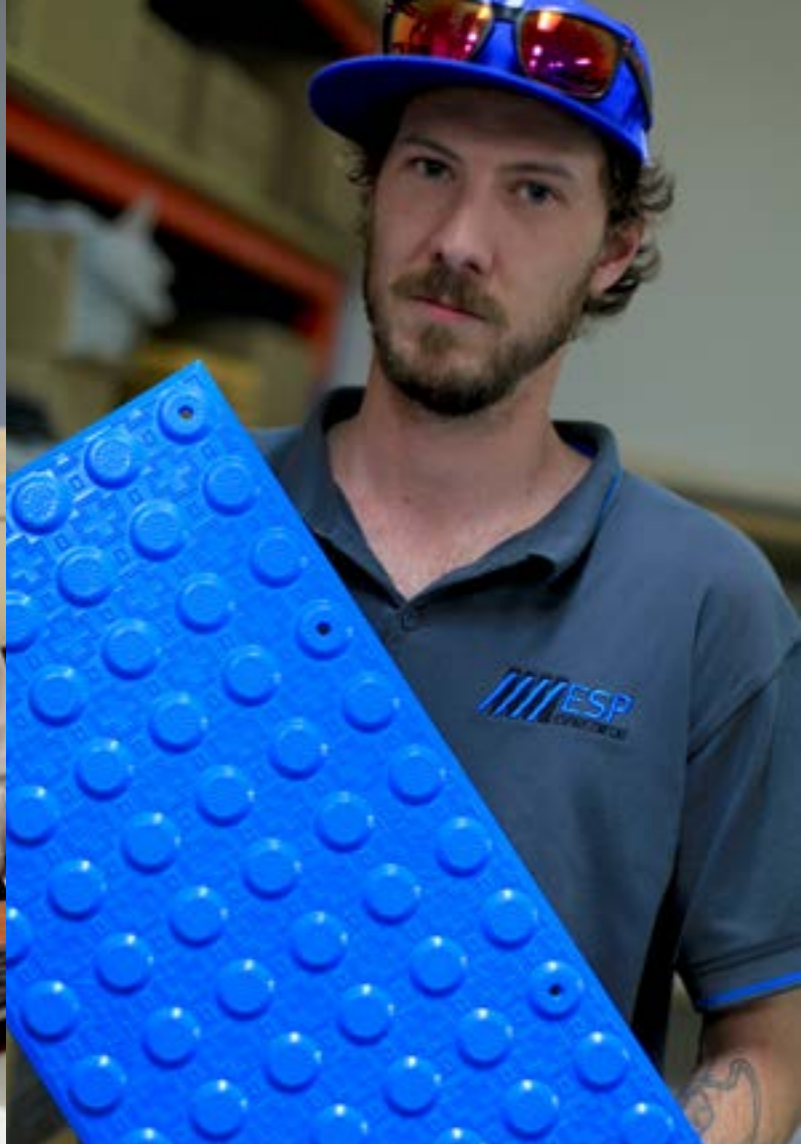
- Stairs and Stair landings
- Escalators & Travellators
- Pedestrian Ramps (not premises threshold ramps)
- Over head hazards (including potential obstructions wall protruding fixtures)
- Carriageways without kerbs - (i.e, that intersect at the same grade)
- Railway, Tramway and Light Rail Pedestrian - (Waiting platforms and level crossings)
- Waterbodies -(wharves, lakes and ponds accessible by pedestrians)

(1) ABS LIVING WITH A DISABILITY ABS 29/04/2016 4430.0.10.001 - Disability, Ageing and Carers, Australia: First Results, 2015

(2) Disability Discrimination Act 1992, Act No. 135 of 1992 Administered by: Attorney-General's Date of Assent 05 Nov 1992, <https://www.legislation.gov.au/Series/C2004A04426/> Compilations

(3, 4, 5 & 6) Source: AS/NZS 1428.4.Part 1 (2009) AMDT No.1.1 Nov 2010

(7) Please Note: This is a summary of AS/NZS 1428.4.1. 2009 Clause 2. There are various other situations and applications that are exempt and/or are called for under The Building Code of Australia, The Access to Premises Standards. Professional consultants should always be consulted with prior to the intended application of TGSIs.



We Work Together

***'Our products
are exceptional
and our team
is memorable.'***

*Richard Vernon,
Founder ESP
Australia*

Who is Eco Safety Products Australia P/L

ESP Australia is a company of trained and talented individuals who genuinely care about supplying the appropriate TGSI product for the applicable application and situation.

To do this,
we have a simple
philosophy:

Our Team at Eco Safety Products Australia P/L

Founded on real construction experience and 'know-how', Eco Safety Products Australia P/L values clear communication, employs practical business process and delivers on what it promises. Our customers tell us that, 'this is what makes ESP Australia stand out and keeps us coming back'.

We have a professional team that are actively engaged in the management, estimation, delivery and installation of TGSIs. They are all trained and experienced in their fields of expertise.

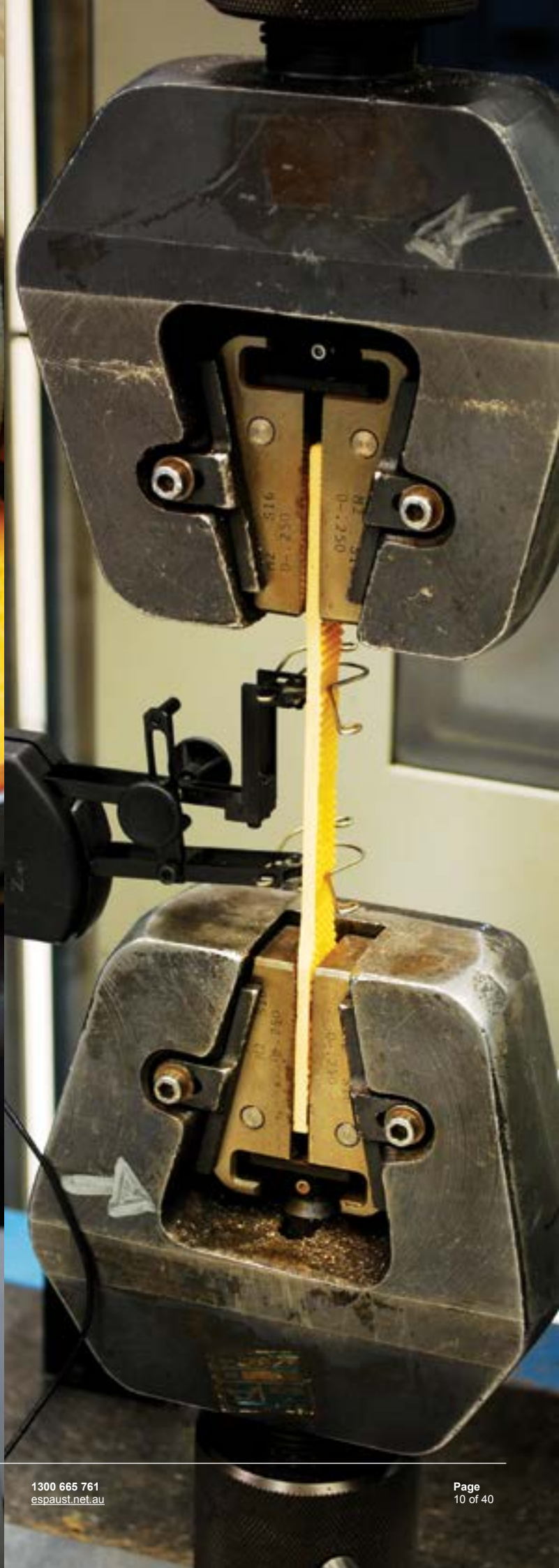
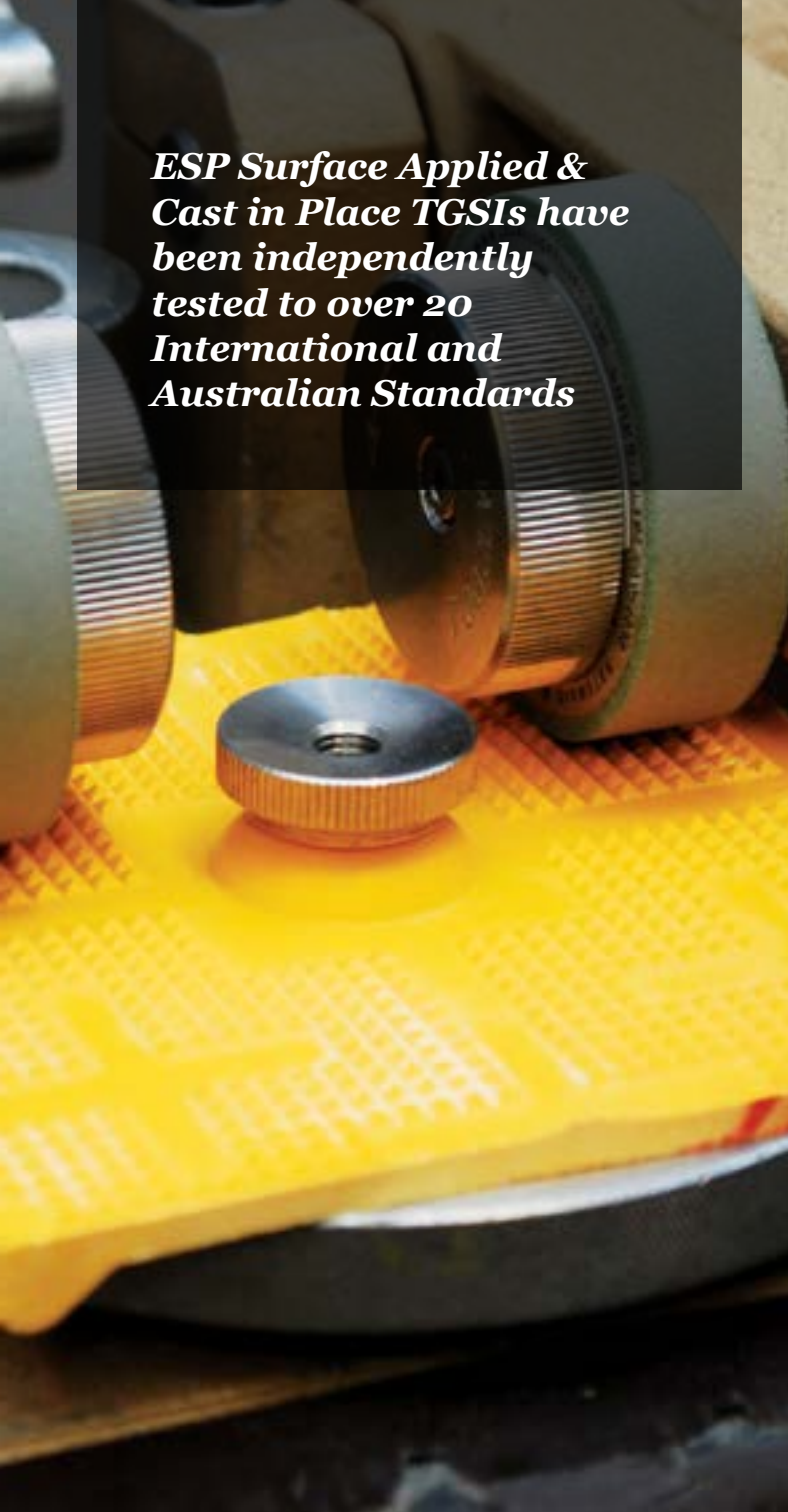
Location & Capacity

Based in Nunawading, Victoria, Australia, Eco Safety Products Australia P/L services both local and national projects.

Our services include.

- Design and Production of TGSIs
- Engineer TGSI Drawings & Specifications
- Special TGSI Products for Municipalities
- TGSI Application and Installation Advice
- TGSI Estimating and Project Quantity Surveying
- Direct TGSI Sales & Distribution
- Coordination of TGSI Installation
- TGSI Product Induction & Training
- Project TGSI Luminance Testing

*ESP Surface Applied &
Cast in Place TGSIs have
been independently
tested to over 20
International and
Australian Standards*



**The industry
product standard
redefined;
ESP Australia's
TGSi product
Testing.**

It's never about the product. It's always about what the product gives you. With ESP Australia's TGSIs, we promise that you can have:

No more Peeling, Lifting or Cracking TGSIs

We have worked tirelessly to design and create the best performing TGSIs in the world.

We have achieved our goal through subjecting our designs and materials to over 20 International and Australian Standard independent tests, stayed committed to research and development and listened to the individual requirements of our clients.

We have behaved like this to give you the peace of mind that when you specify and install ESP Australia TGSIs, you will be confident, informed and certain of your selection.

Here's a list of some of the tests and analysis we have conducted in good faith.

Product Material Testing (ASTM)

All ESP Surface Applied & Cast In Place TGSi product materials have been independently tested for their performance and compliance as follows:

- ASTM D 638-08 - Test: Tensile Properties
- ASTM D790-07-A - Test: Flexural Properties of Plastic
- ASTM D 695-08 - Test: Compressive Strength
- ASTM D1037-07.3.1 - Test: Accelerated Ageing Cycle (UV): (freeze & thaw chamber)
- ASTM D 696-03 - Test: Linear Thermal Expansion
- ASTM C 1583-04 - Test: Tensile Bond Test (Bond & Seal of Polymer Composite) to Concrete - Pull-off Method • AASHTO C HS20-44 - Test: Load Test
- ASTM D 543-06 - Test: Standard Practices for Evaluating the Resistance of Plastic Parts to Chemical Agents.
- ASTM D B117-07 - Test: Salt Spray Test (300hrs)
- ASTM E 84-08 - Test: Flame Spread Index - Surface Burning Characteristics of Building Materials.
- ASTM D 570-98 - Test: Water Absorption
- ASTM C 501-84 - Test: Relative Resistance To Wear

Slip Resistance Testing:

- AS/NZS4586:2004 Appendix A - WET Pendulum (Four S Slider) test - Slip Resistance classification of new pedestrian surface materials
- AS/NZS4586:2004 Appendix D - OIL-WET Ramp test - Slip Resistance classification of new pedestrian surface materials.
- ASTM C 1028 - 07 - USA Slip Resistance Testing

Luminance Testing:

Australian Standard 1428.1 – 2009 Design for access and mobility - General requirements for access - New building work – Appendix B3 & B5

Design Compliance and TGSi Product Approval

- AS 1428.4.1:2009 Clause 2.3.2 Design Requirements
- VIC Roads Approved
- WA Main Roads Approved
- QLD Roads Approved
- ACT Government Territory and Municipal Services Approved

Verification & Transparency

- Detailed Technical Product Data of each ESP Australia Tactile Ground Surface Indicator product is also freely available by written request to Eco Safety Products Australia P/L.

Surface Applied Integrated TGSIs Warning & Directional





ESP Surface Applied TGSI tiles can be mechanically and chemically affixed to ANY stable finished surface.

Fast, Efficient, Cost-Effective. A New Standard In Retrofittable Integrated TGSIs

More than dots and bars on the ground

The ESP Surface Applied (SA) TGSi tiles are a series of compliance products that will change your experience with Tactile Ground Surface Indicators (TGSIs). Made from the most durable, fibre reinforced polymers, the ESP SA TGSIs tiles are fast to install, simple to retrofit and take the toughest pedestrian use.

Independently verified to have an R12 slip resistance rating in all weather conditions, the ESP SA TGSi tiles are a new benchmark in quality and application.

Each ESP SA TGSi tile is mechanically and chemically affixed to ANY stable finished surface. Yes, you get a great price and a great job too. Thank goodness, no more broken, peeling or missing tactiles. That's ESP Australia's promise to you.



This is the new product standard in integrated TGSIs

The ESP Warning and Directional Integrated Surface Applied (SA) TGSi tiles, are both chemically and mechanically applied to any stable finished surface or finished substrate. This applies to internal and external, wet and dry, hot and freezing applications.

Nylon composite, corrosion resistant anchors and 304 stainless steel fasteners, provide additional mechanical connection between the ESP SA TGSi tile and the finished substrate or surface.

The ESP SA TGSi tile also eradicates any likelihood of its perimeter lifting over its lifespan with the addition of high quality adhesive polymer to the bottom of the base surface. This unique product feature is designed to meet compliance with AS/NZS 1428.4.1:2009 Amdt No.s 1 & 2 - Clause 3.2.1 (a) & (e).

What makes the ESP SA Tile so tough?

The Herculite material is made of the highest quality materials with additional UV stabilisers for the harsh Australian Sun.

What do I need to meet compliance to ensure that the SA TGSi tiles are effective?

The intended use of this product must comply with AS/NZS 1428.4.1:2009 Amdt No.s 1 & 2 - Section A 2.1 (a), (b), (c), (d), (e), (f) and, 2.2 (a), (b) (i) and installed as to the tested results, as independently verified, in accordance with Appendix E of the above standard.

What about Slip Resistance?

Each ESP SA TGSi tile has a Diamond Grip Pyramid Micro texture design, on the truncated horizontal dome surface and the horizontal base surface. The Diamond Grip Pyramid Micro texture between the tactile truncated domes is designed to reduce the possibility of a stiletto heel strike, walking stick, crutches or bike tyres slipping.

All Weather Slip Resistance Rating

Independently certified to be - R 12.

Surface Applied Integrated TGSIs

Warning TGSIs

Product Summary

ESP Product Code

ESP-SA-INT-WAR-TGSI-300x300

ESP-SA-INT-WAR-TGSI-600x300

Group

Tactile Ground Surface Indicators (TGSIs)

Type

WARNING

(Truncated Domes)

Configuration

Integrated Type - (TGSIs that are in a defined pattern and which are of the same luminance and material on the product's base surface)

Available Product Colours

Black, Blue, Yellow, Grey, White - (Custom colours are available on written contract)

Surface Application

Surface Applied (SA)

Physical Environments

Internal & External

Hot & Freezing

Wet & Dry

Finished Surface/Substrate Application

Ceramic & Vitrified Tiles, Escalator & Travellator Motor Covers, Metal Checker Plate & Access Covers, Timber Floor Boards, Timber & WPC Decking, Timber Floating Floor & Engineered Floor, Concrete, Masonry, Exposed Aggregate, Terrazzo, Concrete Pavers, Brick Pavers, Asphalt, Bluestone, Granite, Limestone, Sandstone, Engineered Stone, Artificial Grass & External Matting, Vinyl, Epoxy/Self, Levelling Compounds, Carpet (Thin) & Carpet Tiles, Carpet (Thick) - Loop Pile (with Underlay)

Installation Methods

Method 1 - Clean & Glue

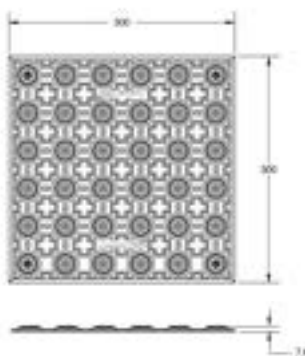
Method 2 - Drill, Clean, Glue & Fixing

Method 3 - Drill, Clean, Glue, Plug and Hammer

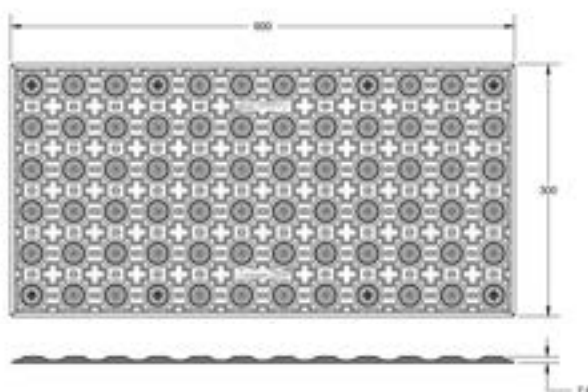
Method 4 - Recess, Drill, Clean, Glue & Fixing

Technical Drawings

300x300



600x300



Technical Drawing Notes

Detailed and specific technical, engineering and compliance product information about the ESP Surface Applied (SA) TGSI, is available from Eco Safety Products Australia on request. Please quote the applicable product code for each technical product data document as required.

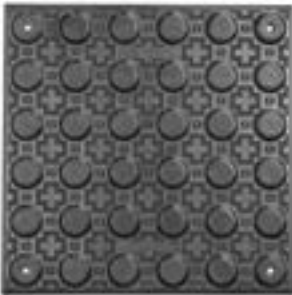
Warning TGSIs

Product Colour
Black

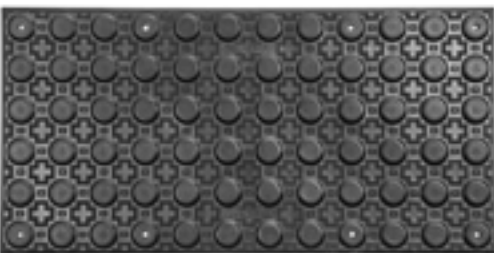
Luminance Contrast Rating
Dry= 3.60
Wet= N/A

Slip Resistance Classifications
Wet pendulum S Slider = 55 / [V Low]
Oil-wet inclining platform slip test = 27.5 / R12 [Low]

ESP Product Code
ESP-SA-INT-WAR-TGSI-300x300-BLACK



ESP Product Code
ESP-SA-INT-WAR-TGSI-600x300-BLACK



Product Colour
Blue

Luminance Contrast Rating
Dry= 18.93
Wet= N/A

Slip Resistance Classifications
Wet pendulum S Slider = 55 / [V Low]
Oil-wet inclining platform slip test = 27.5 / R12 [Low]

ESP Product Code
N/A

ESP Product Code
ESP-SA-INT-WAR-TGSI-600x300-BLUE



Warning TGSIs

Product Colour

Grey

Luminance Contrast Rating

Dry= 10.35

Wet= N/A

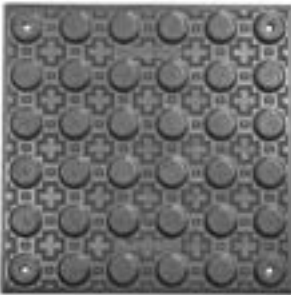
Slip Resistance Classifications

Wet pendulum S Slider = 55 / [V Low]

Oil-wet inclining platform slip test = 27.5 / R12 [Low]

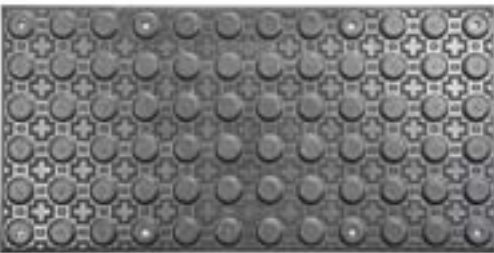
ESP Product Code

ESP-SA-INT-WAR-TGSI-300x300-GREY



ESP Product Code

ESP-SA-INT-WAR-TGSI-600x300-GREY



Product Colour

Yellow

Luminance Contrast Rating

Dry= 47.83

Wet= N/A

Slip Resistance Classifications

Wet pendulum S Slider = 55 / [V Low]

Oil-wet inclining platform slip test = 27.5 / R12 [Low]

ESP Product Code

ESP-SA-INT-WAR-TGSI-300x300-YELLOW



ESP Product Code

ESP-SA-INT-WAR-TGSI-600x300-YELLOW



Product Colour

White

Luminance Contrast Rating

Dry= 69.32

Wet= N/A

Slip Resistance Classifications

Wet pendulum S Slider = 55 / [V Low]

Oil-wet inclining platform slip test = 27.5 / R12 [Low]

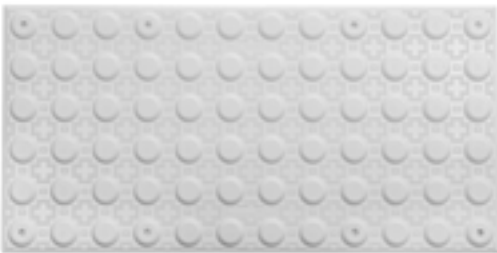
ESP Product Code

ESP-SA-INT-WAR-TGSI-300x300-WHITE



ESP Product Code

ESP-SA-INT-WAR-TGSI-600x300-WHITE



***Access lids, service covers, Telstra and communication pits.
ESP SA TGSI Tiles
affix to ALL stable surfaces***

Surface Applied Integrated TGSIs

Directional TGSIs

Product Summary

ESP Product Code

ESP-SA-INT-DIR-TGSI-600x300

Group

Tactile Ground Surface Indicators (TGSIs)

Type

DIRECTIONAL
(Truncated Bars)

Configuration

Integrated Type - (TGSIs that are in a defined pattern and which are of the same luminance and material on the product's base surface)

Available Product Colours

Black, Blue, Yellow, Grey, White - (Custom colours are available on written contract)

Surface Application

Surface Applied (SA)

Physical Environments

Internal & External
Hot & Freezing
Wet & Dry

Finished Surface/Substrate Application

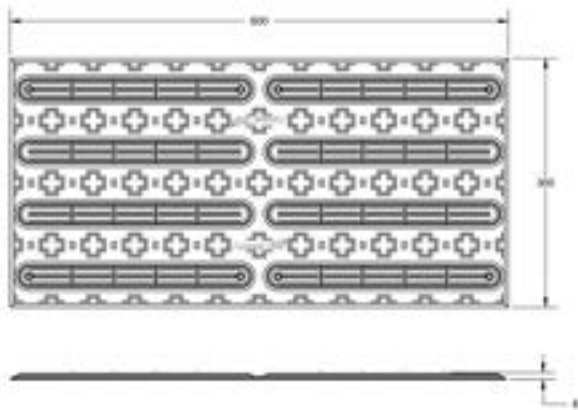
Ceramic & Vitrified Tiles, Escalator & Travellator Motor Covers, Metal Checker Plate & Access Covers, Timber Floor Boards, Timber & WPC Decking, Timber Floating Floor & Engineered Floor, Concrete, Masonry, Exposed Aggregate, Terrazzo, Concrete Pavers, Brick Pavers, Asphalt, Bluestone, Granite, Limestone, Sandstone. Engineered Stone, Artificial Grass & External Matting, Vinyl, Epoxy/Self, Levelling Compounds, Carpet (Thin) & Carpet Tiles, Carpet (Thick) - Loop Pile (with Underlay)

Installation Methods

Method 1 - Clean & Glue
Method 2 - Drill, Clean, Glue & Fixing
Method 3 - Drill, Clean, Glue, Plug and Hammer
Method 4 - Recess, Drill, Clean, Glue & Fixing

Technical Drawing

600x300



Technical Drawing Notes

Detailed and specific technical, engineering and compliance product information about the ESP Surface Applied (SA) TGSI, is available from Eco Safety Products Australia on request. Please quote the applicable product code for each technical product data document as required.

Surface Applied Integrated TGSIs

Directional TGSIs

Product Colour

Black

Luminance Contrast Rating

Dry= 3.60

Wet= N/A

Slip Resistance Classifications

Wet pendulum S Slider = 64 / [V High]

Oil-wet inclining platform slip test = 30.6 / R12 [Med]

ESP Product Code

ESP-SA-INT-DIR-TGSI-600x300-BLACK



Product Colour

Grey

Luminance Contrast Rating

Dry= 10.35

Wet= N/A

Slip Resistance Classifications

Wet pendulum S Slider = 64 / [V High]

Oil-wet inclining platform slip test = 30.6 / R12 [Med]

ESP Product Code

ESP-SA-INT-DIR-TGSI-600x300-GREY



Product Colour

Yellow

Luminance Contrast Rating

Dry= 47.83

Wet= N/A

Slip Resistance Classifications

Wet pendulum S Slider = 64 / [V High]

Oil-wet inclining platform slip test = 30.6 / R12 [Med]

ESP Product Code

ESP-SA-INT-DIR-TGSI-600x300-YELLOW



Product Colour

Blue

Luminance Contrast Rating

Dry= 18.93

Wet= N/A

Slip Resistance Classifications

Wet pendulum S Slider = 64 / [V High]

Oil-wet inclining platform slip test = 30.6 / R12 [Med]

ESP Product Code

ESP-SA-INT-DIR-TGSI-600x300-BLUE



Product Colour

White

Luminance Contrast Rating

Dry= 69.32

Wet= N/A

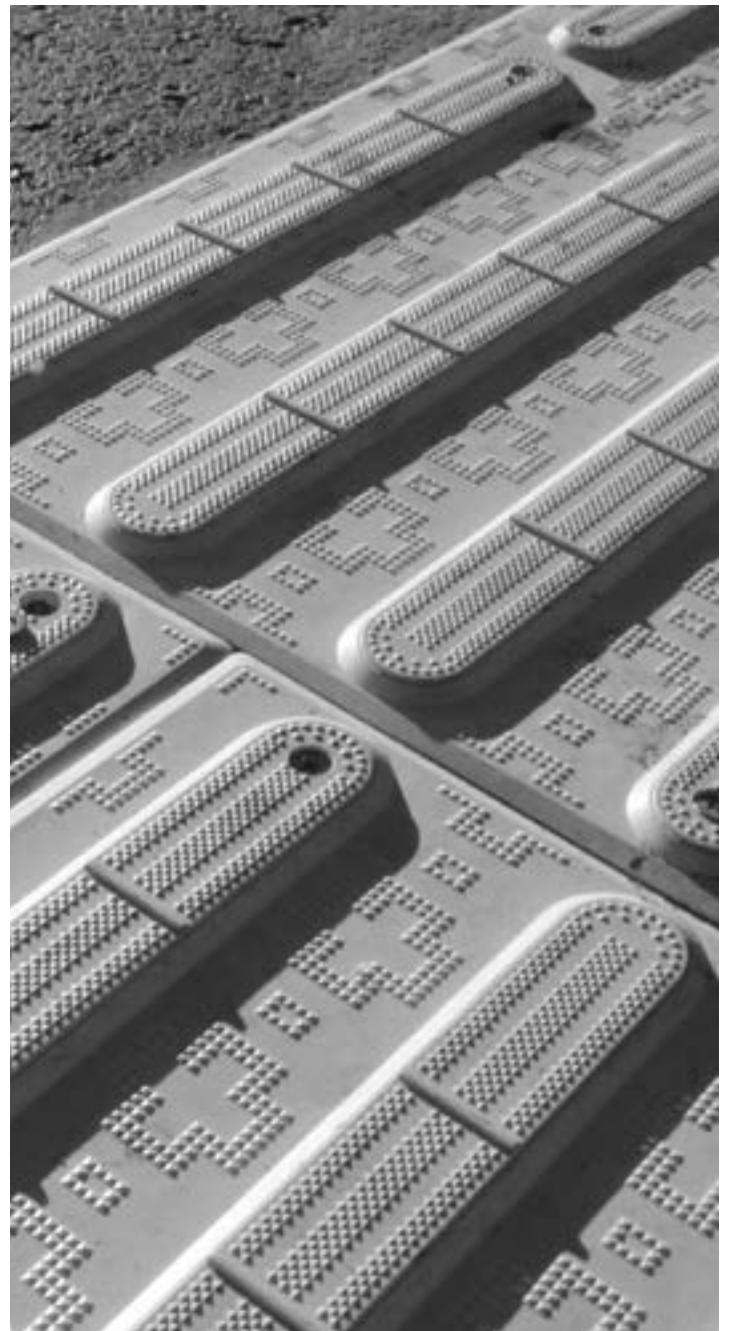
Slip Resistance Classifications

Wet pendulum S Slider = 64 / [V High]

Oil-wet inclining platform slip test = 30.6 / R12 [Med]

ESP Product Code

ESP-SA-INT-DIR-TGSI-600x300-WHITE



*ESP SA TGSI Tiles
can be Anchored
to Any Stable
Finished Surface.
No Lifting.
No Peeling.
No Cracking.*



Installation

Surface Applied Integrated TGSIs

Warning & Directional

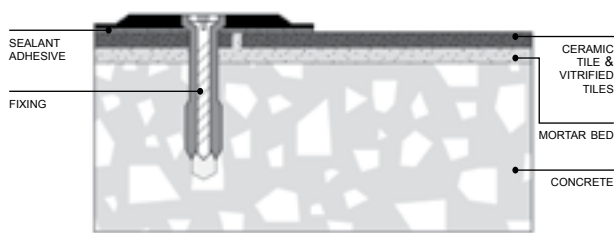
Installation Method - 1

Clean & Glue

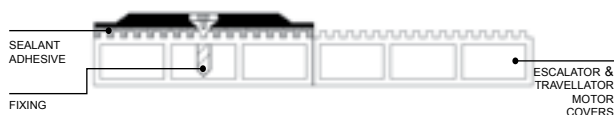
Tools & Equipment Required

Cordless drill, drill bits, Tap to create thread, Isopropyl alcohol, clean rags & rubber mallet. Fixings are supplied

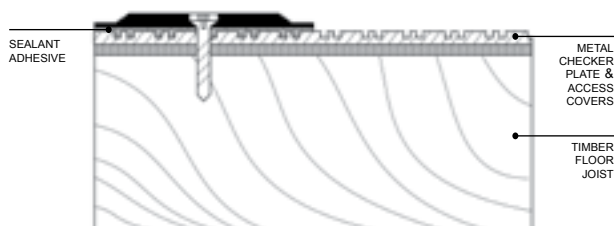
1. Ceramic & Vitrified Tiles



2. Escalator & Travellator Motor Covers



3. Metal Checker Plate & Access Covers



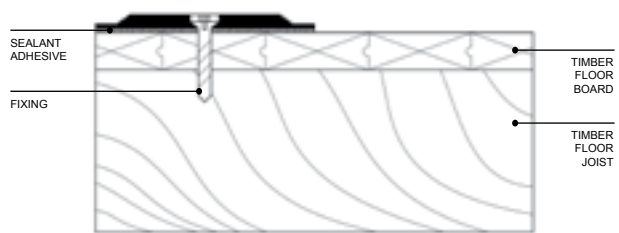
Installation Method - 2

Drill, Clean, Glue & Fixing

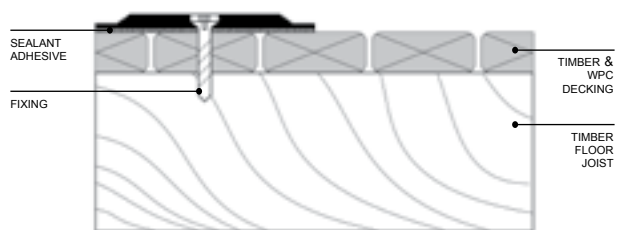
Tools & Equipment Required

Cordless drill, drill bits, Isopropyl alcohol, clean rags & rubber mallet. Fixings are supplied

4. Timber Floor Boards



5. Timber & WPC Decking



6. Timber Floating Floor & Engineered Floor



Installation

Surface Applied Integrated TGSIs

Warning & Directional

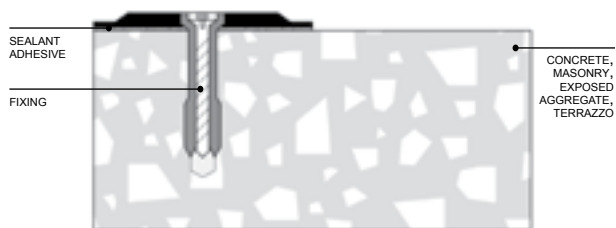
Installation Method - 3

Drill, Clean, Glue, Plug & Hammer

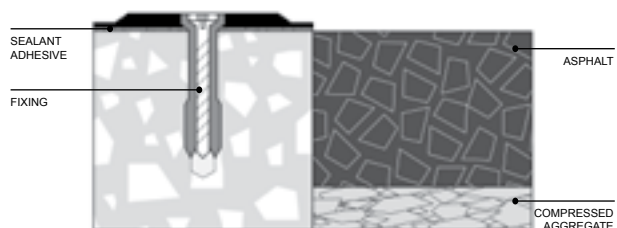
Tools & Equipment Required

Cordless drill, drill bits, Isopropyl alcohol, clean rags, hammer & rubber mallet. Fixings & plugs are supplied

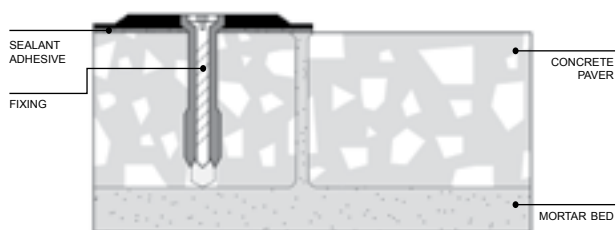
7. Concrete, Masonry, Exposed Aggregate, Terrazzo



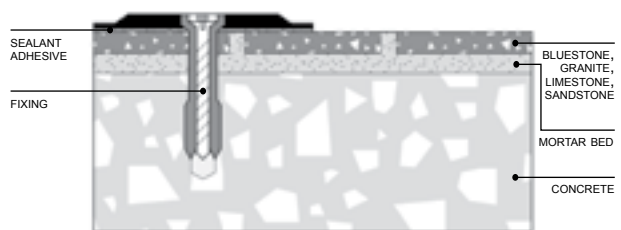
10. Asphalt



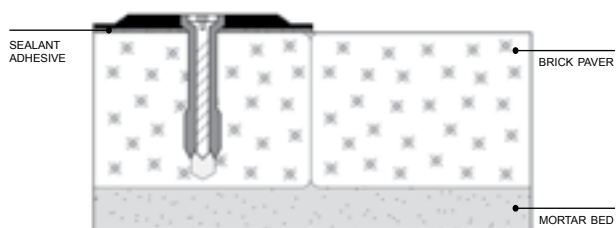
8. Concrete Pavers



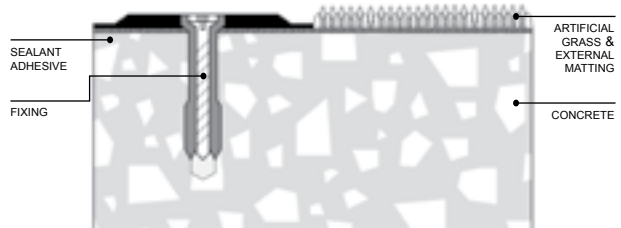
11. Bluestone, Granite, Limestone & Sandstone



9. Brick Pavers



12. Artificial Grass & External Matting



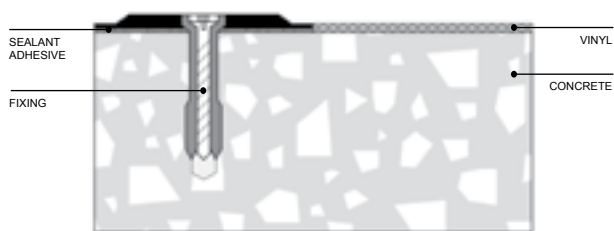
Installation Method - 3

Drill, Clean, Glue, Plug & Hammer

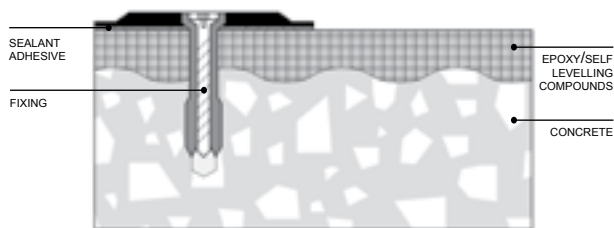
Tools & Equipment Required

Cordless drill, drill bits, Isopropyl alcohol, clean rags, hammer & rubber mallet. Fixings & plugs are supplied

13. Vinyl



14. Epoxy/Self-levelling Compounds



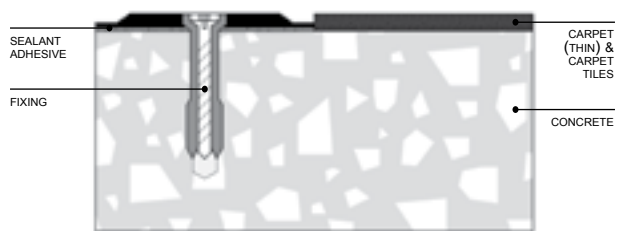
Installation Method - 4

Recess, Drill, Clean, Glue & Fixing

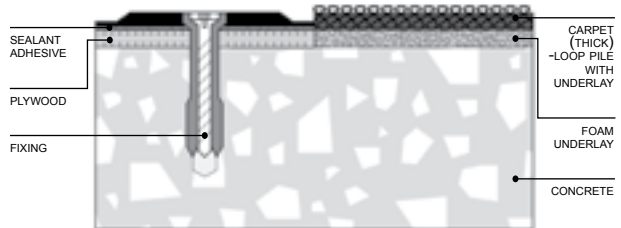
Tools & Equipment Required

Cordless drill, drill bits, Isopropyl alcohol, clean rags, hammer & rubber mallet. Fixings & plugs are supplied

15. Carpet (Thin) & Carpet Tiles



16. Carpet (Thick) - Loop Pile (With Underlay)



Cast In Place Integrated TGSIs Warning & Directional





Tougher Than Trucks. Stronger Than Concrete.

ESP Cast In Place Integrated TGSIs

A picture speaks a thousand words

So what happens when large, heavy trucks cut corners and repeatedly drive over the nature strip? What about when they drive over the pedestrian kerb ramps with TGSIs installed on them? Who comes off better, the ESP TGSIs or the concrete kerb ramp?

As you can see from the images below, where the trucks have driven over the pedestrian crossing, the concrete around the ESP CIP TGSIs tiles has cracked. The ESP CIP TGSIs tiles have not. They are as good as the day they were installed and remain fit-for-purpose.

With 23 international engineering tests and over 20 years of application experience throughout the world, ESP CIP TGSIs tiles are the most robust, durable and functional TGSIs for pedestrian streetscapes.



A great solution to a growing litigious problem

The ESP Warning and Directional Integrated Cast in Place (CIP) TGSIs Tile is applied during the curing of wet concrete.

When the concrete becomes cured, the ESP CIP TGSIs tile, is subsequently mechanically fixed to the finished substrate.

Corrosion resistant, nylon composite hexagonal anchors and counter sunk tamper proof 304 stainless steel fasteners, provide additional mechanical connection between the ESP CIP TGSIs tile and the substrate.

The ESP CIP TGSIs tile also eradicates any likelihood of its perimeter lifting over its lifespan. This unique product feature is designed to meet compliance with AS/NZS 1428.4.1:2009 Amdt No.s 1 & 2 - Clause 3.2.1 (a) & (e).

What makes the ESP CIP Tile so tough?

The Herculite material is made of the highest quality materials with additional UV stabilisers for the harsh Australian Sun.

What do I need to meet compliance to ensure that the CIP TGSIs tiles are effective?

The intended use of this product must meet compliance with AS/NZS 1428.4.1:2009 Amdt No.s 1 & 2 - Section A 2.1 (a), (b), (c), (d), (e), (f) and, 2.2 (a), (b) (i) and installed as to the tested results, as independently verified, in accordance with Appendix E of the above standard.

What about Slip Resistance?

Each ESP CIP TGSIs tile has a Diamond Grip Pyramid Micro texture design, on the truncated horizontal dome surface and the horizontal base surface. The Diamond Grip Pyramid Micro texture between the tactile truncated domes is designed to reduce the possibility of a stiletto heel strike, walking stick, crutches or bike tyres slipping.

All Weather Slip Resistance Rating

Independently certified to be - R 12.

Cast In Place Integrated TGSIs

Warning

Product Summary

ESP Product Code

ESP-CIP-INT-WAR-TGSI-300x300
ESP-CIP-INT-WAR-TGSI-600x300
ESP-CIP-INT-WAR-TGSI-1200x600

Group

Tactile Ground Surface Indicators (TGSIs)

Type

WARNING
(Truncated Domes)

Configuration

Integrated Type - (TGSIs that are in a defined pattern and which are of the same luminance and material on the product's base surface)

Available Product Colours

Black, Blue, Yellow, Grey, White - (Custom colours are available on written contract)

Surface Application

Cast In Place (CIP)

Physical Environments

Internal & External
Hot & Freezing
Wet & Dry

Finished Surface/Substrate Application

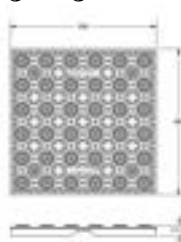
Ceramic & Vitrified Tiles, Timber & WPC Decking, Concrete, Masonry, Exposed Aggregate, Concrete Pavers, Brick Pavers, Asphalt, Bluestone, Granite, Limestone, Sandstone, Engineered Stone, Vinyl, Carpet (Thick) - Loop Pile (with Underlay)

Installation Methods

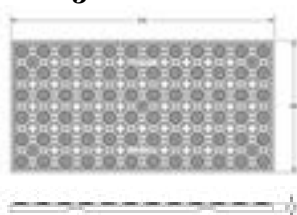
- Method 5 - Cast In Place -
(during the curing of wet concrete)
Method 6 - Boxed, Cast In Place -
(during the curing of wet concrete)
Method 7 - Drill, Clean, Plug, Pack, Glue & Fixing
Method 8 - Set-Down, Drill, Clean, Plug, Pack, Glue & Fixing
Method 9 - Recess, Board, Drill, Clean, Plug, Pack, Glue & Fixing

Technical Drawings

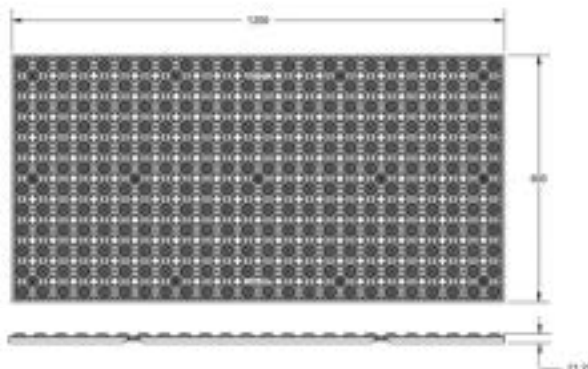
300x300



600x300



1200x600



Technical Drawing Notes

Detailed and specific technical, engineering and compliance product information about the ESP Cast In Place (CIP) TGSI, is available from Eco Safety Products Australia on request. Please quote the applicable product code for each technical product data document as required.

Cast In Place Integrated TGSI's

Warning

Product Colour

Black

Luminance Contrast Rating

Dry= 3.60

Wet= N/A

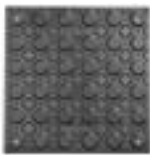
Slip Resistance Classifications

Wet pendulum S Slider = 55 / [V Low]

Oil-wet inclining platform slip test = 27.5 / R12 [Low]

ESP Product Code

ESP-SA-INT-WAR-TGSI-300x300-BLACK



Product Colour

Yellow

Luminance Contrast Rating

Dry= 47.83

Wet= N/A

Slip Resistance Classifications

Wet pendulum S Slider = 55 / [V Low]

Oil-wet inclining platform slip test = 27.5 / R12 [Low]

ESP Product Code

ESP-SA-INT-WAR-TGSI-300x300-YELLOW



ESP Product Code

ESP-SA-INT-WAR-TGSI-600x300-BLACK



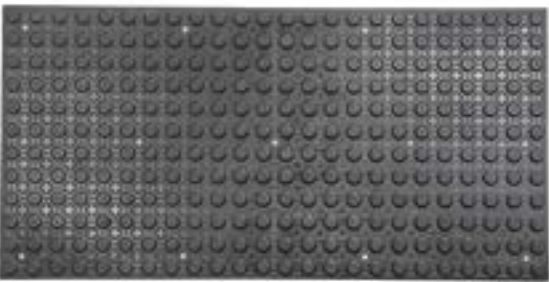
ESP Product Code

ESP-SA-INT-WAR-TGSI-600x300-YELLOW



ESP Product Code

ESP-SA-INT-WAR-TGSI-1200x600-BLACK



ESP Product Code

ESP-SA-INT-WAR-TGSI-1200x600-YELLOW



Cast In Place Integrated TGSI's

Warning

Product Colour

Grey

Luminance Contrast Rating

Dry= 10.32

Wet= N/A

Slip Resistance Classifications

Wet pendulum S Slider = 55 / [V Low]

Oil-wet inclining platform slip test = 27.5 / R12 [Low]

ESP Product Code

ESP-SA-INT-WAR-TGSI-300x300-GREY



ESP Product Code

ESP-SA-INT-WAR-TGSI-600x300-GREY



Product Colour

White

Luminance Contrast Rating

Dry= 69.32

Wet= N/A

Slip Resistance Classifications

Wet pendulum S Slider = 55 / [V Low]

Oil-wet inclining platform slip test = 27.5 / R12 [Low]

ESP Product Code

ESP-SA-INT-WAR-TGSI-300x300-WHITE



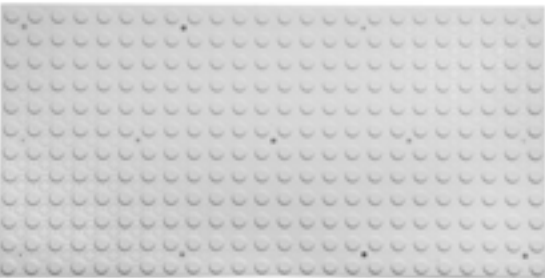
ESP Product Code

ESP-SA-INT-WAR-TGSI-600x300-WHITE



ESP Product Code

ESP-SA-INT-WAR-TGSI-1200x600-WHITE



Cast In Place Integrated TGSIs

Directional

Product Summary

ESP Product Code

ESP-CIP-INT-DIR-TGSI-600x300

Group

Tactile Ground Surface Indicators (TGSIs)

Type

DIRECTIONAL
(Truncated Bars)

Configuration

Integrated Type - (TGSIs that are in a defined pattern and which are of the same luminance and material on the product's base surface)

Available Product Colours

Black, Grey, Yellow, White (Custom colours are available on written contract)

Surface Application

Cast In Place (CIP)

Physical Environments

Internal & External
Hot & Freezing
Wet & Dry

Finished Surface/Substrate Application

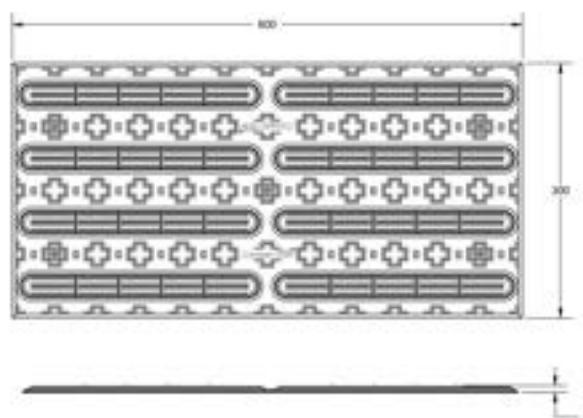
Ceramic & Vitrified Tiles,, Timber & WPC Decking, Concrete, Masonry, Exposed Aggregate, Concrete Pavers, Brick Pavers, Asphalt, Bluestone, Granite, Limestone, Sandstone, Engineered Stone, Vinyl, Carpet (Thick) - Loop Pile (with Underlay)

Installation Methods

- Method 5 - Cast In Place
(during the curing of wet concrete)
Method 6 - Boxed, Cast In Place -
(during the curing of wet concrete)
Method 7 - Drill, Clean, Plug, Pack, Glue & Fixing
Method 8 - Set-Down, Drill, Clean, Plug, Pack,
Glue & Fixing
Method 9 - Recess, Board, Drill, Clean, Plug,
Pack, Glue & Fixing

Technical Drawing

600x300



Technical Drawing Notes

Detailed and specific technical, engineering and compliance product information about the ESP Cast In Place (CIP) TGSI, is available from Eco Safety Products Australia on request. Please quote the applicable product code for each technical product data document as required.

Cast In Place Integrated TGSIs

Directional

Product Colour

Black

Luminance Contrast Rating

Dry= 3.60

Wet= N/A

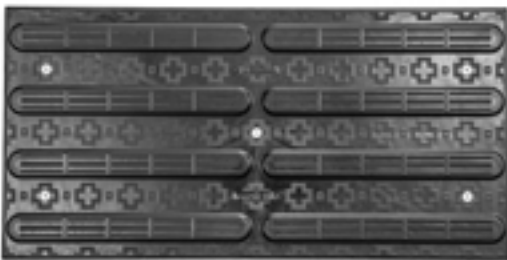
Slip Resistance Classifications

Wet pendulum S Slider = 64 / [V High]

Oil-wet inclining platform slip test = 30.6 / R12 [Med]

ESP Product Code

ESP-CIP-INT-DIR-TGSI-600x300-BLACK



Product Colour

Yellow

Luminance Contrast Rating

Dry= 47.83

Wet= N/A

Slip Resistance Classifications

Wet pendulum S Slider = 64 / [V High]

Oil-wet inclining platform slip test = 30.6 / R12 [Med]

ESP Product Code

ESP-CIP-INT-DIR-TGSI-600x300-YELLOW



Product Colour

Grey

Luminance Contrast Rating

Dry= 10.35

Wet= N/A

Slip Resistance Classifications

Wet pendulum S Slider = 64 / [V High]

Oil-wet inclining platform slip test = 30.6 / R12 [Med]

ESP Product Code

ESP-CIP-INT-DIR-TGSI-600x300-GREY



Product Colour

White

Luminance Contrast Rating

Dry= 69.32

Wet= N/A

Slip Resistance Classifications

Wet pendulum S Slider = 64 / [V High]

Oil-wet inclining platform slip test = 30.6 / R12 [Med]

ESP Product Code

ESP-CIP-INT-DIR-TGSI-600x300-WHITE





***Repair & Renew
your Streetscape.
Replace your Broken and
Missing Tactiles with
ESP CIP TGSI Tiles***

Cast In Place During the Curing of Wet Concrete, ESP CIP TGSIs are also replaceable.

Product Summary

Material

Fibre reinforced Herculite polymer

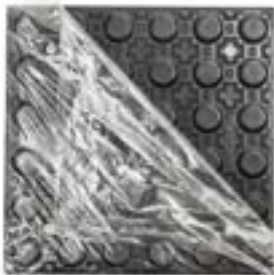
Suitability for Physical Environments

External or internal, hot or freezing conditions.

Intended Use

The intended use of this product must meet compliance with AS/NZS 1428.4.1:2009 Amdt No.s 1 & 2 - Section A 2.1 (a), (b), (c), (d), (e), (f) and, 2.2 (a), (b) (i) and installed as to the tested results, as independently verified, in accordance with Appendix E of the above standard.

Removable Film - to Protect the TGSI during the Cast In Place Process with wet concrete.



Cross section of CIP TGSI - Set firm in concrete



Typical re-installation sequence

Step 1 - Remove Non-Compliant TGSIs



Step 2 - Replace ESP CIP TGSI Tile



Step 3 - Fix with tamper proof fixings



Installation

Cast In Place

Integrated TGSIs

Warning & Directional

Installation Method - 5

Cast In Place - (during the curing of wet concrete)

Tools & Equipment Required

Set down TGSi frame, rubber mallet, tape measure.
Fixings are supplied

17. Concrete, Masonry, Exposed Aggregate



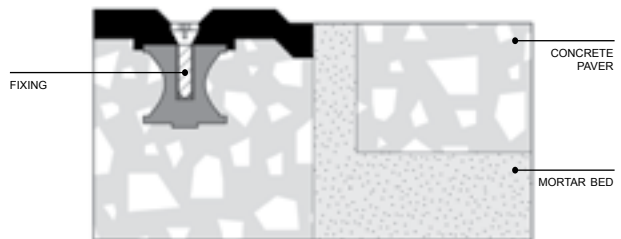
Installation Method - 6

Boxed, Cast In Place - (during the curing of wet concrete)

Tools & Equipment Required

Set down TGSi frame, rubber mallet, tape measure & concrete boxing. Fixings are supplied

18. Concrete Pavers



19. Brick Pavers



20. Asphalt



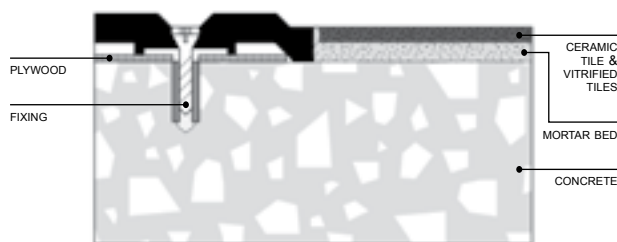
Installation Method - 7

Drill, Clean, Plug, Pack, Glue & Fixing

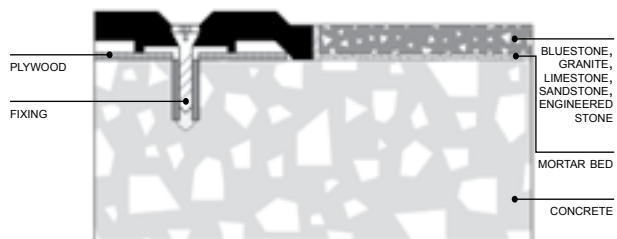
Tools & Equipment Required

Set down TGSI frame, Plywood, tape measure & concrete boxing. Cordless drill, drill bits, Isopropyl alcohol, clean rags, hammer & rubber mallet. Fixings & plugs are supplied

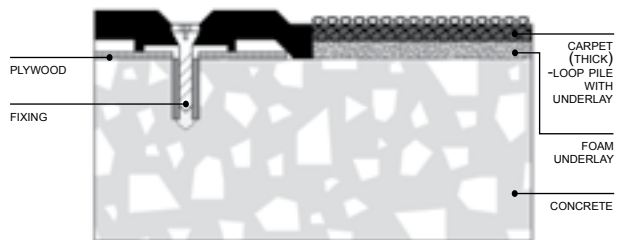
21. Ceramics, Vitrified Tiles



22. Bluestone, Granite, Limestone, Sandstone, Engineered Stone



23. Carpet (Thick) - Loop Pile (With Underlay)



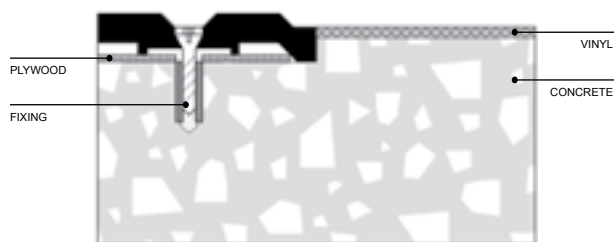
Installation Method - 8

Set-Down, Drill, Clean, Plug, Pack, Glue & Fixing

Tools & Equipment Required

Concrete recess, set down TGSI frame, plywood, tape measure. Cordless drill, drill bits, Isopropyl alcohol, clean rags, hammer & rubber mallet. Fixings & plugs are supplied

24. Vinyl



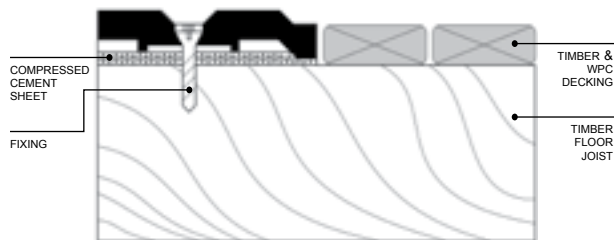
Installation Method - 9

Recess, Board, Drill, Clean, Plug, Pack, Glue & Fixing

Tools Required

Compressed cement sheet on joists and packing, tape measure, cordless drill, drill bits, Isopropyl alcohol, clean rags, Fixings & plugs are supplied

25. Timber & Wood Plastic Composite (WPC) Decking



Call now **1300 665 761**



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