

Touch the message experience the future

T - STEP



BROCHURE
APRIL 2023



In accordance with BS 7997:2003



T - STEP

The T-STEP System

The tactile paving tiles system T-Step is made in accordance with size parameters of Technical Standard BS 7997:2003. The specific innovation of this system is to provide to blind and visually impaired people both tactile and vocal information (only in those places where the vocal service has been activated).

Furthermore, it is possible to install the system simply by placing it on existing flooring, saving on building works, greatly speeding up the operations and without having to set up a building site for the area.

The tactile system is made of high resistance M-PVC-P technopolymer, suitable for both indoor and outdoor use.

In this way, the environment becomes quickly compatible with the orientation needs of blind and visually impaired people to guarantee them both safety and autonomy when moving.



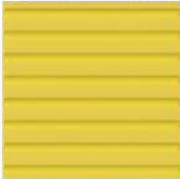
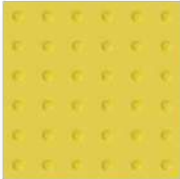
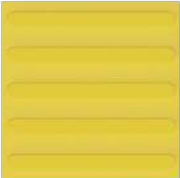
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HOW THE SYSTEM WORKS WITH TAG RFG

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Components

CODE	
CORDUROY HAZARD WARNING SURFACE  Corduroy hazard warning surface is a profiled paving finish comprising raised rounded bars running transversely across the product. It is made of M-PVC-P of 40x40cm. It is used to warn about the presence of specific hazards like steps, crossings etc.	BLISTER SURFACE  Blister is a profiled paving finish comprising rows of flat topped domes made of M-PVC-P of 40x40cm. The blister surface provides a warning to visually impaired people in the absence of a kerb upstand at controlled and uncontrolled crossings.
PLATFORM EDGE (ON-STREET)  Platform edge (off-street) warning surface is a profiled paving finish comprising raised lozenge shapes. It is made of M-PVC-P of 40x40cm. This surface provides a warning when approaching the edge of an on-street light rapid transit (LRT) platform.	PLATFORM EDGE (OFF STREET)  Platform edge (off-street) warning surface is a profiled paving finish comprising raised off-set rows of flat topped domes. It is made of M-PVC-P of 40x40cm. This surface provides a warning about the edge of an off-street railway platform.
GUIDANCE PATH SURFACE  Guidance path surface is made up of M-PVC-P modules of 40x40cm profiled paving finish comprising raised flat top bars with rounded ends. The guidance path surface guides visually impaired people along a route when the traditional cues, such as a property line or kerb edge, are not available.	CYCLE TRACK/FOOTWAY SURFACE  Cycle track surface is a profiled paving finish comprising raised flat-top bars running the full width of the product. It is made of M-PVC-P of 40x40cm. The segregated shared cycle track/footway surface advises of the correct side to enter the track or footway.



All the codes can be integrated with RFG technology

Item specifications T-STEP made up of M-PVC-P

Tactile paving system made in accordance with size parameters of Technical Standard BS 7997:2003, built in M-PVC-P technopolymer with "olive" shape finishing of 2x1mm, possibly integrated with TAG RFG 134.2 Khz. It has the following technical specifications:

DESCRIPTION	UM	VALUE	TESTING METHOD		AVAILABLE COLOURS	VALUE LRV
Friction coefficient	μ	> 0,40	B.C.R.A. method			
IRemaining track	mm	0,1	EN433		YELLOW 3F9	37
Wheelchair	-	suitable	EN425		YELLOW 3FA	70
Electrical insulation	ohm	1010	DIN 51953		WHITE 232B	83
Resistance to chemical product	-	suitable	DIN 51958		GREY 1B82	23
Resistance to fire	-	B-fl/s1	UNI EN 13501-1		RED BC3	10
Hardness	Shore A	91	ISO 868		CHARCOAL 1B68	8
Xenon arc aging test (with anti-UV)	h	> 300	UNI EN ISO 4892-2			
Heat insulation	W/mk	0,12	DIN 52612			
Specific weight	gr/cm ³	1,24+/- 0,02	ISO 1183			
Failing load (after 168h at 100 °C) °C)	N/mm ²	19	CEI 20-34			
Stretch (after 168h at 100 °C)	%	305	CEI 20-34			
Thermal stability	min	35	CEI 20-34			
Twisting stability	°C	-20	ASTM D 104			
Slipperes test	-	R 11	DIN 51130			

OTHER COLORS
ON REQUEST

T - STEP

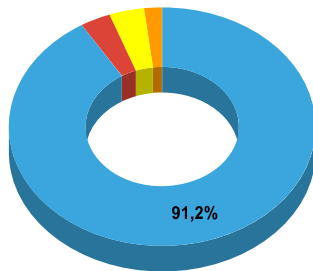
What do users think about the innovation

The Tactile Ground Surface Indicators (TGSi) is made up of modular elements equipped with grooves, whose shape, spacing, height and radius of the reliefs are specifically projected.

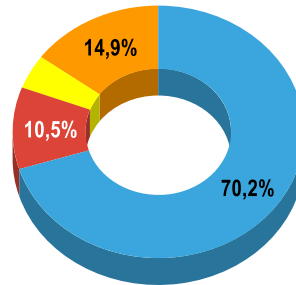
It allows blind or partially-sighted people to reach the destination through the scan of a tactile map, if present, the feet-sense-of-touch and the manual feedback (the white cane) or even, for partially-sighted persons, the chromatic contrast. **The process of orientation that these tools can provide is then structured in different stages: maps reading, information memorization, guiding path.**

If you could choose would you like that the voice message was sent from the:

Do you think is useful the vocalization of a tactile route?

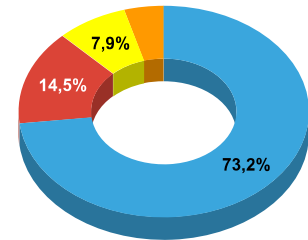


● Yes ● No ● If no, why not ● No answer



● Headset ● External mini speakers ● Mobile phone hands free
● No answer

Do you believe that the T-STEP system meets the needs of blind and partially sighted most of the current system?



● Yes ● No ● If no, why not ● No answer

The T-STEP System makes the knowledge procedure of the environment and the orientation PRECISE and IMMEDIATE thanks to the RFG (Radio Frequency Ground) technology that, if integrated with the plantar-tactile system, gives vocal information in the right point of contact between a specific hardware and the pavement implemented with RFG detectors.

Installation with glue

The glue to be used is a polyurethane adhesive made up of two elements with high tenacity and low viscosity: Component A (polymer polyurethane) and Component B (hardner).

The components need to be carefully mixed together to get a paste, that can easily be affixed with a trowel, a roller or a squeegee. The base must be evenly dry, sound, free from dust or removable parts, without cracks, paint, wax, oil, rust and anything else that may affect the adherence. Tiles must be got out from their packaging a few hours before installation and laid down: they need to acclimatize and loose the internal stress.

The glue must be carefully manipulate and mixed from the center outwards. Pay attention to mix also the side parts and to let bubbles come out.

Tiles are to be laid in order to assure a good coplanarity. They should be fixed on existing pavement, there is no need to remove or polish it. Tiles are quite thin, then you are not needed to glue them on a screed, as needed for other kind of pavement.

In case tiles have planarity defects, it is needed to put sand sack or something heavy on deformed section and maintain them until the glue is hardened.

Warning: don't use on surfaces where humidity can easily return, on wet surfaces or on not-dry asphalt (wait 30 days at least), on bituminous surfaces where oil could easily exude.



Installation with double sided tape

A polyester film heavily coated on both sides with acrylic glue could be used to fix the product both on smooth or even on irregular surfaces.

To obtain the expected outcome, installation surfaces must be clean, dry and solid. To clean the surfaces before the installation, solvent like isopropyl alcohol mixed with water or heptane is to be used. When using those solvents pay attention to instruction and warnings on the label.

The endurance would be much stronger, if a hard pressure is used after the tiles have been laid. The fixing is at 50% after 20 minutes, 90% after 24 hours and is complete after 72 hours. Sometimes it could be useful to use warm air (ex: 70° for 1 hour) to obtain a better impermeability.

Caution: products must be kept in their package at maximum 23°C and with no more than 50% humidity.





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