Advanced Group P/L
1300 665 499
www.advancedgroup.com.au
sales@advancedgroup.com.au

But Yellow Tactiles On Concrete Comply….. Don't They?

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We are all familiar with the now, common sight of Tactile Ground Surface indicators, (TGSI's) on footpaths, at stairways, ramps, railway platforms. TGSI's installed on the ground or floor surface are designed to provide pedestrians who are blind or vision-impaired with warning or directional orientation information.

TGSI'S are available in various materials, types, and colours. 'Yellow' would now appear to be most dominant coloured tile. Why 'Yellow'. Yellow, as a primary colour, it says, 'look at me'. It is bright and readily identified. This may be the reasons the reason we see so many of the current tactile installations employing yellow however it is a misconception that this colour is the correct for all installations.

All tactile installations are to are to comply with the requirements of BCA, Disability (Access to Premises – Buildings) Standards 2010, and Australian Standards AS 1428.1–2009 & AS/NZS 1428.4.1–2009. This includes achieving a minimum luminance contrast of:

30% contrast for TGSI tiles,

45% contrast for the single coloured 'discrete' TGSI cones and

60% contrast for two colours or materials used for 'discrete' TGSI cones.

Luminance contrast is defined in Australian Standard 1428.1-2009 as 'the light reflected from one surface or component, compared to the light reflected from another surface or component'. It is not the difference in the colour or the colour contrast, but the difference in the light reflective values (LRV'S) of each colour.

As indicated above this is to be said of ‘Yellow’ Tactiles. They do provide colour difference between the tiles and background and do provide excellent contrast however they do not necessarily achieve the required LRV’s for both wet and dry installation requirements, as required to achieve compliance with AS 1428.1 & AS 1428.4.1 2009

There are many and varied products on the market today which will have different dry and wet characteristics. Since products absorb water at different rates and will take different lengths of time to dry, a single calculation of required luminous reflectance may be insufficient in some applications, particularly since some sections of accessible paths of travel may be exposed to more wetting, and other sections to better drainage. therefore, for every installation separate measurements of luminous reflectance of the surrounds and TGSIs may need to be made.

Here at equal access we are provided with samples of various types and brand tactiles and to resolve the common question posed to us – “are these compliant’ we carried out a luminance reflectance value (LRV) test on yellow tiles against a concrete background surface. Concrete being a surface common in our everyday environment.

The LRV test, conducted as per the methodologies prescribed in AS 1428.1–2009 Appendix B and AS/NZS 1428.4.1–2009 Appendix E, confirmed our suspicion that some “yellow’ tiles whilst achieving the required 30% luminance contrast in a wet situation do not achieve the same in a dry condition. Thereby not achieving compliance for both installations.

A comparison test was carried out on a sample “white” tactile and whilst this would appear to not provide good contrast to the grey / concrete background it does provide the required 30% luminance contrast in both wet and dry installations.

Whilst we did not compare alternative background surfaces, in this instance, we chose the most common combination, whereby based on test results, consideration should be given to looking beyond ‘yellow’ for all installations where concrete is the background surface.

White may prove to be the new ‘yellow”.

Considerations

Please note the LRV readings for the concrete used as you can see by the photo are for ‘aged concrete’ and not new concrete.

The LRV for new concrete will measure a lot closer to the yellow reducing the contrast even more.

Why we like using white, is that it will comply when installed to new concrete and as the concrete ages the luminance contrast will increase.

BUT, and there is always a ‘But’, a regular maintenance program must be set up to ensure the TGGIs luminance contrast is maintained.

Note: In order to determine the luminance contrast between two adjacent building elements, the luminance reflectance value (LRV) of each building element needs to be obtained first.

Should LRV data not be readily available from the supplier or manufacturer, Luminos Consulting is experienced in conducting tests to determine the LRV of products samples – be it on-site for in situ products, or within our laboratory. Refer to the testing website http://luminos.com.au/