

# Luminance Contrast Report

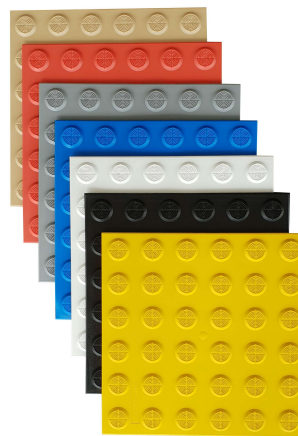
**Product:** Duratac Hazard Fastiles  
**Product Code:** TGS1-HF3030/ - All Colours  
**Address:** 8a Lara Way, Campbellfield VIC 3061  
**Testing Date:** 16/08/2022

As requested, we have determined the luminance contrast of the sample provided. These test results and report should be used as a good guidance only with the test method specified in the standards AS/NZS 1428.4.1.2009 Paragraph E3, Appendix E.

## Product

**Product Name:** Duratac Hazard Tactiles

**Product Description:**  
 Integrated Hazard Tactiles 300mm x 300mm -  
 Polymer Construction



## Test Results

Overall view of test results per colour - Please see table of results on next page

Colour	Dry LRV Average	Wet LRV Average
Biege	38.420	37.959
Black	3.266	3.164
Blue	10.134	9.803
Grey	21.767	21.841
Red	14.45	14.080
White	83.93	83.456
Yellow	48.95	48.615

## Table of LRV Results

Dry Measurements		Wet Measurements		Dry Measurements		Wet Measurements	
<b>Colour</b> Biege				<b>Colour</b> Black			
38.454	38.088	38.222	37.974	3.364	3.577	3.08	3.222
38.618	38.827	37.319	38.866	3.163	3.24	3.197	3.179
38.866	37.78	38.224	37.515	3.35	3.293	2.813	3.393
37.539	37.716	36.907	37.836	3.58	3.194	2.941	3.123
37.981	38.988	38.223	37.66	3.312	3.325	3.262	3.207
38.973	38.625	37.458	38.343	3.328	3.191	3.119	3.244
38.722	38.451	38.107	37.485	3.363	3.569	3.151	3.185
38.528	38.653	38.257	37.513	3.398	3.32	3.129	3.067
38.945	38.981	38.035	38.195	3.505	3.055	3.237	3.382
37.966	37.707	38.334	38.708	3.339	3.31	3.283	3.061
<b>Mean Dry LRV</b>	38.42	<b>Mean Wet LRV</b>	37.959	<b>Mean Dry LRV</b>	3.266	<b>Mean Wet LRV</b>	3.164
<b>Colour</b> Blue				<b>Colour</b> Grey			
9.783	10.213	9.776	9	22.121	21.664	21.767	21.833
10.06	10.215	10.151	9.753	21.843	21.708	21.91	21.746
9.893	10.157	10.222	9.451	21.862	21.748	22.397	21.4
10.224	10.25	10.163	9.67	21.813	21.74	22.568	21.891
10.062	9.971	9.743	9.911	21.899	21.776	22.017	22.331
10.028	10.413	9.958	9.896	21.786	21.636	21.334	22.443
10.099	10.404	9.977	9.866	22.364	22.483	21.948	21.555
10.302	10.237	10.038	9.731	21.398	21.538	21.576	20.981
10.123	10.175	10.012	9.845	21.778	21.137	21.955	21.872
10.077	9.994	9.529	9.361	21.606	21.437	21.958	21.336
<b>Mean Dry LRV</b>	10.134	<b>Mean Wet LRV</b>	9.803	<b>Mean Dry LRV</b>	21.767	<b>Mean Wet LRV</b>	21.841
<b>Colour</b> Red				<b>Colour</b> White			
14.54	14.45	14.084	13.678	83.69	83.63	84.743	84.55
14.53	14.56	14.258	13.837	83.42	83.88	83.71	82.673
14.42	14.41	14.091	13.938	83.45	83.36	82.623	83.832
14.42	14.57	13.86	14.234	84.09	83.92	83.275	83.493
14.21	14.73	14.149	14.112	84.51	84.01	83.572	82.551
14.29	14.36	14.481	14.147	83.90	84.29	83.788	83.487
14.35	14.22	14.259	14.221	83.79	84.01	82.999	82.182
14.47	14.45	14.176	14.234	84.54	83.61	83.478	83.181
14.61	14.14	13.993	14.019	83.40	84.85	84.082	83.327
14.61	14.65	14.058	13.78	84.19	84.15	83.443	84.135
<b>Mean Dry LRV</b>	14.45	<b>Mean Wet LRV</b>	14.080	<b>Mean Dry LRV</b>	83.93	<b>Mean Wet LRV</b>	83.456
<b>Colour</b> Yellow							
49.38	48.86	47.955	48.176				
48.99	48.65	48.343	48.471				
49.21	48.72	49.641	48.757				
49.26	48.95	49.097	49.679				
49.14	48.99	47.7	48.234				
49.04	49.10	47.88	48.309				
48.75	48.80	48.344	49.671				
48.92	48.71	49.416	48.323				
49.38	48.96	48.625	48.648				
48.21	48.91	48.231	48.806				
<b>Mean Dry LRV</b>	48.95	<b>Mean Wet LRV</b>	48.615				



Term	Definition
Luminance contrast	The light reflected from one surface or component, compared to the light reflected from another surface or component.
LRV	Luminance reflective value
Bowman-Sapolski equation	To determine the luminance contrast between the samples tested, the LRVs are entered into the Bowman-Sapolski equation: $C = 125 (Y2 - Y1)/(Y1 + Y2 + 25)$ , where: C = luminance contrast Y1 and Y2 = LRV of each surface
TGSI	Tactile Ground Surface Indicator
Integrated TGSI	Tactile ground surface indicators that are in a defined pattern and which are of the same luminance and material as the base surface.
Discrete TGSI	Individually installed TGSIs, which provide the same luminance for the sloping sides and upper surface of the truncated cone.
Composite Discrete TGSI	Tactile ground surface indicators that are individually installed and which provide a differing luminance for the sloping sides and upper surface of the truncated cone.
Stair Nosing	A strip not less than 50 mm and not more than 75 mm deep across the full width of the path of travel.

## Onsite Laboratory Testing Equipment

Sterling Supplies uses compliant testing apparatus meeting AS/NZS 1428.4.1 Appendix E requirements:

- Model: Konica Minolta CR-400 tristimulus colorimeter
- Illuminating and viewing system: Diffuse illumination/0° (d/0) viewing angle, specular component included.
- Conforms to JIS Z 8722 condition c standard
- Light source: Pulsed xenon lamp
- Measurement time: 1 second
- Minimum measurement interval: 3 seconds
- Measurement / illumination area; ∅ 8mm
- Observer: 2° Closely matches CIE 1931 Standard Observer
- Illuminant used: CIE Standard Illuminant D65
- Colour space and colorimetric data: CIE for Yxy

## Testing Methodology

The following is a summary of the testing methodology, conducted in accordance with requirements of AS 1428.4.1, Clause E3.3:

- The apparatus was firstly calibrated in accordance with the manufacturer’s instructions.
- The tristimulus value ‘Y’ (LRV measurements) were taken of the surface in random locations in dry & wet conditions.
- 20 measurements were taken. See table of results.
- Surface area was swept with a rag to remove dust particles and soiling prior to testing
- Wet Measurements were determined after 5 minutes of water ponding on the surface.

