

REPORT 05082
APPENDIX A. GENERAL PHYSICAL REQUIREMENTS

Ray-O-Lite Type B non-retroreflective raised pavement Markers

Colour = White Type B

3.2 Dimensions and Shape to AS1906.3

Width (at right angles to traffic direction)	99.63 mm
	Requirement 90 to 130mm
Length (parallel to traffic direction)	99.63 mm
	Requirement 200mm max
Height (above pavement level when installed)	20.5 mm
	Requirement 10 to 20mm
Base - Deviation from flatness	0 mm
	Tolerance

General:

The markers do not contain sharp projections which may be a hazard to tyres
Base does not contain any coating which may reduce its ability to bond to the adhesive

3.5.8 Additional requirements for Type B & type A/B Markers

The exterior surface is smooth with exposed edges rounded
The surface finish of the top is full gloss
Top surface is convex and of substantially uniform curvature
Markers Comply

Table 1 Luminance

tested to AS1906.3-1992

Mean	86.4%
std dev	0.2%
max	86.8%
min	85.9%
AS1906.3 min	75%

3.5.1. Water Absorption to AS1906.3 Appendix D

- (a) Water Ingression
No Visible ingress in any marker
- (b) Change in Luminance

Marker No	Change %
1	0%
2	0%
3	-1%
4	0%
5	0%
Mean Change	-0.4%

Note -ve values mean decrease
Grey scale change 5 (no change) Markers comply

3.5.2. Heat Test to AS1906.3 Appendix E

- (a) Distortion, loss of gloss, colour change
No visible distortion, no visible loss of gloss, no perceptible change in colour
- (b) Change in CIL values

Marker No	Face1, Change %
6	0%
7	0%
8	-1%
9	0%
10	0%
Mean Change	-0.1%

Note -ve values mean decrease
Grey scale change 5 (no change) Markers comply

3.5.3. Ultraviolet Test to AS1906.3 Appendix F

- (a) Physical Deterioration or colour change greater than control sample
No visible physical deterioration or colour change when compared with an unexposed control sample
- (b) Change in CIL values

Marker No	Face1, Change %
11	0%
12	-1%
13	0%
14	0%
15	0%
Mean Change	0.0%

Note -ve values mean decrease
Grey scale change 5 (no change) Markers comply

3.5.4. Impact Resistance Test to AS1906.3 Appendix G

- (a) Any permanent damage considered detrimental to designed use of marker
None of the markers showed damage considered to be detrimental to the designed use of the markers.
- (b)

Marker No	Type and extent of fracture	Extent of shell delamination from centre of hammer impact
11	Nil	Nil
12	Nil	Nil
13	Nil	Nil
14	Nil	Nil
15	Nil	Nil

AS1906.3 allows - Maximum radius of shell fracture 10mm
 Maximum radius of delamination 20mm

3.5.5. Compressive Strength Test to AS1906.3 Appendix H

Compressive Strength

Marker No	Compressive Strength. kN	Deformation at Failure. mm	Allowable min. Comp. strength kN
16	10.50	5.0	5
17	10.60	5.0	5
18	10.25	5.0	5
19	10.30	5.0	5
20	10.80	5.0	5

3.5.7. Adhesive Bond Strength Test to AS1906.3 Appendix J

Adhesive used = Lord 320/322 epoxy adhesive

Adhesive Bond Strength MPa		
Assy	Bond Strength MPa	Failure Type
1	2.21	100% Adhesive/Marker
2	3.31	70% Adhesive/Marker, 30% adhesive/steel
3	3.38	100% Adhesive/Marker
4	3.41	90% Adhesive/Marker, 10% adhesive/steel
5	2.49	100% Adhesive/Marker