

CERTIFICATE OF COMPLIANCE NZTA T 12:2013

Applicator: Type LA Borum BM3000-DL
Thermoplastic Applicator
Registration # MHU876



Owner: Higgins Contractors Ltd
P O Box 5164
Terrace End
Palmerston North

Test Description: The long life pavement marking applicator described by this certificate has been tested under the conditions described and found to comply with the relevant requirements of NZTA Specification NZTA T 12:2013

Test Conditions: The scope of the NZTA T12: 2013 recertification was as follows;

1. Application to Schedule B Audio Tactile Markings, in accordance with NZTA M24:2006 and Borum Technical Specifications.
2. Application to Schedule C, Agglomerate Thermo-plastic in accordance with Borum Technical Specification, NZTA P 30:2008 and NZTA T 12:2012,

Test Identification:

- The Registration plate of the tested unit is MHU876 and the Chassis number is 220265
- The tests were carried out at the depot of Higgins Group Holdings Ltd on the 7th of October 2019.
- The materials used for both tests were; DPI DURA Thermoplastic Roadmarking Material and Potters R145 Pristine glass beads (AS/NZS 2009)

Equipment Tested:	Extruder Head	Borum DOTnLINE	/220265
	Extruder Drive	Borum Hyd Screw	/220265
	Screw Compressor	SCI 1800	/220265
	Bead Applicators (2)	Borum BMC30	/220265
	Intermittent Line		
	Devise & Speedometer	Borum Line Master	/220265

Applicator Speeds:

(100mm)	Schedule B	3.5 km/hr
	Schedule C	3.5 km/hr

Special Notes:

1. The applicator is not capable of applying turn arrows.
2. This certificate is accompanied by T18 certificate.

SCHEDULE B

Audio Tactile Profile Markings with Thermoplastic in accordance with NZTA M24:2006, NZTA P30:2008 and NZTA T12:2013

The markings when applied to flat electro-galvanised steel plates met all dimension and performance requirements as specified in; NZTA M24:2006 Specification for Audio Tactile Profiled Roadmarkings, NZTA P30:2009 Specification for High Performance Roadmarkings and NZTA T12:2013 Specification for Long-Life Pavement Marking Material Applicator Testing.



The values specified in NZTA M24:2006, NZTA P30:2009 and NZTA T12:2013 used for determination of compliance were as follows:

Gap length between segments

- Where gap is 3.0m or more: $\pm 300\text{mm}$
- Where gap is less than 3.0m but greater than 1.0m: $\pm 150\text{mm}$
- Where gap is less than 1.0m: $\pm 50\text{mm}$

Length of segment.

- Where segment is longer than 5.0m: $\pm 150\text{mm}$
- Where segment is shorter than 5.0m but longer than 1.0m: $\pm 75\text{mm}$
- Where segment is shorter than 1.0m: $\pm 50\text{mm}$



Raised blocks.

- Block height; + 15 %, - 5 % of the specified value. (9 mm)
- Block width; + 30 %, - 20 % of the specified value (150mm)
- Block length; + 30 %, - 20 % of the specified value (50mm)
- Block pitch; + 5 %, - 5 % of the specified value. (250mm)

Retroreflectivity.

- AS/NZS 2009 Class B (drop-on) glass beads applied uniformly at a minimum rate of 275gm/m².
- Dry retroreflectivity; a minimum of 150 mcd/m²/lux.
- Wet retroreflectivity; a minimum of 80 mcd/m²/lux

Day Time Visibility.

- Minimum Qd of 100 mcd/m²/lux

SCHEDULE C

Agglomerate Thermo Plastic, in accordance with Borum Technical Specification, NZTA P30:2008 and NZTA T12:2013.

The markings when applied to flat electro-galvanised steel plates met all dimension and performance requirements as specified in; NZTA P30:2009 Specification for High Performance Roadmarkings and NZTA T12:2013 Specification for Long-Life Pavement Marking Material Applicator Testing.



The values specified in NZTA P30:2009 and NZTA T12:2013 used for determination of compliance were as follows:

Gap length between segments

Where gap is 3.0m or more: $\pm 300\text{mm}$
Where gap is less than 3.0m but greater than 1.0m; $\pm 150\text{mm}$
Where gap is less than 1.0m: $\pm 50\text{mm}$

Length of segment.

Where segment is longer than 5.0m; $\pm 150\text{mm}$
Where segment is shorter than 5.0m but longer than 1.0m; $\pm 75\text{mm}$
Where segment is shorter than 1.0m; $\pm 50\text{mm}$

Line width.

All line widths; $+ 10\%$, $- 5\%$ of the specified value. (200 mm)

Structured (Agglomerate) Thermo Plastic.

1. Minimum material application rate of 5.0kg/m^2
2. A coverage between 55% and 75%, and
3. Line appearing continuous when sitting in a passenger car.

Retroreflectivity.

AS/NZS 2009 Class B (drop-on) glass beads applied uniformly at a minimum rate of 330gm/m^2 .
Dry retroreflectivity; minimum of $150\text{mcd/m}^2/\text{lux}$.
Wet retroreflectivity, a minimum of $80\text{mcd/m}^2/\text{lux}$

Day Time Visibility.

Minimum of $100\text{mcd/m}^2/\text{lux}$

Colour.

White; a discolouration of not more than 4/5 from colour Y35 of AS2007S.

Skid Resistance.

50 BPN or greater for roadmarkings with a dry film thickness of 0.9 mm or greater

CERTIFICATE OF COMPLIANCE NZTA T 12:2013

Registration Details:

5034

[NZRF Stamp & Unique Number]



Initial Certificate Testing Officer:

Bruce Belton
Mark Roads Ltd

Signed:

Bj Belton

Date of Expiry:

7th October 2020

