NZ TRANSPORT AGENCY
WAKA KOTAHI

CERTIFICATE OF COMPLIANCE **NZTA T 12:2013**

Applicator: Type LA Borum SPT 350-2
Thermoplastic Applicator
Registration # EUK 633

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 T12:2013**

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

- Application of Agglomerate Thermo Plastic to Schedule One, Agglomerate Thermo Plastic, in accordance with Higgins Contractors Technical Specification, NZTA M24:2006, NZTA P30:2008 and NZTA T12:2013.
- Application of Audio Tactile Markings to Schedule Two, Thermo Plastic Audio Tactile, in accordance with Higgins Contractors Technical Specification, NZTA M24:2006, NZTA P30:2008 and NZTA T12:2013.

Test Identification:

- The Registration plate of the tested unit is EUK 633 and the Chassis number is 140057
- The tests were carried out at the depot of Higgins Group Holdings Ltd on the 23rd of October 2018.
- The materials used for both tests were; Britesite, Premium Thermoplastic Roadmarking Compound and Potters drop-on glass beads (AS/NZS 2009)

Equipment Tested:

Extruder Head	Borum	SPT350/140057
Extruder Drive	Borum	SPT350/140057
Screw Compressor 1	TMC	04080115U
Screw Compressor 2	TMC	07080151U
Bead Applicators (2)	Borum	SPT350/140057
Intermittent Line Devise	BM Uni-line EUR1	SPT350/140057
Speedometer	BM Uni-line EUR1	SPT350/140057

Applicator Speeds:

	100mm	150mm	200mm
Schedule One		3.1 km/hr	
Schedule Two A		2.3 km/hr	
Schedule Two B		2.2 km/hr	

Special Notes:

1. The applicator is not capable of applying turn arrows.

SCHEDULE ONE

Agglomerate Thermo Plastic, in accordance with Higgins Contractors 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: ± 300mm
Where gap is less than 3.0m but greater than 1.0m; ± 150mm
Where gap is less than 1.0m: ± 50mm

Length of segment.
Where segment is longer than 5.0m; ± 150mm
Where segment is shorter than 5.0m but longer than 1.0m; ± 75mm
Where segment is shorter than 1.0m; ± 50mm

Line width.
All line widths; + 10 %, – 5 % of the specified value. (200 mm)

Structured (Agglomerate) Thermo Plastic.
1. Minimum material application rate of 2.4kg/m²
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/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

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

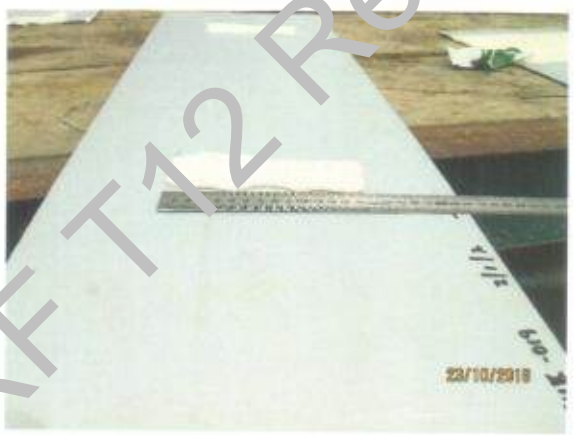
Skid Resistance.
50 BPN or greater for roadmarkings with a dry film thickness of 0.9 mm or greater

SCHEDULE TWO

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: ± 300mm
Where gap is less than 3.0m but greater than 1.0m; ± 150mm
Where gap is less than 1.0m: ± 50mm

Length of segment.
Where segment is longer than 5.0m; ± 150mm
Where segment is shorter than 5.0m but longer than 1.0m; ± 75mm
Where segment is shorter than 1.0m; ± 50mm

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 & 50mm)
Block pitch; + 5 %, - 5 % of the specified value. (250mm & 500mm)

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

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CERTIFICATE OF COMPLIANCE **NZTA T 12:2013**

Registration Details: [NZRF Stamp & Unique Number]

The New Zealand Roadmarkers Federation Inc
PO Box 13 605, Auckland
Phone: (09) 625 7470

Initial Certificate Testing Officer: Ross Ridings
Quality Surveillance Ltd

T/12 Testing Officer: Bruce Belton
Mark Roads Ltd

Signed: *BjBelton*

Date of Expiry: **23rd October 2019**