

## CERTIFICATE OF COMPLIANCE NZTA T/12:2013

**Applicator:** Hino FC Mac Stripper, registration number BQY303, fleet number T91, Plant Number:116033 Type LA

**Owner:** Downer NZ Ltd  
133 Main South Road  
Green Island  
Dunedin 9018

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

**Test Conditions:** The scope of the Certification was as follows:  
 1) Application of Extruded Flat Thermoplastic to Schedule One, with thickness in accordance with NZTA P/22:2006, NZTA P30:2008 and NZTA T12:2013.  
 2) Application of Audio Tactile Markings to Schedule Two, with markings in accordance with NZTA M/24:2006, NZTA P30:2008 and NZTA T12:2013.  
 3) Application of Profiled Multi Dot Line Markings to Schedule Three, with thickness in accordance with DNZ Multi Dot Line Technical Specification NZTA P/30:2008 and NZTA T/12:2013 .

**Test Identification:** The tests were carried out at the Downer NZ Depot at 645 Great South Rd Penrose, Auckland, from September 14<sup>th</sup> 2023 to September 27<sup>th</sup> 2023.  
 The Applicator Chassis Number is JHDFC4JJPXXX101157.  
 The test materials used were:  
 Damar Multi-Grade Thermoplastic for Schedule One, Schedule Two, and Schedule 3  
 Potters Type B Drop-On Glass Beads were used for Schedule One, Two and Three

**Equipment Tested:**

Extrusion Heads	Mini Mac	FC
	Hofmann Multi Dot Line	
	DNZ Profile Head	
Extruder	Mini Mac 75mm	FC
Temperature Controller	Carel	FC
Compressor	Ingersoll Rand	8830199
Speedometer	Roadmarker	FC
Bead Gun	Graco Bead Gun	

**Applicator Speeds:**

Schedule	Line Width		
	100mm	150mm	200mm
<b>One</b>	6.24	5.21	4.14
<b>Two</b>		3.41	
<b>Three</b>	6.14	5.25	4.11

**Special Notes:** The applicator is not capable of applying turn arrows.

**Premelter:** Isuzu Pre-Melter Unit T/18 Certificate No:5646 was used for the T/12 tests.

**Schedule One**

**Extruded Flat Thermoplastic in Accordance with NZTA P/22:2006**

The markings when applied to flat electro-galvanised steel plates met all dimension and performance requirements as specified in NZTA P22: 2006, NZTA P30: 2008 and NZTA T12:2013.

The values specified in NZTA P/22:2006 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 1.0m or less  $\pm 50\text{mm}$

Length of Segments

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 1.0m or shorter  $\pm 50\text{mm}$

Thermoplastic Line Width

All line widths  $+10\% - 5\%$

Thermoplastic Height

New markings – asphalt 2.0 – 2.5mm

New markings – chipseal 2.0 – 3.0mm

Retroreflectivity

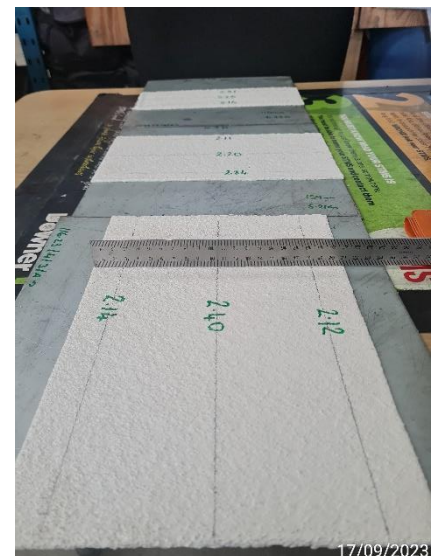
AS/NZS 2009 Potters Pristine Drop-On Glass beads applied uniformly at a minimum rate of 300 grams/m<sup>2</sup>

Reflectivity (dry – R): A minimum of 150 mcd/m<sup>2</sup>/lux.

Reflectivity (condition of wetness – RW): A minimum of 80 mcd/m<sup>2</sup>/lux.

Skid Resistance

Greater than 50 BPN but less than 65 BPN



# CERTIFICATE OF COMPLIANCE NZTA T/12:2013

## Schedule Two

### Thermoplastic Audio-Tactile in Accordance with NZTA M24: 2006, NZTA P/30:2008 and T/12:2013

The markings when applied to flat electro-galvanised steel plates meet all dimension and performance requirements as specified in NZTA M24: 2006 Specification for Audio-Tactile Profiled Roadmarkings, NZTA P/30:2008 Specification for High Performance Roadmarkings and NZTA T/12:2013 Specification For Long-Life Pavement Marking Material Applicator Testing.

The values specified in NZTA M/24, NZTA P/30 and NZTA T/12:2013 used for determination of compliance were as follows.

#### Thermoplastic Line Width

All line widths +10% - 5%

#### Thermoplastic Base Height

N/A Profile Blocks only

#### Raised Blocks

Spacing between blocks +5% - 5% of specified value (250mm)

Spacing between blocks +5% - 5% of specified value (500mm)

Length of block +30% - 20% of specified value (50mm)

Width of block +30% - 20% of specified value (150mm)

Block Height -5% +15% of specified value (8.0mm)

#### Retroreflectivity

AS/NZS 2009 Potters Pristine Drop-On Glass beads applied uniformly at a minimum rate of 275 grams/m<sup>2</sup>

Reflectivity (dry – R): A minimum of 150 mcd/m<sup>2</sup>/lux.

Reflectivity (condition of wetness – RW): A minimum of 80 mcd/m<sup>2</sup>/lux.

Skid Resistance *Not Applicable*



## Schedule Three

### Profiled “MultiDotLine” - markings in Accordance with DNZ Technical Specification, NZTA P/30:2008, and NZTA T/12:2013

#### MultiDot Line Application

Inside of a housing a hollow cylinder (scattering drum) positioned at the periphery and equipped with outlets is rotating during forward movement of the extruder. At a lockable slot, which width corresponds to the requested line width, outlets continuously open and close when the cylinder periphery is sliding along towards the road. Through these outlets the thermoplastic marking material will be applied in portions on the road.

The result is an exact defined regular pattern with regular distribution.

The markings when applied to flat electro-galvanised steel plates meet all dimension and performance requirements as specified in NZTA P/30:2008 Specification for High Performance Roadmarkings.

The values specified in NZTA P/30:2008 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 1.0m or less  $\pm 50\text{mm}$

#### Length of Segments

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 1.0m or shorter  $\pm 50\text{mm}$

#### MultiDotLine Dots

1. Material application rate of  $3.1\text{kg/m}^2 \pm 10\%$
2. A coverage between 55 and 75%
3. Line appearing continuous when sitting in a passenger car.

#### MultiDotLine Widths

All line widths  $+10\% - 5\%$

#### Retroreflectivity

AS/NZS 2009 Potters Pristine Drop On Glass beads applied uniformly at a minimum rate of  $300\text{grams/m}^2$

Reflectivity (dry – R): A minimum of  $150\text{mcd/m}^2/\text{lux}$ .

Reflectivity (condition of wetness – RW):

A minimum of  $80\text{mcd/m}^2/\text{lux}$ .

#### Skid Resistance

Greater than 50 BPN but less than 65 BPN



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



Registration Details: [NZRF Stamp & Unique Number]

5801

**Initial Certificate  
Issuing Officer:**

**R J Ridings**  
Quality Surveillance Ltd



**Testing Officer:**

**P Del Favero** Downer NZ LTD

**Signed:**



**Date of Expiry:**

**27th September 2024**