




# BRITESITE (NZ) LTD



# BRITESITE (NZ) LTD

- Glass Beads
- Thermoplastic
- Reflective Pavement Markers
- Marker Adhesive
- LED/Solar Markers
- Application Equipment



**britesite**

**HIGHWAY DELINEATION**

Thermoplastic Road Marking Materials

Thermoplastic Coloured Surfacing

Glass Beads

Reflective Raised Pavement Markers

Blurred Road Marker Adhesives

Self Adhesive

Solar Pavement Markers

Preformed Thermoplastic

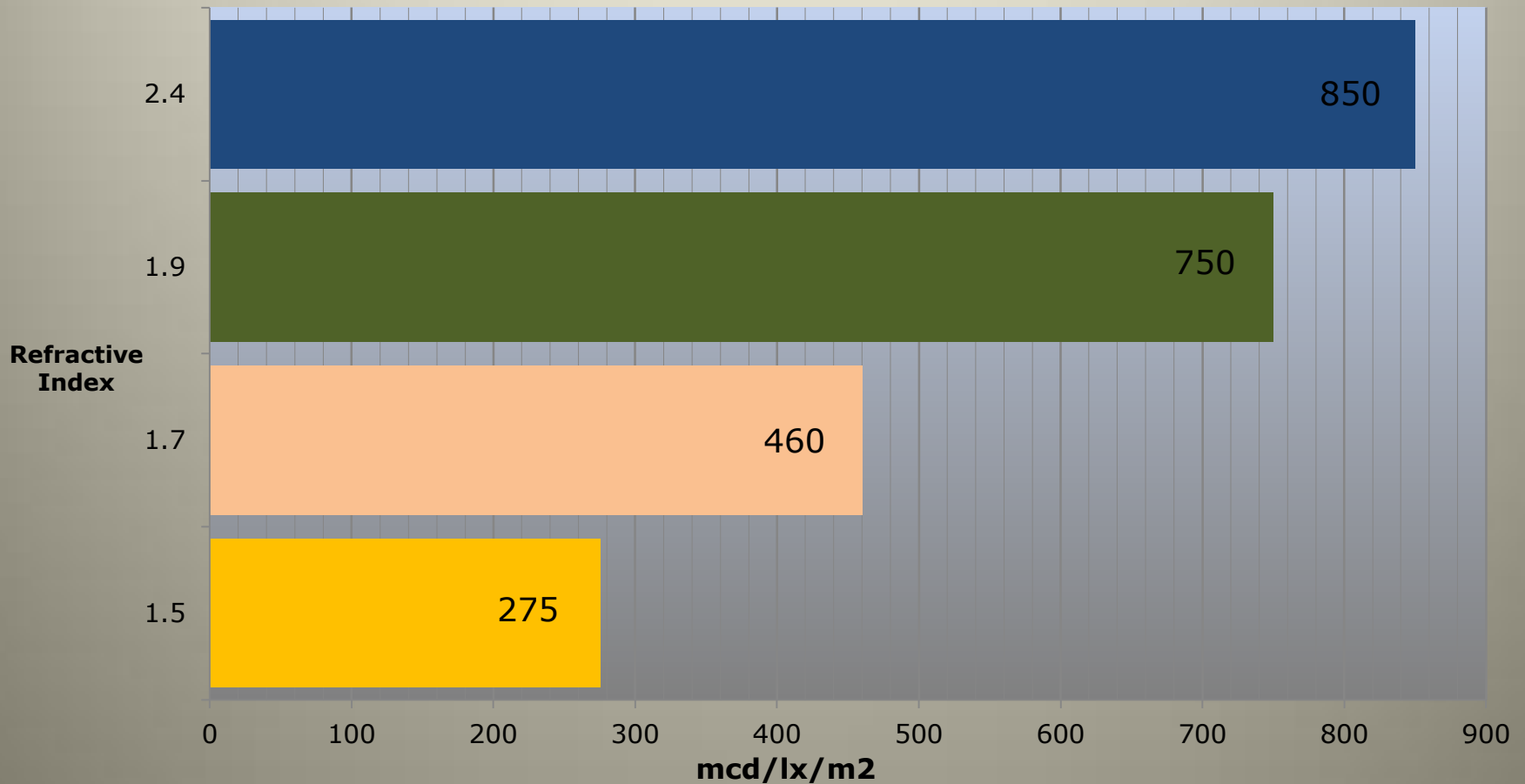
*All products comply with NZS/NZTA Standards and Specifications*

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Keeping DRIVERS  
on the ROAD

# BRITESITE (NZ) LTD

## Glass Beads - High Index



# BRITESITE (NZ) LTD

## Glass Beads – Camsizer

**Particle Analyzer CAMSIZER®**  
Particle size and particle shape measurement with Dynamic Image Analysis

Measurement of dry, free flowing bulk materials in a range from 30 µm to 30 mm

**Retsch**  
TECHNOLOGY  
Solutions in Particle Sizing

**PARTICLE ANALYZER CAMSIZER**

### Key features

#### Quality control of particle size and shape

**Example: Glass beads**

The graph shows the increase over of the sphericity of glass beads. At least 80% of the beads need to be spherical to fulfil the high quality standards for retro-reflectivity.

#### Old analysis specifications – new method – identical results

**Example: Glass beads**

The quality control of glass beads used in road markings is regulated in ISO standards ISO 1428 and ASTM D 1135. The measurements are either done consuming only a small number of beads (see standard) and the results largely depend on the testing procedure. The CAMSIZER allows for automated measurement of both particle size and particle shape. The measurement results can be validated against the methods described in the industrial standards, making the time-consuming manual methods obsolete. The CAMSIZER provides identical results – but faster, with better reproducibility and with considerably improved statistics.

#### Determination of length and diameter

**Example: Extrudates**

Many samples consist of particles which are not frequently characterized by "size" only. In many cases, the length and diameter of the particles differ considerably, and the variation of both parameters have to be monitored as part of the quality control procedure. The example shows the measurement of the length (green) and the diameter (blue) of a catalyst support material. The other complex dimensional geometry of the rods is measured by the low magnification of the diameter distribution which can be clearly detected thanks to the high resolution of the CAMSIZER. The CAMSIZER results are based on the evaluation of approx. 100,000 particles in 2 minutes and fully correspond to the results of a time-consuming manual measurement (caliper measurement of a few hundred particles).

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# **BRITESITE (NZ) LTD**

## **Thermoplastic**

- **Dot Matrix Trial**
- **ATP Impact Resistance**
- **Glow in Dark Preform**

# BRITESITE (NZ) LTD

## News Update – June 2013



KEEPING DRIVERS ON THE ROAD

News UPDATE

June 2013

### Britesite Thermoplastic .....

NZTA are responsible for ensuring road marking materials meet specification and this entails applying materials transversely on selected trial sites. Leading up to a new round of testing in November 2013, trial sites were selected following a pre-trial test, which was conducted in June 2010 when Britesite applied Thermoplastic (Dot Matrix) at the pre-trial test sites. This May 2013, Britesite engaged Opus Research to measure the markings at Taupo Swamp on SH1 North of Wellington where approximately 8,200 vehicles per day cross the transverse lines.



Left: The photos show the Thermoplastic Dot Matrix markings in the wheel path, 8 x 10<sup>6</sup> vehicle passes.

TEST RESULTS: Britesite Thermoplastic EXSCRE35 compared to specifications

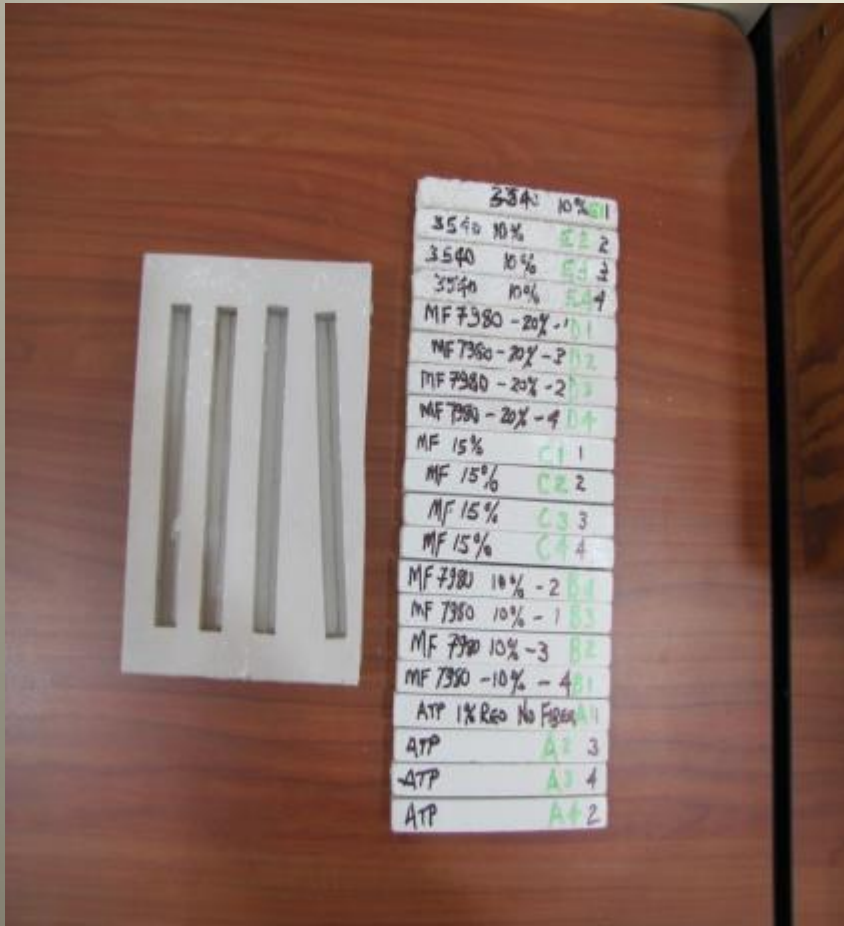
Performance Parameter	Britesite Thermoplastic EXSCRE35		Specifications				
	Line T10 White	Line T11 Yellow	M20 2003		AS4049.2 2005	Proposed M7 Long life	
			White	Yellow		White	Yellow
Retroreflectivity mod	118	81	100	80	100	150	150
Skid Resistance BPN	58	64	50-65		45	50-65	
Test Duration Vehicle Passes x10 <sup>6</sup>	8	8	3		3	5	

The results off the pre-trial test at 8 million vps are very encouraging and show without question, we exceed the requirements of the current NZTA M20 Long Life Road Marking Material Specification and Australia's Thermoplastic Road Marking Material Specification (AS4049.2) **after more than twice the specified exposure**, and whilst our 'retro's' are lower than the draft M7 targets, the 60% greater trafficking exposure of our test lines indicates we are heading in the right direction.



# BRITESITE (NZ) LTD

## ATP Impact Resistance



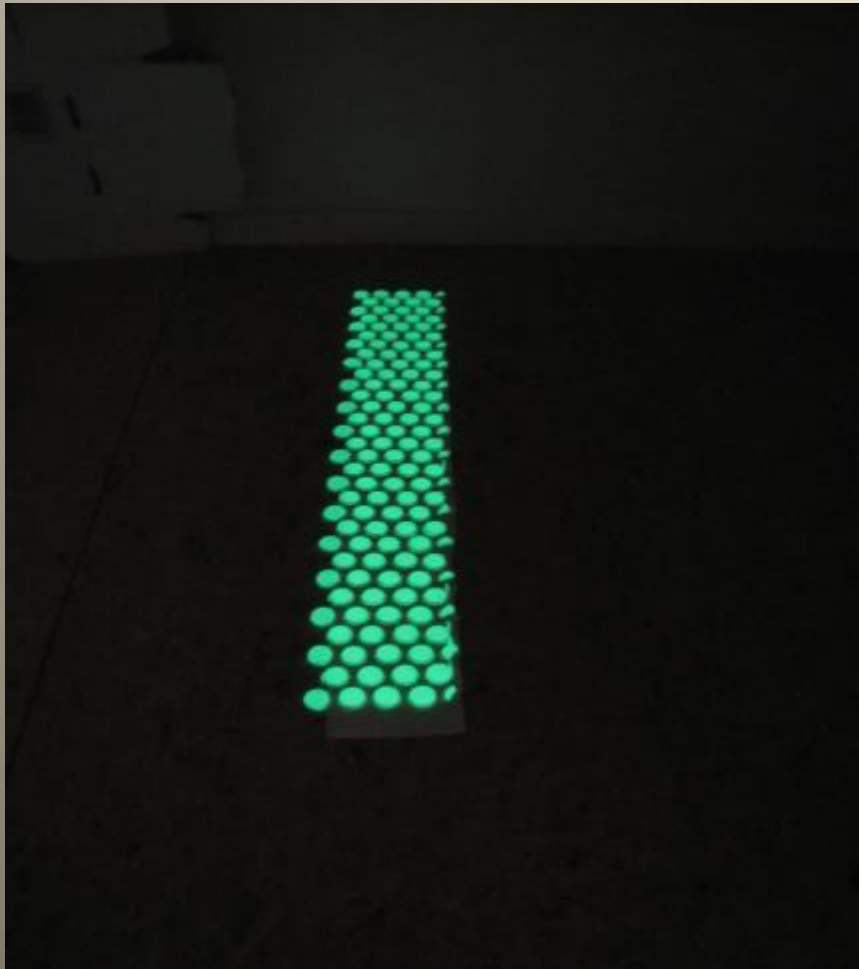
## ATP IMPACT RESISTANCE

### CHARPY IMPACT TESTING

Britesite ATP Production Year	Impact Resistance J/M
2010	11.75
2011	12.92
2013	14.23 (+ 20%)
Trials	20.37 (+ 73%)
Difficult Application	45.10 (+ 384%)

# BRITESITE (NZ) LTD

## Glow in Dark Preform



### LUMINESCENT PREFORM

#### TYPICAL AFTERGLOW (AFTER LIGHTS OUT)

MINUTES	MCD/M <sup>2</sup>
2	1550
5	700
10	360
60	50
120	20



# BRITESITE (NZ) LTD

## Martin Bituminous Marker Adhesive

### BITUMINOUS MARKER ADHESIVE

MARTIN

<b>RED BOX</b>	<b>GREEN BOX</b>
FOR	FOR
SAND	NON-SAND
BASED	BASED
MARKERS	MARKERS
<b>TIME PROVEN</b>	<b>NEW</b>

# BRITESITE (NZ) LTD

- Application Equipment



Unimark Hymix Premelter.



**britesite**

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2 x 30 gallon (2 x 135 litre ) Oil Jacketed, Premelter, Gas fired.

- 8/10 Hp Electric start Propane fired Honda engine Hydraulic Power pack, to power Hydraulic agitators.
- 12V DC electronic flame management system with auto ignition, Flame sensor and Thermostat.
- 1.5 M long, 2.0 M wide, 1.2 M high 1000 kg
- Price NZD \$ 18,300.00 ( subject to exchange rate )
- Prices plus GST ex plant Auckland

 BRITESITE - KEEPING DRIVERS ON THE ROAD

