

# PAINT INDUSTRIES PTY LTD

A.C.N. 008 753 839

TELEPHONE

(08) 9437 1488

FAX: (08) 9410 2395

61 Lionel Street  
Naval Base 6165  
WESTERN AUSTRALIA

P.O. BOX 83  
North Fremantle 6159  
WESTERN AUSTRALIA

MADE IN WA  
GUARANTEED QUALITY  
DATE: 31/01/2009

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## PRODUCT BULLETIN

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### Attachment to F.C.321

### TOPDEK LONG LIFE ROAD MARKING

#### Typical Performance Advantages

Conventional waterborne films that exhibit enough surface dry to prevent the paint from being “picked-up” and tracked onto the road by traffic, may not be dry under the surface film. Waterborne traffic paints need to reach a surface dry and “dry-through” stage before they begin to withstand an early rain shower.

#### Drying Performance

**Topdek Long Life Road Marking** will dry faster to “no pick-up” and “dry-through” than conventional waterborne paints. The faster dry is particularly evident when the drying conditions are poor (high humidities, and low air flow and temperatures). Furthermore, fast “dry-through” characteristics make it much more resistant to damage from an early rain shower than conventional waterborne paints.

#### Dry To No Pick-Up Time

**Topdek Long Life Road Marking White** was compared to a commercial solventborne traffic paint on the road for Auto-No-Track Time as specified in ASTM Method D-713. The paints were applied to a 15 mil wet thickness and glass beads were dropped onto the paint at a rate of 275 grams/sq.m. of paint. The humidity was high (84% relative humidity) and there was only a slight breeze. After only 35 seconds, a car passing over the Long Life Road Marking Paint did not track paint on the road. Tracking was evident after 45 seconds with the fast-dry solventborne paint.

#### Dry to No Pick-Up Road/Vehicle Test

Road Temperature	20°C
Relative Humidity	84%
Air Speed	5 – 10 km/L
Wet film thickness	15 mils (375 microns)

#### **Topdek Long Life Road Marking**

No tracking  
after 35 seconds

#### **Commercial Solventborne**

Tracked for 20m  
after 45 seconds

**Durability**

The service life of traffic markings depends on the marking having good wear properties. In road tests using transverse test lines to accelerate wear, Topdek Long Life Road Marking exhibited excellent durability over both asphalt and concrete road surfaces in a variety of climates.

**Glass Bead Retention**

The visibility of traffic markings at night requires retention of the glass beads applied to that marking. Night visibility can be monitored with a retroflectometer that measures the low angle reflectance of light off the beading marking.

The following data compare the loss of retroreflectivity of Topdek Long Life Road Marking with commercial solventborne markings based on alkyd resins (with and without chlorinated resin modification).

Note that the Topdek Long Life Road Marking retains retroreflectance (hold onto reflective glass beads) considerably longer than the commercial solventborne traffic markings.

**Glass Bead Application Rates**

PAINT TYPE	COMMENTS	DRY FILM THICKNESS (Minimum)	GLASS BEAD TYPE	GLASS BEAD APPLICATION RATE
WATER BORNE	Maintain existing marking	200 micron	Standard (AS 2009)	300g/m <sup>2</sup> +/- 50g/m <sup>2</sup>
	Install new marking	300 micron	Standard (AS 2009)	300g/m <sup>2</sup> +/- 50g/m <sup>2</sup>
	Maintain existing marking	320 micron	Type D (AS 2009)	500g/m <sup>2</sup> +/- 50g/m <sup>2</sup>
	Install new marking (Asphalt)	320 micron	Type D (AS 2009)	500g/m <sup>2</sup> +/- 50g/m <sup>2</sup>
	Install new marking (Aggregate)	400 micron	Type D (AS 2009)	500g/m <sup>2</sup> +/- 50g/m <sup>2</sup>

**Retroreflectance Retention of Topdek Long Life Road Marking vs. Solentborne Alkyds**  
Retroreflectance in millicandelas / m<sup>2</sup> / lux with a Mirolux 12.

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Transverse Lines on a 6000 ADT (average daily traffic) asphalt road :

	<u>3 months</u>	<u>15 months</u>	<u>26 months</u>
<b>Topdek Long Life Road Marking</b>	240	190	170
Solventborne Fast Dry Alkyd	280	110	70

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Transverse Lines on a 20,000 ADT concrete road :

	<u>7 months</u>	<u>16 months</u>
<b>Topdek Long Life Road Marking</b>	301	211
Solventborne Chlorinated Polyolefin Modified Alkyd	189	148

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Skip Lines of a 20,000 ADT asphalt road :

	<u>12 months</u>	<u>27 months</u>
<b>Topdek Long Life Road Marking</b>	267	167
Solventborne Fast Dry Alkyd	155	100