

## ( TECHNICAL BULLETIN )

INTERIOR/EXTERIOR PROTECTIVE AND DECORATIVE COATINGS

ASTEC IS COMMITTED TO ONGOING RESEARCH AND DEVELOPMENT

### Rapid Line



#### PRODUCT TYPE

Waterborne Traffic Marking Paint.

#### DESCRIPTION / USE

**Astec Rapid Line** is a second generation, fast dry waterborne, all-acrylic traffic marking paint with excellent durability. Astec Rapid Line provides exceptionally fast drying and through cure over a broad range of application conditions. In addition, provide excellent durability in terms of retention of glass beads for night visibility, with excellent wear properties over asphalt, concrete and old markings.

#### FEATURES AND BENEFITS

**Excellent Durability** - Superior wear properties over various bituminous and concrete road surfaces.

**Fast Dry** - Fast dry-to-no-pickup and resistance to early rain showers under a wide range of climatic conditions.

**Enhanced Retention of Glass Beads** - Excellent long-term night visibility.

**Environmentally Friendly** - V.O.C's as low as 80grams/litre

**User Friendly** - Non-flammable, water clean-up, reduced disposal costs, increased worker safety.

#### PERFORMANCE ADVANTAGES

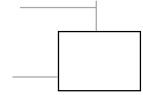
Conventional waterborne film that exhibit enough surface dry to prevent the paint from being "picked up" and tracked through onto the road by traffic, may not be dry under the surface film. Waterborne traffic paints need to reach a surface dry and "dry through" stage before they begin to withstand an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



*Astec Paints are a 100% Australian owned company committed to the research and development of technologically advanced coatings that provide premium durability against our harsh Australian conditions. Our coatings are manufactured with high regard for worker safety and environmental care and will provide you with absolute confidence in long term performance.*



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### DRYING PERFORMANCE

Rapid Line will dry faster to "no pick-up" and "dry through" than conventional waterborne traffic marking paints. The faster dry is particularly evident when the drying conditions are poor i.e. high humidity, low air flow and temperatures. Furthermore, the fast "dry-through" characteristics of Astec Rapid Line provides outstanding resistant to damage from an early rain shower.

### DRY TO NO PICK-UP TIME

Astec Rapid Line 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 6 lbs. per gallon for a 4 inch wide line

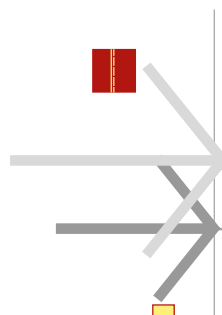
(275 grams/sq.m of paint). The humidity was high (84% relative humidity) and there was only a slight breeze (2-4 mph). After only 35 seconds, a car passing over the waterborne marking based on Rapid Line did not track paint on the road. Tracking was evident after 45 seconds with the fast-dry solventborne paint.

Dry to No Pick-up Road/Vehicle Test	
Road Temperature	60F (16C)
Relative Humidity	84%
Air Speed	2 to 4 mph
Wet Film Thickness	15 mils (375 microns)

Astec Rapid Line Waterborne Acrylic	Commercial Solventborne
No tracking after 35 seconds	Tracked for 60 ft after 45 seconds

### DURABILITY

The service life of traffic markings also depends on the marking having good wear properties. In road tests using transverse test lines to accelerate wear, Astec Rapid Line have shown excellent durability over both asphalt and concrete road surfaces in a variety of climates.



**Rapid Line**

**PRODUCT DATA**

**ASTEC A**  
AUSTRALIAN PAINT MAKERS

■	Gloss Level	Low Sheen
■	Recommended Thinners/ Clean Up	Water
■	Application	Brush, Spray or Roller
■	Abrasion Resistance	Good
■	Volume Solids	62%
■	P.V.C	58%
■	Solids W/W	77%
■	SG	1.67
■	Recommended D.F.T	375 microns (15mils)

**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 beaded marking.

The following data compares the loss of retroflectivity of Astec Rapid Line White waterbased traffic markings against commercial solventborne markings based on alkyd resins (both with and without chlorinated resin modification).

**NOTE :** THE WATERBORNE ASTEC RAPID LINE RETAINED ITS RETROFLECTANCE (HOLD ON TO REFLECTIVE BEADS) CONSIDERABLY LONGER THAN THE COMMERCIAL SOLVENTBORNE TRAFFIC MARKINGS.

Table 1 Retroflectance Retention of Traffic Markings based on:  
**Astec Rapid Line vs. Solventborne Alkyds**  
Retroflectance in millicandelas/m/lux with a Microlux 12

<b>Transverse Lines on a 6000 ADT (average daily traffic) asphalt road:</b>			
	<b>3 months</b>	<b>15 months</b>	<b>26 months</b>
Astec Rapid Line	240	190	170
Solventborne Fast Dry Alkyd	280	110	70

<b>Transverse Lines on a 20,000 ADT concrete road:</b>			
	<b>7 months</b>	<b>16 months</b>	
Astec Rapid Line	301	211	Solventborne
Chlorinated Polyolefin Modified Alkyd	280 110		

<b>Skip Lines on a 20,000 ADT asphalt road:</b>			
	<b>12 months</b>	<b>27 months</b>	
Astec Rapid Line	267	167	Solventborne Fast
Dry Alkyd	155 100		



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