Scope Of Use

- Asphalt, bitumen or concrete surface
- Relining upon alkyd and acrylic paints. New concrete surfaces with precautions
- Long-lasting road marking, for its fast hardening and high durability

Limitations

- Protect the road marking from traffic until it is dry
- **WARNING**: The roughness and anti-skid performance vary with the applied dosage and the film thickness

Retro-reflectivity

- Retro-reflective road marking can be achieved by dropping glass beads onto the paint immediately after application
- Use the suitable size gradation and type of glass beads, depending on the requirements of the road marking

Application

- Manual spreading, by means of a trowel, a spatula or a screed-box
- Application in cold, after mixing the two components: homogenise the paint, add the curing agent and stir thoroughly
- Once mixed use within 15 minutes
- DO NOT ever dilute the product with any kind of solvent or thinner
- DO NOT use the product if it has been heated by sun exposure

Dosage

- Ratio of the two components: one pail of 15kg of paint and one bag of 250g of curing agent (F-903-A)
- Use the amount of paint and glass beads required in the contract or specifications sheet
- The actual consumption of material for the desired film thickness depends on the nature and roughness of pavement
- An adequate film thickness is obtained by a dosage between 2500 and 3000 g/m² of paint

Conditions

- Dry and clean pavements, whose temperature is neither below 5°C nor above 40°C
- Ambient temperature exceeding dew point at least 5°C. Wind speed below 25 km/h
- Material perfectly homogenised: stir thoroughly the paint in the pail thoroughly before using

Precautions

- In case of relining, ensure good adhesion on the surfaces of the pre-existing road marking
- In case of application upon new concrete/asphalt remove the possible remainder of the curing agents as this can prevent adhesion of the road marking to the surface. In the case of new asphalt please ensure surface is at least 4-6 weeks old before application

Preservation

- Use the paint within nine months from its manufacturing date
- Protect from storage in the open, with extreme change of temperature. Shelter from solar heat and sunlight during storage, transport and use

Shipment

- Packaging is approved and correctly labelled for transport
- Customs harmonised system: TARIC code 3208.20.90
- Dangerous goods for transport
  Land Trans: UN 1263 PAINT, 3, III (D/E)
  Sea Trans: No UNO 1263 PAINT, 3, III
  (flash point <23°C)

This material constructs the following road marking systems with certificate of durability in accordance with EN 13197 and UNE 135200-3 (method B).

Two Component Roadline MMA White @ 2500 g/m².

Road Marking: Type 1 **Use:** P-NR (permanent / non retro-reflective)

Level of Durability	Night-time Visibility - Dry	Night-time Visibility - Wet	Night-time Visibility – Rain	Day-time Visibility	Skid Resistance
P7 / 4 MM Wheel Passages	---	---	---	B5 (≥ 0,60), Q5 (≥ 200)	S1 (≥ 45)

About Ennis-Flint

Ennis-Flint is a worldwide leader in the traffic safety and road marking industry providing quality and performance-driven solutions designed to enhance traffic safety for all users: drivers, pedestrians, cyclists and pilots.

You can find Ennis-Flint products on roads and highways, taxiways, runways, parking areas and in commercial, contractor, governmental, industrial, domestic, retail, airport and architectural settings.

With corporate headquarters in Thomasville, North Carolina and manufacturing, distribution, and sales locations occupying strategic points around the globe, Ennis-Flint does not lose sight of the fact our local relationships are what make and keep us strong.

Ennis-Flint EMEA (Europe, Middle East, Africa) is equipped to serve and exceed our customers' traffic safety and pavement marking requirements with our full range of quality products, outstanding geographic reach, and unmatched customer support with areas of expertise including, but not limited to:

- Road Markings
- Airfield Markings
- Road Studs
- High Friction Surfacing
- Bridge Expansion Joints
- Sealing and Crack Repair Systems
- Decorative Crosswalks and Traffic Calming Treatments
- Surface Graphics Systems
- Road Marking Performance Analysis
- Traffic Products
- Temporary Markings

Contact Ennis-Flint
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Traffic Products: **+44 (0) 1761 414 824**
E-mail: **info@ennisprismo.com**

ENNIS-FLINT
A Traffic Safety Solutions Company

Prismo Road Markings Limited (registered in England & Wales under registration number 05906228)
Registered Office: Drumhead Road, Chorley North Industrial Park, Chorley, PR6 7BX, UK.

02

MMA

ENNIS-FLINT
A Traffic Safety Solutions Company

Roadline MMA

Technical Information

MMA

MMA is an extremely hard wearing cold plastic that is ideal for high traffic areas such as transverse bar markings, box junctions and mini roundabouts.

It is fast curing, highly durable and has the potential to last up to 10 years. It offers a high skid resistance and conforms to both EN 1871 and EN 1436. It is available in a full range of colours with White, Yellow, Red and Black being offered ex-stock with other colours to order.

Technical Sheet Product Data

Roadline MMA White

This paint complies with the European Standard EN 1871.

This paint allows to construct road marking systems[1] which comply with the requirements of the European Standard EN 1436.

(1: The paint and, if necessary, the drop-on glass beads and the anti-skid aggregate, according to the requested type and class of road marking).

The specifications and the declared values for the dried or drying film refer to the system obtained from the mixture of Roadline MMA White and Curing Agent F-903-A in a ratio of 1.7% w/w.

This technical information does not represent guarantee of the performance of the product once applied.

It is the responsibility of the user to confirm the suitability of this information for its particular purpose, as well as to test if the product is appropriate for its own use and process.

The skid resistance is an own characteristic of the applied road marking, according to the norm EN 1436 and therefore, it's not possible to specify it for the road marking material.

Nevertheless, this paint, properly applied, is indicated to achieve the best performance regarding skid resistance.

Requirements

Property	Testing Method	Specification	Class
1. No-pick-up drying time	ASTM D711	t ≤ 30 minutes	t ≤ 30 minutes
2. Colour (chromaticity co-ordinates)	BS:EN 1871	Co-ordinates X, Y within the region defined in BS:EN 1871 for the white colour	X, Y within the region defined for white colour
3. Luminance Factor	BS:EN 1871	ß ≥ 0,80	LF6 ß = 0,84
4. Accelerated Ultraviolet Ageing	EN 1871 (UV-B)	Variation in ß ≤ 0,05 X, Y within the region for its colour without superficial anomalies, or defects	UV1
5. Alkali Resistance (in case of direct application upon concrete)	EN 1871	Without deterioration of the surface	Without deterioration of surface

Characteristics For Identification

Property	Testing Method	Tolerance	Declared Value
1. Relative Density	EN-ISO 2811-1	± 2% of the declared value	p = 2,02 {1,98 – 2,06}
2. Luminance Factor	BS:EN 1871	± 0,02 of the declared value	ß = 0,84 {0,82 – 0,86}
3. Viscosity Brookfield	EN-ISO 2884-1-2	NOT TOLERANCE DETERMINED	Max. 25.000 mPa-s

Roadline MMA Yellow

This paint complies with the European Standard EN 1871.

This paint allows to construct road marking systems[1] which comply with the requirements of the European Standard EN 1436.

Requirements

Property	Testing Method	Specification	Class
1. No-pick-up drying time	ASTM D711	t ≤ 45 minutes	t ≤ 45 minutes
2. Colour (chromaticity co-ordinates)	BS:EN 1871	Co-ordinates X, Y within the region defined in BS:EN 1871 for the yellow colour	X, Y within the region defined for white colour
3. Luminance Factor	BS:EN 1871	ß ≥ 0,40	LF1 ß = 0,44
4. Accelerated Ultraviolet Ageing	EN 1871 (UV-B)	Variation in ß ≤ 0,05 X, Y within the region for its colour without superficial anomalies, or defects	UV1
5. Alkali Resistance (in case of direct application upon concrete)	EN 1871	Without deterioration of the surface	Without deterioration of the surface

Characteristics For Identification

Property	Testing Method	Tolerance	Declared Value
1. Relative Density	EN-ISO 2811-1	± 2% of the declared value	p = 1,98 {1,94 – 2,02}
2. Luminance Factor	UNE 48073-2	± 0,02 of the declared value	ß = 0,44 {0,42 – 0,46}
3. Viscosity Brookfield	EN-ISO 2884-1-2	NOT TOLERANCE DETERMINED	Max. 8.000 mPa-s

Roadline MMA Red

Requirements

Property	Testing Method	Specification	Class
1. No-pick-up drying time	ASTM D711	t ≤ 45 minutes	t ≤ 45 minutes
2. Colour (chromaticity co-ordinates)	ISO 7724-2	The region defined by a polygon delimited by the following coordinates Point 1 2 3 4 X 0,650 0,490 0,480 0,620 Y 0,310 0,310 0,340 0,350	X, Y within the region defined for red colour
3. Luminance Factor	ISO 7724-2	0,12 ≤ ß ≤ 0,22	ß = 0,14
4. Accelerated Ultraviolet Ageing	UNE-EN 1871 (UV-B)	Variation in ß ≤ 0,07 0,12 ≤ ß ≤ 0,22 X, Y within the region for its colour without superficial anomalies, or defects	Variation in ß ≤ 0,07 0,12 ≤ ß ≤ 0,22 X, Y within the region for its colour without superficial anomalies, or defects

Characteristics For Identification

Property	Testing Method	Tolerance	Declared Value
1. Relative Density	UNE-EN-ISO 2811-1	± 2% of the declared value	p = 1,98 {1,94 – 2,02}
2. Luminance Factor	UNE 48073-2	± 0,02 of the declared value	ß = 0,14 {0,12 – 0,16}
3. Viscosity Brookfield	UNE-EN-ISO 2884-1-2	NOT TOLERANCE DETERMINED	Max. 8.000 mPa-s