



**PREALUX**

Passion for Road Safety

# ROAD MARKING

# THERMOPLASTIC AND COLD PLASTIC MATERIAL FOR ROAD MARKING

Thanks to collaborations with worldwide leading manufacturers, to guarantee quality and reliability, we can offer the **best marking solutions** for roads, highways and parking lots.



## THERMOPLASTIC

Produced in Kelly Bros's innovative and sustainable factory, this thermoplastic material is among the best in the world. Produced with quality raw materials, it is designed to meet the highest standards and offers superior performance on both dry and wet.

## COLD PLASTIC

MMA cold plastic is suitable for even the most difficult environments. A high quality road marking that offers durability and exceptional visibility day and night.

# BRITELINE 100 WHITE



DATE 22/02/17

ISSUE 01

REV 02

## TECHNICAL SPECIFICATION



### APPLICATION AND PREPARATION

Ensure the road surface is dry and clean from dust, dirt, grease, salt or any other contaminants. Road surface temperature should be above 5°C.

### TEST FREQUENCY

As per BSI Kitemark Licence Protocol.

### LICENCE NUMBER

KM 21408

### PRODUCT CODE

WE 100



### Performance Characteristics

#### BS EN 1871

Physical Properties

(Laboratory Conditions)

#### BS EN 1436

Performance Properties

(In Situ)

Luminance

LF 6  $\geq 80$

B 4<sup>1)</sup>  $\beta \geq 0,5 0$

Softening Point Class

SP 2  $\geq 80^{\circ}\text{C}$

–

Reflectivity

–

R4<sup>1)</sup> RL<sup>1</sup>  $\geq 200 \text{ mcd/m}^2.\text{lx}$   
– initial  
R2<sup>1)</sup> RL  $\geq 100 \text{ mcd/m}^2.\text{lx}$   
– surface dependent.  
24 months min  
(Drop-on beads 450g/m<sup>2</sup>)

Skid Resistance Class

–

S 2 SRT  $\geq 50$   
(Machine)  
S 3 SRT  $\geq 55$   
(Screed)

### Material Characteristics

Flash Point  $>230^{\circ}\text{C}$

Application Temperature  $170-210^{\circ}\text{C}$

Drying time **1–5 minutes (approx.)**



# BRITELINE 200 WHITE – SPRAY



DATE: 14/03/18

ISSUE: 01

REV: 2

## TECHNICAL SPECIFICATION



### APPLICATION AND PREPARATION

Ensure the road surface is dry and clean from dust, dirt, grease, salt or any other contaminants. Road surface temperature should be above 5 °C.

### TEST FREQUENCY

As per BSI Kitemark Licence Protocol.

### LICENCE NUMBER

KM 21408

### PRODUCT CODE

WS 200

### Performance Characteristics

BS EN 1871 Physical Properties (Laboratory Conditions)	BS EN 1436 Performance Properties (In Situ)
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#### Luminance

<b>LF 6 ≥ 80</b>	<b>B 4') β ≥ 0,5 0</b>
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#### Softening Point Class

<b>SP 3 ≥ 95 ° C</b>	–
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#### Reflectivity

With enhanced flowability.	<b>R4') RL ≥ 200 mcd/m².lx</b>
–	Drop-on beads – (450g/m²)

#### Skid Resistance Class

–	<b>S 2 SRT ≥ 50</b>
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### Material Characteristics

Flash Point	<b>&gt;230 ° C</b>
Application Temperature	<b>170-200 ° C</b>
Drying Time	<b>1–5 minutes (approx.)</b>

## TECHNICAL DATA

### Process

Spray thermoplastic material is mechanically agitated and is thermostatically controlled in a preheater and is sprayed under pressure through a nozzle onto the road surface. The height and pressure of the nozzle control the width of the line, while the pressure at the nozzle and the application speed controls the thickness of the line. Specially constructed spray equipment can travel and apply thermoplastic lines at a faster speed than extrusion. Sprayed applied markings are ideally suited for overlaying partially worn extrusion lines. Spray thermoplastic provides a low cost alternative to extrusion where an improvement is required in terms of the performance characteristics of a line, without an excessive increase in the thickness of the line.

Recommended Thickness 1.0 – 2.5 mm.

### Equipment

- Daily inspection of equipment is necessary to ensure that it is operable prior to application. Breakdowns of equipment during the application process can cause thermoplastic materials to be over-heated and this may result in sections of the work failing to meet the overall specification requirements.
- Continuous routine in process control of all equipment during application is of extreme importance for the assurance of meeting the specification requirements.
- It is essential to keep equipment clean and free of material residue build-up particularly at the end of a working day. It is of critical importance to ensure that the material in the pipes is cleaned out at the end of a working day to avoid sedimentation of the material which would hamper the next heating up process.

### Recommendation

To avoid settlement at the end of the working day the agitators (paddles) must be left on until the material is cooled below 120°C.

# BRITELINE PLUS

## WHITE – RIB



### TECHNICAL SPECIFICATION



#### APPLICATION AND PREPARATION

Ensure the road surface is dry and clean from dust, dirt, grease, salt or any other contaminants. Road surface temperature should be above 5°C.

#### TEST FREQUENCY

As per BSI Kitemark Licence Protocol.

#### LICENCE NUMBER

KM 21408

#### PRODUCT CODE

WRIB +

#### Performance Characteristics

BS EN 1871 Physical Properties (Laboratory Conditions)	BS EN 1436 Performance Properties (In Situ)
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#### Luminance

LF 6 ≥ 80	B 4 <sup>1</sup> ) β ≥ 0,5 0
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#### Softening Point Class

SP 3 ≥ 95 °C	–
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#### Reflectivity

–	<b>R4<sup>1</sup>) RL ≥ 200 mcd/m<sup>2</sup>.lx</b> – 12 months <b>150 mcd/m<sup>2</sup>.lx</b> – 24 months <b>R2<sup>1</sup>) RL ≥ 100 mcd/m<sup>2</sup>.lx</b> – 36 months (NRA Contract 36 months min guarantee) Recommended single drop-on bead system. <b>Euro Medium</b> <b>AC90-10 AS</b> – (450 g/m <sup>2</sup> )
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#### Skid Resistance Class

–	S 2 SRT ≥ 50
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#### Material Characteristics

Flash Point	>230 °C
Application Temperature	170–210 °C
Drying Time	1–5 minutes (approx.)



# BRITELINE PLUS

## YELLOW – RIB



### TECHNICAL SPECIFICATION



#### APPLICATION AND PREPARATION

Ensure the road surface is dry and clean from dust, dirt, grease, salt or any other contaminants. Road surface temperature should be above 5°C.



#### TEST FREQUENCY

As per BSI Kitemark Licence Protocol.

#### LICENCE NUMBER

KM 21408

#### PRODUCT CODE

YRIB +

#### Performance Characteristics

##### BS EN 1871

Physical Properties  
(Laboratory Conditions)

##### BS EN 1436

Performance Properties  
(In Situ)

#### Luminance

LF 2 ≥ 50

B 2<sup>1)</sup> β ≥ 0,3 0

#### Softening Point Class

SP 3 ≥ 95 °C

–

#### Reflectivity

–

R4<sup>1)</sup> RL ≥ 200 mcd/m<sup>2</sup>.lx  
– 12 months  
150 mcd / m<sup>2</sup>.lx  
– 24 months  
R2<sup>1)</sup> RL ≥ 100 mcd/m<sup>2</sup>.lx  
– 36 months  
(NRA Contract 36 months min guarantee)  
Echo Star 20 – (450 g/m<sup>2</sup>)

#### Skid Resistance Class

–

S 2 SRT ≥ 50

#### Material Characteristics

Flash Point >230 °C

Application Temperature 170–210 °C

Drying Time 1–5 minutes (approx.)

# COLOURTUFF RED FOR COLD-APPLIED



## TECHNICAL SPECIFICATION



### Hardened Red Stone Characteristics

PSV	55
Skid Resistance Value (SRV)	55+ (S3)
10% Fines	220km

The product detailed in this data sheet forms one of a series of specially formulated high friction road surfacing binders for use with 1–3mm hardened red stone with a Polished Stone Value of 55. The system comprises of two liquid reactive components of moderate viscosity and good reactivity to optimise processing and throughput.

**(PART A)** is a specially formulated high performance epoxy resin with proprietary modification.

**(PART B)** is a specially formulated epoxy resin curing agent with proprietary modification.

Combined, these materials cure to produce a tough resilient surface coating binder that adheres to many substrates, has a high degree of toughness and is hard wearing.

### APPLICATION

This system is a specially formulated two-part epoxy resin system, developed for application to road surfaces in combination with hardened red stone or other type aggregates (if required) to form hard-wearing high-performance anti-skid road dressing. The resultant surfaces are highly resistant to polishing and wear and should maintain high skid resistance values for long periods of time.

### USES

The relentless action of traffic on road surfaces causes a steady deterioration of conventional bituminous surfaces, both by 'fatting up' of the binder and by the polishing action of vehicle tyres. These problems are particularly prevalent at highly stressed areas where performance is critical.

- Pedestrian crossings
- Traffic signals
- Roundabouts
- Bus bays
- Junctions
- Sharp bends
- Toll booth approaches
- Feeder and exit lanes
- Rumble strips
- Accident 'black spots'
- Cycle lanes and pedestrian walk ways

### BENEFITS

- Non-toxic system
- Clear components – readily coloured for improved aesthetic appearance
- Homogeneous system – may be applied by hand or machine
- Convenient mix ratio 1:1 by weight
- Moderate viscosity and good reactivity
- Good tensile and elongation characteristics
- Resistant to oils and solvent spillage

### PROCESSING APPLICATION

The system must be applied to dry substrates, free from oil, solvents and loose debris/stone. As stated previously the application rate will vary with substrate porosity. The following coverage levels are suggested. This system is generally applied at a nominal 20–30°C mixed temperature (hand mix application) and following intimate mixing is spread evenly to provide the aforementioned coverage. Following application to the substrate, the hardened red stone (or other aggregate) is distributed across the surface before the binder has set. The system is allowed to cure and the residual aggregate is then brushed from the surface and reclaimed.



# DISABLED BAY BLUE



## TECHNICAL SPECIFICATION



### APPLICATION AND PREPARATION

Ensure the road surface is dry and clean from dust, dirt, grease, salt or any other contaminants.

### CONCRETE APPLICATION

It is recommended that the area to be marked should be given a light scabbling and the area lanced to burn off any curing agents present in the concrete. Material should be applied 170–190°C.



### Performance Characteristics

BS EN 1871 Physical Properties (Laboratory Conditions)	BS EN 1436 Performance Properties (in situ)
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Luminance

**N/A**

–

Softening Point Class

**SP 2 ≥ 80 °C**

–

Reflectivity

–

–

Skid Resistance Class

–

**S 5 SRT ≥ 65**

### Material Characteristics

Flash Point	<b>&gt; 230 °C</b>
Application Temperature	<b>170–190 °C</b>
Drying Time	<b>1–5 minutes (approx.)</b>
Spread Rate	<b>120m<sup>2</sup> per tonne</b>

# KELLY BROS MANUFACTURING

## PRODUCT RANGE

### THERMOPLASTIC



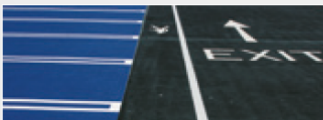
**BriteLine 100** a premium, durable thermoplastic, with ultra-bright pigments and high index glass beads. Ideal for the most demanding environments. BriteLine 100 is highly visible, both by day and by night. Available in white and yellow.



**BriteLine +** our premium plus product range. BriteLine + is a high-definition thermoplastic, offering superior performance in both dry and wet conditions, providing exceptional reflectivity, luminance, durability and skid resistance. Available in white and yellow.



**PrimeLine** a versatile, cost-effective thermoplastic designed to withstand heavy traffic usage. With excellent levels of reflectivity, luminance and skid resistance it is available in reflective and non-reflective grades in a range of colours.



**CreteGrip** is an innovative line marking product that adheres to most surfaces including concrete. It is available in reflective and non-reflective grades and in a range of colours.

All products above are available in screed, rib line, extrusion and spray grades and are certified for application in many European and international markets.

### ANTI-SKID



**ColourTuff** a quick-drying, hot-applied thermoplastic anti-skid road surface treatment. ColourTuff is highly visible and ideal for bus and cycle lanes, walkways, car bays and traffic calming strips and is proven to improve safety in busy areas. Available in a range of grades and colours.



**KellyGrip** the highest performing anti-skid road surface treatment on the market, produced using aggregates exclusive to Kelly Bros in excess of 75 PSV and 71 SRV. Available in Buff and Dark Grey (applied hot or cold).

### REPAIR



**KellySeal** an overband sealant for general applications, made with high PSV, 1–3mm aggregates, polymers and mineral fillers, capable of filling and sealing in one operation. KellySeal is tough, with strong elastomeric performance.



# KELLY BROS MMA COLD PLASTIC PRODUCT RANGE



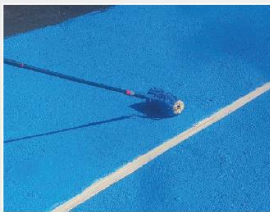
## BritePlast 100

Suited to the most challenging environments, BritePlast 100 is a premium, highly durable cold plastic. Due to its ultra-bright pigments and complex binder system, BritePlast 100 is an effective solution for roads that require high visibility during the day and high reflectivity at night. Superior durability under heavy traffic loads and snowploughs with exceptional adhesion to concrete and asphalt surfaces. Available in extrusion, screed and spray grades.



## BritePlast Plus

Designed to meet the highest quality standards in the world. BritePlast Plus offers superior performance in both dry and wet conditions. A highly durable, sustainable road marking that stands up to harsh weather conditions and the demands of today's busy roads. BritePlast Plus is specifically designed to provide a high definition road marking with exceptional reflectivity, luminance and anti-skid resistance properties. Available in extrusion, screed and spray grades.



## BritePlast Grip

Formulated to display all the outstanding features of our BritePlast technology, BritePlast Grip offers exceptional anti-skid properties. BritePlast Grip comes in a range of colours and is specifically suited to bus and cycle lanes, walkways, car bays and traffic calming strips. A quick-drying solution, BritePlast Grip ensures minimum disruption to pedestrian or motor traffic and is available in a number of grades for a truly versatile product. Available in extrusion and screed grades.

\*The BritePlast portfolio is available in a variety of traffic colours and in a 98:2 system.



## Applications

Apply MMA by spray, extrusion, shoe or by agglomerate. MMA can also be hand-applied by screed box (drag shoe), roller or trowel. Flat line is normally mixed with a static mixer.

## MMA cold plastic is normally a two-component system or 1:1 (three components).

The 1:1 system is normally Component A and Component B (with an accelerator), sprayed together with a liquid curing agent (normally Benox 50). Special spray equipment for friction surfaces is available.

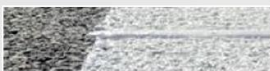
## AGGLOMERATES



**Eurostructure, or Wyssbrood system** (named after its Swiss inventors (1998)), is the most common agglomerate for cold plastics in central Europe. For optimum performance, agglomerate should be "open" so that water and dirt can drain.



**Spot Flex** was invented originally for thermoplastic in Denmark and is also a very common agglomerate for cold plastic markings in central Europe. The cold plastic "spots" are normally smaller and rounder than the thermoplastic 'drop on dot' lines. But the functionality is the same/similar: good drainage, an audible effect and protected glass beads at the side of the agglomerate.



**Rib Line** – Whilst many northern countries are milling the surface to achieve a noise effect – central Europe seems to prefer the ribs for their noise-giving features.



**Trappflex** (Stair/Chess) thermoplastic can also be constructed for cold plastic. Thixotropic materials already exist.



**bsi.**

**Certificate**

QUALITY MANAGEMENT SYSTEM

This is to certify that:

Holds Certificate Number:

and operates a Quality Management System within the following scope:

The manufacturer including any subcontractors

For and on behalf of

Original Registration Date: 17/03/2017  
Latest Revision Date: 17/03/2017



This certificate was issued by BSI Assurance Limited, a Member of the BSI Group.



By Royal Charter

**aetec**

Asociación para el Estudio de las Tecnologías de Equipamiento de Carreteras, S.A.  
Control de calidad de:  
- Materiales de señalización vial horizontal  
- Ensayos de durabilidad  
- Marcas viales: auscultación en carretera  
C/ Isaac Peral, nº 1 (nave 4), E-28914 Leganés (Madrid) - Spain  
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**ENAC**  
ENSAYOS  
Nº 877/LE1781

## ROAD MARKING MATERIALS

(Durability against abrasion: EN 13197:2012+A1:2014)

**CERTIFICATE OF DURABILITY TEST** REF. **4896/P-RW-II**

**Client:** **KELLY BROS (Erinline)**  
Baileborough Road, Virginia, Co Cavan  
A82 DY05 (IRENLAD)

**Issue date:** February 28th, 2020

**1.- TESTED ROAD MARKING SYSTEM**

**A) INFORMATION PROVIDED BY THE CUSTOMER**

MATERIALS IDENTIFICATION, TRADE MARK NAME AND TYPE OF APPLICATION		MANUFACTURER(S)		Thickness (µm)	Dosage (g/m²)
Nature:	White waterbased paint				
Trade mark:	<b>Brite Aqua 100</b>				
Applied by:	Spray		<b>Kelly Brothers</b>	<b>400</b>	<b>660</b>
Nature:	Class beads				
Trade mark:	<b>ECHOSTAR 10 WBP</b>		<b>SOVITEC</b>		<b>400</b>
Applied by:	Drop-on				
<b>TYPE OF MATERIAL:</b> White acrylic waterborne paint without premix glass beads applied by spray and with drop-on glass beads.					
<b>CHARACTERISTIC OF THE ROAD MARKING:</b> (in accordance with EN 1438:2018) <b>Not structured</b>					

- The characteristics of identification of the material can be obtained from the own manufacturer or in this laboratory with his authorization.
- The tested material is identified by its CE Declaration of Conformity and their accompanying documents.

**B) TEST RESULTS: on roughness (in accordance with EN 13197:2012+A1:2014)**

REQUIREMENTS OF THE ROAD MARKING SYSTEM		DURABILITY						
According to the intended use of the road marking system, not all requirements are necessary		expressed in TRAFFIC CLASSES, in accordance with EN 13197:2012+A1:2014						
Night-time visibility	Coefficient of retro reflected luminance $R_L$	Expressed in		P			R	
		dry	wet	P0	P4	P5	P6	P7
Day-time visibility	Luminance coefficient in diffuse illumination $Q_d$ or luminance factor $\beta$	Class (R)		RW			Q	
		R5	R4	RW3	RW2	RW2	RW2	RW1
Skid resistance	Chromaticity coordinates (x - y)	Class (B)		B			Q	
		B5	B4	B5	B4	B4	B4	B3
Type	SRT units	Pass / Not Pass		S			T	
		pass	pass	S2	S2	S1	S2	S1
<b>NO PICKUP-TIME:</b>		In accordance with EN 13197:2012+A1:2014		Type I / II		Class (T)		
						II		
						T3		

The TRAFFIC CLASSES have been assigned based on the measured mean values, without considering their measurement uncertainties.

<b>CERTIFICATE OF DURABILITY TEST</b>	Ref. <b>4896/P-RW-II</b>	Issue date <b>February 28th, 2020</b>	Date of end the test: <b>February 18th, 2020</b>
This certificate is identical to the original certificate number:		Laboratory Manager: <b>[Signature]</b>	Product reference: <b>17-3C (E)</b>
This CERTIFICATE cannot be partially reproduced without permission of AETEC S.A.		Or Francisco J. Garcia	Page 1 of 2

The validity status of the certificate can be confirmed in [www.aetec.es](http://www.aetec.es)

# Passion for Road Safety

## CONTACT INFO

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