

# ULTRALUX 200

## 'HIGH VISIBILITY' THERMOPLASTIC ROAD MARKING MATERIAL

### MATERIAL SPECIFICATION SHEET (MSS15)

#### description >>>

ULTRALUX 200 is a high performance road marking designed for superior day and dry night visibility. ULTRALUX 200 utilises the whitest titanium pigments and premium quality glass microspheres along with a specialised binder system. Manufactured under an ISO 9001:2008 & ISO14001:2004 Quality Assured System, it is BSI kitemarked to BS EN 1871:2000 and has been performance tested against the requirements of BS EN 1436.

#### scope of use >>>

ULTRALUX 200 is recommended for situations requiring exceedingly visible road markings that are "ultra bright" during the day and highly reflective at night. ULTRALUX 200 thermoplastic road markings can be especially effective on unlit rural roads that have a high speed limit and a history of serious accidents. It is available as Screed, Extrusion or Spray grades.

#### product highlights / benefits >>>

- High performance material for enhanced daytime and dry night-time visibility
- Improved contrast with road surface to give better information and guidance to drivers
- Exceptionally Bright White - Achieves the top luminance (Qd) class possible after being independently trialled for 1 year (BS EN 1824)
- Very stable material, does not significantly discolour upon prolonged heating (up to 6hrs)



#### technical data >>>

Laboratory Tests	Value	Class
BS EN 1871 Softening Point	≥ 65°C	SP1
Export Grades	≥ 95°C	SP3
BS EN 1871 Luminance (β)	≥ 80 White	LF6
Road Trials	Value	Class
BS EN 1824 Durability	1x10 <sup>6</sup> wheel passes	P5
Performance Tests	Value	Class
<b>BS EN 1436 Retroreflectivity (RL)</b>	≥ 200 mcd m <sup>-2</sup> lx <sup>-1</sup>	<b>R4</b>
<b>WET Night Retroreflectivity</b>	≥ 25 mcd m <sup>-2</sup> lx <sup>-1</sup>	<b>RW 1</b>
Initial retroreflectivity is entirely dependent on the application method, surface applied materials and conditions of application.		
BS EN 1436 Luminance (Qd) (Diffuse Illumination)	≥ 160 mcd m <sup>-2</sup> lx <sup>-1</sup>	Q4
BS EN 1436 Skid Resistance (SRT)	≥ 45	S1
Higher initial skid resistance is achieved by the use of a special Drop on Bead/Aggregate/Grain mixture.		
Other Data	Value	Class
Flash Point (Open Cup)	≥ 230°C	N/A
Maximum Safe Heating Temp	220°C	N/A
Application Temp. Screed / Extrusion	150 - 200°C	N/A
Spray	180 - 210°C	N/A
Relative Density	1.9 ± 0.2 g/cm <sup>3</sup> (mt / m <sup>3</sup> )	N/A
Coverage Rate Screed / Extrusion	100 - 250 m <sup>2</sup> / mt	N/A
Spray	230 - 390 m <sup>2</sup> / mt	N/A
Coverage rate is approximate only and depends on application speed, method, applied thickness and road surface texture.		

#### packaging & storage >>>

ULTRALUX 200 thermoplastic is packed in approx. 25kg heat-sealed meltable "pillow sacks" in 1 tonne lots. Each batch is covered with a polyethylene top-sheet and shrink-wrapped. Materials should be stored under cover in dry conditions and if stored correctly will have a shelf life of > 1 year. The pillow sacks contain ventilation holes to prevent bursting and it is important that the material is stored under cover to prevent ingress of moisture. Wet material poses a significant Health and Safety risk to operators as it can "foam" excessively and overflow from the pre-heater.

#### health & safety information >>>

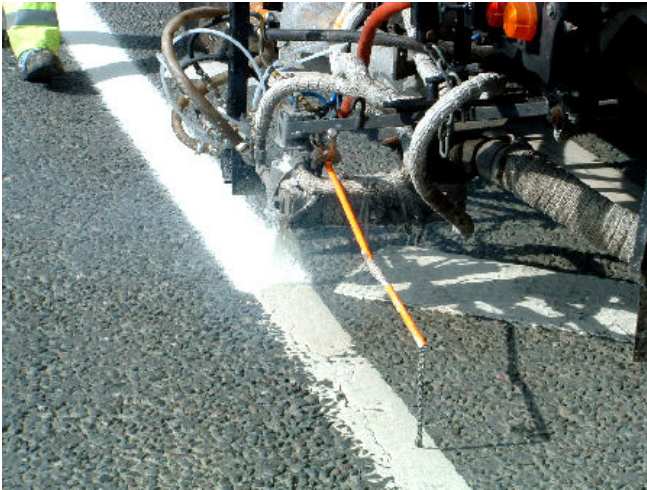
Please refer to separate H&S Data Sheet (MSDS XX). General information for all products is contained on the reverse of the pallet weight sheet.



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## surface preparation >>>

The surface should be dry, free from dust, dirt, grease or oil and any other detritus material. The road surface temperature should be above 5°C. Ideally existing markings should be removed prior to application.

ULTRALUX 200 may be applied over existing thermoplastic markings provided that they are in a sound condition and will not be easily removed from the road surface. ULTRALUX 200 should not be applied over old paint markings.

On worn bituminous and concrete surfaces, a suitable tack coat primer should be used in accordance with the manufacturer's instructions prior to application.

It should be noted that thermoplastic road markings laid on new bituminous surfaces could suffer from "bitumen carry-over" leading to discolouration and masking of the road markings.

## Application information >>>



ULTRALUX 200 is supplied in 25kg (approx.) low melt polyethylene bags that may be melted with the product (depending on application method, not recommended for spray materials).

Place a few bags of product into the preheater, fitted with mechanical agitation and temperature control devices, and heat up to approaching the stated application temperature.

When this initial material is molten the remainder of the preheater may then be filled (heating a small amount initially, increases the rate of heat transfer and reduces heating time for a full preheater of material).

When the material has been brought to the recommended temperature, and has been thoroughly mixed, it can then be transferred to the application equipment.

**DO NOT EXCEED** the maximum safe heating temperature as this is potentially dangerous and could lead to flashing, discolouration of the material and severe deterioration of the binder.

Surface applied glass beads or bead / aggregate / grain mix recommended by Kestrel Thermoplastics should be used. Application rates vary depending upon the grade of drop-on material to achieve optimum performance. Typical application rates are  $400 \pm 100 \text{ g/m}^2$ .

Use of alternative materials may reduce the performance characteristics of ULTRALUX 200 products.

ULTRALUX 200 products should be applied at the recommended thicknesses as follows:

- |              |           |
|--------------|-----------|
| 1) SCREED    | 2 – 5 mm  |
| 2) EXTRUSION | 2.5 – 4mm |



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The information contained in this specification is believed to be accurate as of the date of issue. Kestrel Thermoplastics Ltd. reserves the right to make changes to this specification as required. Performance data compiled from independent trials is INDICATIVE only and does not constitute a guarantee as in situ performance is significantly affected by application conditions. It is the users responsibility to ensure that the product selected is suitable for the intended use.



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