PLASCON THERMOPLASTIC PAINT

GENERAL

The Thermoplastic Paint Material consists of a combination of light plasticized resin, Glass Beads, aggregated pigment and extender, heated to around 200 - 220 °C (if sprayed) which cools down rapidly. Thermoplastic Paint can be applied efficiently through any of the established road marking machines. Paints are applied in three different ways, namely Screed, Spray or Extrusion. Different applications usually require different formulations and equipment.

1. AGGREGATE

The aggregate consists of light coloured silica, crushed calcite or other approved aggregate.

2. PIGMENT AND EXTENDER:

For White markings, the pigment is titanium dioxide (anatase or rutile) complying with BS 1851 and its content is such as to give a minimum luminance factor of the material of 70.

For the Yellow markings the pigment is a lead chromate which is sufficiently heat stable. The pigment content used will depend on the colour required by the engineer.

The extender is calcium carbonate which is prepared from natural chalk.

3. BINDER:

The binder is plasticized synthetic resin.
The viscosity and wetting properties of the binder at the application temperature give a composition which can be applied satisfactorily.
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4. PERFORMANCE:

a) Density

Thermoplastic Paint has a density of approximately 2.0 gm/cc

b) Flash Point

Thermoplastic Paint has an open flash point above 235 °C.

c) Softening Point

The Softening Point of Thermoplastic Paint measured by the Ring and Ball method (BS 2000) is at least:

- 90 °C - Tropical Grade
- 85 °C - Semi Tropical Grade
- 65 °C - temperate grade

d) Luminance

The luminance factor as delivered of Thermoplastic Paint is not less than 70 for white and 50 for yellow.

e) Flow Resistance

The percentage decrease in the height of the cone of Thermoplastic Paint is not more than 25% after testing for 48 hours at 40 °C (tropical or semi-tropical grades) or 23 °C (temperate grade).

f) Skid Resistance

The skid resistance of a laboratory prepared sample of Thermoplastic Paint is not less than 45.
5. APPLICATION

i) The road surface must be dry and free from loose detritus, mud and other extraneous matter. Where old paint or other thermoplastic material is present, it is the contractor’s responsibility to ensure that the surface is suitable.

ii) When the road surface temperature is below 5°C the contractor must use heat up the road surface before the application of Thermoplastic Paint. It’s on contractor’s description to decide when to heat up the road surface.

iii) The Thermoplastic Paint must be applied at the temperatures not exceeding the safe heating temperature 220 °C.

iv) In addition to the solid glass beads incorporated in the mixed material a further quantity of surface applied beads may be required. If so the rate of application shall be 450. 50g/m².

v) Thickness:

The material shall be laid to the following thickness:

1) Screed line not less than 2.0 mm nor more than 5.0 mm
2) Sprayed lines other than yellow: not less than 1.5 mm
3) Sprayed yellow edge lines (no waiting etc.): not less than 0.8 mm
4) Extruded lines: not less than 2.5 mm or more than 3.5mm