



## THERMOPLASTIC

Hi-Brite thermoplastics have been specially formulated to comply with AS4049.2 and are manufactured in a ISO9001 accredited facility. Hi-Brite thermoplastic exceeds the AS/NZ standards for retroreflectivity, luminance and anti-skid. This high-performance product comes in Spray, Profile, Screed and Extrusion formats to meet each application format.

Spray thermoplastic is designed primarily for long edge lines, lane lines with a typical spray thickness of about 1.6-1.8mm. Material application temperature is typically between 190 – 210 degrees Celsius with application rates of 10-12km per hour achievable. Drop on glass beads and aggregates can be applied immediately behind the sprayed line to give initial skid resistance and retroreflectivity. Spray thermoplastic can penetrate the spaces between the aggregates in the road, creating a strong bond between the material and substrate.

Profile thermoplastic, more commonly known as ATLM or ATP (NZ) is a marking system which provides an extra level of safety to road users. These types of markings give enhanced visual and audio effect to drivers who stray out of the road's parameters. It is widely used in highways and 'black spot' areas to mark lane lines, and edge lines.

The raised profiles or ribs of about 10mm on Profile thermoplastic will stand proud of any water during or after rain and provides retroreflectivity / visibility from a distance whereas normal line markings, even with the biggest glass beads, could be submerged under a layer of water which distorts and reduces the retroreflectivity of the line.

Profile Thermoplastic is specially formulated to apply at 180-200°C and normally applied by truck mounted equipment. Most equipment can be set to apply the ribs at set heights with the normal specification set a base line thickness of less than 2mm and profile height of 10±2mm from substrate. Drop-on glass beads are applied immediately onto the profile line to provide retroreflectivity.

Screed thermoplastic is typically used for transverse lines, pedestrian crossings, symbols, car parks and small jobs. Application temperature typically is 180-200°C with glass beads and anti-skid aggregates are applied onto the molten line to provide immediate anti-skid and Retro-Reflectivity.

Extrusion is another marking system for edge lines and lane lines which is typically applied with a truck mounted machine or trailer unit. Extrusion thermoplastic is extruded at about 195-215°C through a shoe with a set width and shutter thickness. The extruded material is laid onto the road surface where the hot thermoplastic forms a bond when it contacts the road. Glass Beads and aggregates are applied immediately behind the extruded lines to give initial skid resistance and Retro-Reflectivity.

Extruded lines have good edges and thickness but the substrate must be in a sound state for maximum benefit. Extrusion is not the best linemarking system for coarse sealed roads compared to spray applications. Application rate is also slower than spray

### Key Facts

- Hardest wearing roadmaking system
- ATLM provides extra safety awareness to road users
- Quick dry time
- Good night / wet visibility performance
- Multiple system application solution

- Flexibility to withstand road expansion
- High performance ability to hold large beads for enhanced retroreflectivity

## Physical Characteristics

- Colour White and Colours
- Softening point 95 Degrees C
- Application Temperature 180-200 Degrees C
- Flash Point 235 Degrees C
- Weight Solids (%) >99%
- Volume Solids (%) >99%
- VOC Content <20g/L
- Theoretical Coverage 2.5KG/m<sup>2</sup> at a thickness of 1-1.25mm

## Available Sizes

- 25kg bags

## Surface Preparation

Prior to application the surface should be free of any oil, dirt, grease, loose surface material or other foreign matter and dry. If the surface has previously been coated or treated then a marking test should be carried out to check and establish if further surface preparation is required.

## Hi-Brite Thermoplastics Preparation

Hi-Brite thermoplastic is a composite material which requires heating to 180C-210C and turning the product into a molten form ready for application. Film thickness can vary depending on the marking system applied. Anti-skid media and glass beads can be applied when the product is a molten form to enhance skid resistance and retroreflectivity.

## Dry Time and Application Conditions

The specific curing time will be dependent upon the thickness of the paint applied and the ambient weather condition at the time of application. If the humidity increases or the temperature drops or the wind speed drops then the curing of the paint will increase.

## Clean Up

A minimum amount of thermoplastic should be left in the heating kettle post application to avoid burning and blackening when the kettle is restarted. Leaving excessive material in a kettle or pre-heater can also damage the mixing paddles when they are restarted.

## Storage and Transport

Hi-Brite Thermoplastic is classified as non-dangerous goods by the Australian code for the transport of dangerous goods (ADG). The product should be stored undercover and out of direct sunlight, stock should be used on a first in first out basis.

## Support and Service

At RRSP, we look to offer our customers the right road and pavement system solution through a combination of fast service, reliable inventories, knowledgeable people, personalized attention, and competitive pricing which is perceived by our customers to be the best value available. Have a question on this product or any other we offer give us a call.

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