

Thermoplastic Product Data Sheet

Product Description:

Crystalite's Thermoplastic is a high performance long life roadmarking system designed to meet and exceed AS4049, being produced in APAS Registered Manufacturing facilities. Formulations can be tailored to different price points and performance criteria.

It comes in the following formats:

- Screed – for transverse and short longitudinal markings
- Extrusion – Flat line longitudinal marking applied by machine
- Profile – For raised profiled ribs at 8-10mm height to increase road safety on longitudinal markings
- Preform – Preformed sheets to be applied with a heat torch.

Application & Conditions:

Thermoplastic must be laid on a dry surface. It cannot be laid when dew or rain is present. On asphalt, as soon as car tyres begin to show signs of 'tracking' from moisture, application must cease immediately.

Concrete must have not had rain for 72 hours prior to application and must have at least 30 days curing from being poured.

Application temperature will depend greatly on product, ambient temperature and surface. Being a hot melt adhesive, temperature must be increased to ensure adhesion in colder temperatures and decreased in warmer temperatures to minimise dry time and tracking.

ALL THERMOPLASTIC SHOULD ONLY BE APPLIED ABOVE 10 DEGREES PAVEMENT OR AIR TEMPERATURE.

If circumstances insist that the material is being applied between 7-10 degrees, temperature must be at a minimum of 205 degrees, with adhesion being checked regularly by hammer and bolster. Application temperatures must be checked regularly.

IF AIR TEMPERATURE IS BELOW 15 DEGREES, DEW POINT MUST BE CHECKED REGULARLY.

IN COOLER TEMPERATURES WHERE MOISTURE IS PRESENT / HAS BEEN PRESENT, PARTICULAR ATTENTION NEEDS TO BE GIVEN TO AREAS WHERE TREES OR SHADE IS PRESENT. THESE AREAS MAY NOT HAVE FULLY DRIED OUT.

Stone Mastic Asphalt and 10-14mm Chip Seal's also require particular attention as they may appear dry however may have water / moisture sitting below the visual surface.

APPLICATION TO CONCRETE SURFACES MUST BE APPLIED AT MIMUM 200 DEGREES. ALL CONCRETE SURFACES MUST BE PRIMED WITH CRYSTALITE THERMOPLASTIC CONCRETE PRIMER PRIOR TO APPLICATION.

Application to “Flushed” bitumen seals will result in failure – the bitumen’s bond to the thermoplastic is stronger than the bitumen’s integrity and elongation strength.

Application over new or high build waterborne paint is not advisable. If Audio Tactile Line Marking is required on a freshly painted surface, it is advisable to consider Black ATLM offset on the edgeline and in between the double barrier.

Crystalite Profile Thermoplastic is formulated to be applied at 185-195 degrees on asphalt and bitumen surfaces, and minimum 200 degrees on concrete surfaces. Please contact Crystalite if you have a large concrete job so we can tailor the formula to ensure adequate rib height occurs at this temperature.

Purging Trays must be taken prior to each run when machine applying. Temperature must be accurately measured by infrared thermometer coming out the head of the machine into the tray.

Temperature probes and gauges on the machine must be used as a guide only as they typically prove inaccurate. Normally 3-4 trays should see the material at a consistent temperature. Some machines may experience poor oil circulation and more trays may be necessary. The head should be reading the same temperature as the oil temperature on the hot oil outlets.

Preheaters and agitators should be set at a maximum of 30 RPM to avoid excessive shear, particularly with profile thermoplastic.

Thermoplastic should be reheated a maximum of 2 times and at application temperature for 8 hours, ensuring that only the amount needed is cooked for each shift. Reheating thermoplastic jeopardises the integrity of the binder package through prolonged heat exposure. All augers and heads should be drained at the end of each shift to avoid settling.

Physical Properties:

Item	Standard
Softening Point	<90 degrees, <95 degrees - Profile
Binder Content	18-22%
Glass Bead Content	<25% (exc black)
Specific Gravity once Molten	2g/cm ²
Spherical Intermixed Beads	<80% (exc black)
Refractive Index	<1.5 (exc black)

Storage & Transport:

Crystalite Thermoplastic should be stored in a dry undercover space with stock being rotated on a first in, first out basis as a useable life span is 6 months from order date. It is classified as a non Dangerous Goods product when in its unmolten form.

CRYSTALITE

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Please note that when molten in kettles thermoplastic does become a Class 9 Elevated Temperature Dangerous Good once passing 100 degrees. Please check with local regulations.

Support & Service:

24/7 Support is available on +61 4 07 766 796 Training is available on-site complimentary Please contact Crystalite to ensure that the material is fit for purpose prior to ordering through sales@crystalite.com.au or (02) 65 66 77 666

ALWAYS REFER TO SDS PRIOR TO USE