



**MORE INFO:** [www.uniteddecorating.com](http://www.uniteddecorating.com)

## SYSTEM 300 THERMOPLASTIC IS A HIGHLY DURABLE PLASTIC ROAD MARKING MATERIAL.

It can be applied to the surface of the roadway or inlaid into the asphalt, and can be used for longitudinal or transverse markings. Due to its durability, United Decorating uses System 300 Thermoplastic as the base for SNO-PRO profiled road markings, which offer additional wet / night visibility and skid resistance.

### APPLICATION & MAINTENANCE

Manufactured by United Decorating Road Marking, Thermoplastic creates a strong hydrocarbon bond to the oil in the asphalt. Because a hydrocarbon bond is required, application is best on fresh, non-oxidized asphalt. Application on old asphalt is possible, however it must first be milled to expose non-oxidized layers.

System 300 Thermoplastic is very durable, and was specially designed for extra durability in inlaid road markings. Inlaid road markings can be flush with the road surface, or 1-3 mm above, and can withstand extreme weather and snowplow blades.

### RECOMMENDED PROCEDURES

United Decorating has been applying thermoplastic road markings since 1996. The System 300 Thermoplastic roadmarking is created by heating solid plastic blocks to high temperatures, and applying the liquid plastic to either longitudinal or transverse markings. It is extremely durable and can be used in high-traffic areas.



Manufacturing—Adding to drum



Manufacturing—Creating the bars



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SYSTEM 300 THERMOPLASTIC // SPECIFICALLY FORMULATED FOR CANADIAN CLIMATES





Cleaning the road surface



Transferring plastic to the applicator



Yellow longitudinal line

## RECOMMENDED PROCEDURES:

### SURFACE CONDITIONS

Surface conditions should be clean and dry. Fine dust, sand, or clay must be removed before application of thermoplastic materials. A sweeper, air equipment or broom will work in most situations.

The surface temperature of the asphalt is also critical. For best results the temperature should be above freezing if materials are inlaid. For surface application, United Decorating recommends the temperature of the road surface be at least 10°C.

### MATERIAL TEMPERATURE

Our white thermoplastic is designed to be applied at 200°C. This is especially important on old asphalt, as the tar and oils of the asphalt have been eroded from the surface and more time is required for the heat bond to take place.

Our yellow thermoplastic is designed to be applied at 185°C because a lower temperature is important to maintain good color.

### PRE-HEATING EQUIPMENT

Heating equipment should be regulated to ensure the heating oil temperature never exceeds 220°C. Serious damage can occur to the molecular structure of the resin which can result in premature failure and discoloration.

The rate of heating is important, as is the time the material is kept at application temperature. For best results, heat the material so it is ready just in time for use. For example, keeping the material at 200°C for five hours before application is cause for concern, as the binder resins will burn off.

### APPLICATION EQUIPMENT

All application equipment must be kept at the temperature required to maintain the proper material temperature. If the equipment is cooler than the material, a loss of heat can seriously affect the bond to the asphalt. Material damage can occur when operating equipment that is too hot, as the material will "boil" or overheat.

### NATURAL COOLING

The thermoplastic material should be allowed to cool naturally for five to 10 minutes. The total amount of time required will depend on the ambient and asphalt temperature. Some contractors have used water to cool the material faster so the road can be opened to traffic. This practice damages the bond, and is counter-intuitive to the bonding process. Solid asphalt bonds are created by allowing the thermoplastic to heat the substrate and then cool slowly.

### BEAD USAGE

For the best retro-reflectivity, United Decorating recommends the usage of drop-on bead be limited to 350 grams per square meter. Excessive bead does not give better retro-reflectivity readings. The type of bead showing good, overall results, is Dual Coat M247 Spec. Type 1. This type has larger sizes of bead in the mix and works well with thermoplastics.

### COMPATIBILITY

United Decorating Road Marking products are unique in their composition and should not be mixed with other thermoplastic materials. If more information is required please contact our office at 1-403-569-1101 and ask for technical service regarding the use of our products.



“ United Decorating has been developing thermoplastic road markings since 1996. ”



Longitudinal line application



Glass bead application



Trimming a line for quality control



## FEATURES OF SYSTEM 300 THERMOPLASTIC:

- + High durability for surface and inlaid applications
- + Maintenance cycle of 3-5 years (surface markings), and 6+ years (inlaid markings)
- + Highly retro-reflective
- + Used as the base for Pathfinder profiled markings
- + Inlaid markings can be applied in temperatures as low as 0°C
- + Available in white or yellow
- + Good for longitudinal and transverse markings

## MANUFACTURING

United Decorating has extensive in-house manufacturing capabilities, and custom-builds road marking materials for specific product requirements. Our customers tell us what end-result they want, and our team researches and develops the product according to set specifications. With a large research and development team behind us, we're able to manufacture innovative, unique durable road marking products for both end-users and engineered specifications. All materials can be precisely colour-matched for a custom look.

Markings are not our only focus. United Decorating can design and manufacture solutions for coating, surfaces and adhesive requirements utilizing the properties of our MMA and thermoplastic base stocks.

“ Markings are not our only focus. If you have a problem – we may have a solution. Try us. ”

“ Our Management staff consists of Engineers, Professionals and Journeyman painters. All managers are dedicated and readily available to provide you with our expertise and support throughout the entire project. ”



“ System 300 Thermoplastic material is ISO:9001 certified. ”

