



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

## System 400 Cold Plastic is a flexible, UV-stable, ISO-certified methyl methacrylate (MMA) durable road marking material.

This cost-effective solution has no Volatile Organic Compound (VOC) emissions and can be applied to new and aged asphalt as well as concrete. United Decorating also uses System 400 Cold Plastic as the base for Pathfinder profiled markings, which provide additional safety in the dark and poor weather conditions.

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

### APPLICATION & MAINTENANCE

Manufactured by Lafrentz Road Marking, System 400 Cold Plastic uses a chemical catalyst to create a strong bond to the aggregate in the road surface. Methyl methacrylate is the same hard resin compound as that used to make plexiglass and dentures – meaning cold plastic markings are highly durable and very long-lasting.

Helping to extend the construction season in Canada's cold climate, System 400 can be applied at lower temperatures than thermoplastic (as low as 0°C). The plastic is extruded in liquid form, with glass beads included in the mix and applied the surface for additional retro-reflectivity. The average maintenance schedule is 10 times longer than paint, and when repairs are necessary it can be overlaid on a previous

System 400 Cold Plastic application to provide monolithic repairs (avoiding the need for complete line removal and reapplication).

System 400 is fast-curing, meaning roadways can be opened to traffic soon after application. The plastic is usually ready for traffic in under one hour.

### CHEMICAL RESISTANCE & DURABILITY

System 400 is highly resistant to degradation. It's completely UV-stable, meaning it won't deteriorate over time with exposure to the sun's UV rays. It's equally unaffected by sodium chloride, calcium chloride, or other chemicals used to prevent ice formation on roadways). It won't degrade due to oil content in pavement materials, or from oil dropped from traffic.



7-624B Beaver Dam Rd N.E. Calgary, AB, T2K 4W6

SYSTEM 400 COLD PLASTIC// SPECIFICALLY FORMULATED FOR CANADIAN CLIMATES



STEP 1: Pre-marking the lines



STEP 2: Adding the catalyst



STEP 3: Stop-bar application

## HOW TO INSTALL SYSTEM 400 COLD PLASTIC:

### STEP 1

Markings are laid out prior to applying System 400 materials.

### STEP 2

Catalyst is added to the material on the jobsite immediately prior to application (see table on back page for pot life estimates).

### STEP 3

The catalyzed material is poured into draw boxes to produce a 1.5 – 2 mm thick extrusion for crosswalk and stop bar lines.

### STEP 4

Longitudinal markings are applied using a walk-behind applicator.

### STEP 5

Complicated symbols are applied by using a template and a drawbar to produce a thick extrusion.

### STEP 6

Glass bead application.



STEP 4: Longitudinal line application



STEP 5: Installing complicated symbols



STEP 6: Glass bead application

## INSTALLATION TIPS

Easy to apply, Lafrentz sells System 400 Cold Plastic to project managers to install themselves. The following information is critical for the successful application and durability of System 400 Cold Plastic. The information is based on careful study of the chemical ingredients of the resins and on almost 30 years of road marking application experience. Please note this list is not exhaustive. For more information about applying System 400 Cold Plastic, please contact Lafrentz Road Marking.

## SURFACE CONDITIONS

Surface conditions should be clean and dry. Fine dust, sand or clay must be removed before application of cold plastic 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 surface laid.

## MATERIAL COVERAGE

Each 20-litre pail contains 30 kg. of material. If extruded at 2 mm thick, each pail should give 60 – 65 metres of 10 cm line, or 6 – 6.5 m<sup>2</sup>. Estimate the amount of material required at a specific location to minimize the waste of excess material.

## MIXING INSTRUCTIONS

Pre-mix the material thoroughly with a high-speed power drill mixer. Once the material has been thoroughly mixed, add the pre-determined amount of BPO Powder (the activator / catalyst). A guideline for determining the amount of BPO Powder required is: 1% by weight at 10°C will give approximately 10 – 15 minutes of pot life before hardening (Note that 1% of the 30 kilogram pail is 300 grams). Please use the temperature chart on the following page as a guide to have 10 – 20 minutes to work with the material.

Note: DO NOT USE less than 0.5% or MORE than 3.0% BPO. The material does not polymerize properly outside of this range.

The BPO should be added slowly and well mixed around the sides of the pail, up and down using the high-speed drill mixer for approximately one minute. Longer mixing means shorter pot life.

\*SEE TEMPERATURE GUIDE ON BACK PAGE FOR MORE INFORMATION ABOUT ADDING BPO CATALYST

## CLEANING EQUIPMENT & TOOLS

It is good practice to keep tools and equipment in a clean state. While the material is soft, the tools and equipment can be cleaned with a scraper, rags and solvent. Acetone, Xylene or Toluene are types of solvent that work well. If the material hardens on tools and equipment, the material can be softened and released by heating with a propane tiger torch.

### BEAD USAGE

For the best retro-reflectivity, it is recommended that the usage of drop-on bead be limited to 350gm / m<sup>2</sup>. Excessive bead does not give better retro readings. Silane-coated glass bead is recommend and shows good overall results.

### COMPATIBILITY

United Decorating Road Marking products are unique in their composition and should not be mixed with other plastic road marking materials.



### TEMPERATURE GUIDE FOR ADDING BPO CATALYST

Temp	Maximum BPO % by Weight	Maximum BPO Weight (based on 18.9 kg pail)	Pot Life
0°	2.0% – 2.5%	600g – 750g	20 minutes
10°	1.0% – 1.5%	300g – 450g	15 minutes
20°	0.5% – 1.0%	150g – 300g	10 minutes
30°	0.5%	150g	10 minutes

### DID YOU KNOW?

**SYSTEM 400 IS AVAILABLE IN FOUR DIFFERENT FORMULAS:**

- 01 EXTRUDED (SUMMER)
- 02 EXTRUDED (COLD WEATHER)
- 03 TROWEL-ON
- 04 ROLL-ON

### FEATURES OF SYSTEM 400 COLD PLASTIC:

- + Very durable
- + Can be applied to asphalt (new or aged) and concrete
- + Most cost-effective durable road marking product
- + Completely UV-stable with no VOC emissions
- + Flexible and solvent-free
- + Maintains a smooth surface
- + 10x more durable than paint (on average)
- + Can be applied in temperatures as low as 0°C
- + Highly retro-reflective
- + Good for longitudinal and transverse markings
- + Can be overlaid for easy maintenance
- + Limited installation equipment required

