

SYSTEM 400 COLD PLASTIC EXTRUDE APPLICATION



System 400 Cold Plastic is a flexible, UV-stable, low VOC ISO Certified, methyl methacrylate (MMA), durable road marking

Lafrentz System 400 extrusion formula can be used on longitudinal and transverse lines as well as stenciled messages (arrows, words, symbols). Can be applied to new and aged asphalt as well as concrete, with use of a primer.

APPLICATION AND MAINTENANCE

Manufactured by Lafrentz Road Marking, System 400 Cold Plastic comes as a liquid, using a catalyst initiates the chemical reaction forming a tenacious bond to the aggregate in the road surface. The plastic is extruded in liquid form, with glass beads included in the mix and applied to the surface to provide a highly retroreflective marking. The average maintenance schedule is 10 times longer than paint and when repairs are necessary it can be overlaid on a prevous System 400 Cold Plastic application to provide a monolithic repair.

System 400 Cold Plastic 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 is UV stable, unaffected by sodium chloride, calcium chloride, or other chemicals used to prevent ice formatoin on roadways. It won't degrade from oils or other chemicals dropped from traffic.

PACKAGING & STORAGE

System 400 Cold Plastic is packaged in 30 kg pails with 27 pails on a pallet. Ensure System 400 Cold Plastic is stored out of direct sunlight. It can be stored at almost any temperature, even outside in the winter.

MATERIAL COVERAGE

Optimum application of material is 2.0 mm thick. Each 30 kg pail of material will yeild 6.0 - 6.5 m² of marking at 2.0 mm thick on a relatively tight asphalt surface. If the surface is spalled, or textured additional material may be required.

TOOLS

Getting started with System 400 requires a minimum of tools and equipment. All you need to get started is:

Drill with power supplyHammerImpeller mixing headChiselMetal straight edgesMetal scraperHand Form(s) - available in widths of10, 20, 30, 40 and 60cm



LAFRENTZ ROAD MARKING

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1. CONDITIONS

Ambient and surface temperatures: 0°C to 35°C

The surface should be free of debris and dust, perfectly clean and absolutely dry. At a minimum sweeping and air blast of the surface is required.

Pre-existing painted markings will interfere with the bond of the MMA to the roadway surface. Paint materials should be removed before applying MMA to ensure bonding to the substrate.

> 2. MATERIAL

Premix all materials throughly with a high-speed power drill mixer to ensure a homogenous mix. Settling of the material can occur over time and during transport.

Decant and mix the appropriate quantity of material for the work at hand.

Proper mixing of the A and B componenets is important to ensure the material cures and bonds. Wet spots or uncured edges indicate problems with mixing and distribution of the catalyst.

Determine the quantity of BPO catalyst required. See the chart below for guidance. The BPO should be added slowly and well dispersed throughout by mixing around the sides of the pail, up and down. Continue mixing for 1 minute. The BPO initiates the chemical reaction.

If the mixed material is left in bulk in the pail it will cure rapidly, this is the pot life. When the material is applied to the roadway in a timely manner typical cure time is 40 to 45 minutes, if this guide if followed. If the material begins to cure in the pail, thickens and becomes lumpy, it should not be used.

SYSTEM 400 - GUIDE FOR ADDING BPO CATALYST

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

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



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HOW TO INSTALL SYSTEM 400 COLD PLASTIC









3. APPLICATION

The material is designed to be extruded on to the surface and struck off at an optimum thickness of 2mm. Extrusion formula will retain the shape when struck off and not flow or self level.

Stencil / Trowel

Application is completed by using a stencil of appropriate thickness, spreading material and stricking it off using a trowel or metal bar.

Hand form - drag box

Using a hand form requires the cooprative effort of someone pouring the material in to the hand form and the other person pulling the form along at a continuous rate. Care should be taken to have enough material on the trailing edge of the hand form to be struck off at the proper thickness.

Specialized push applicator

These applicators mimic the manual operation of the hand form application. A regulated flow of material is feed into the shoe from a resevoir as the operator pushes the applicator along. A gate opens and closes the shoe to start and stop the line.

4. GLASS BEADS

Glass beads shall be applied to the surface of the material at a uniform rate of $150 - 250g /m^2$ while the plastic is in a liquid state.

5. CLEAN UP

It is good practice to keep tools and equipemnt in a clean state. While the material is soft use a scraper, rags and solvent to clean tools and equipment. Solvents include ethyl acetate or acetone.

6. OPEN TO TRAFFIC

The area can be opened to traffic when the material has cured to the point that a finger nail will not indent the marking. Usually ready for traffic in under an hour.



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