

PlastiLine MMA

Cold Plastic Screed



PRODUCT DESCRIPTION

PlastiLine MMA Screed is a solvent free, rapid curing, 2 component methacrylate resin with a combination of fillers, anti-skid aggregates and glass beads for reflectivity. It is applied between 1.5-3 mm thickness by means of trowel or draw box, extrusion or hand push machines.

INTENDED USE

PlastiLine MMA Screed is applied in layers of 1.5-3 mm primarily on asphalt road surfaces either by using hand or automatically driven cold plastic machines

The thickness depends on the mechanical load and on the evenness of the surfaces. It is important to ensure a sufficient minimum thickness, especially in the case of heavy traffic load.

When used on concrete road surfaces, the concrete has to be pre-treated (e.g. milling, shot blasting, high-pressure water blasting etc., and PlastiLine MMA Primer applied. The then ready to use PlastiLine MMA Cold Plastic Screed is mixed with PlastiLine MMA BP 50 Powder and applied directly onto the surface using the trowel, rake or drawbox.

PlastiLine MMA Cold Plastic Screed is also suitable for safety or structured road markings.

CHARACTERISTICS

- Heating not required
- Hardening of about 30 minutes at 25°C (irrespective of thickness)
- Excellent obliteration / hiding power, high luminance
- High reflectivity / luminance factor with glass beads added
- High sag resistance allows for excellent build and coverage on new asphalt
- Excellent resistance to bleeding on bitumen substrates
- Excellent alkali resistance on concrete surfaces
- Resistant to weathering
- Excellent adhesion to asphalt (some concrete surfaces will require priming)
- Excellent abrasion resistance and low dirt retention
- Hydrophobic surface with self-cleaning properties

PlastiLine MMA Cold Plastic markings are very abrasion resistant. With traffic under 10,000 vehicles per day, the average abrasion is approximately 0.2 - 0.3 mm per year. Shorter lifetimes sometimes result, not due to traffic, but rather because of improper application of the marking such as

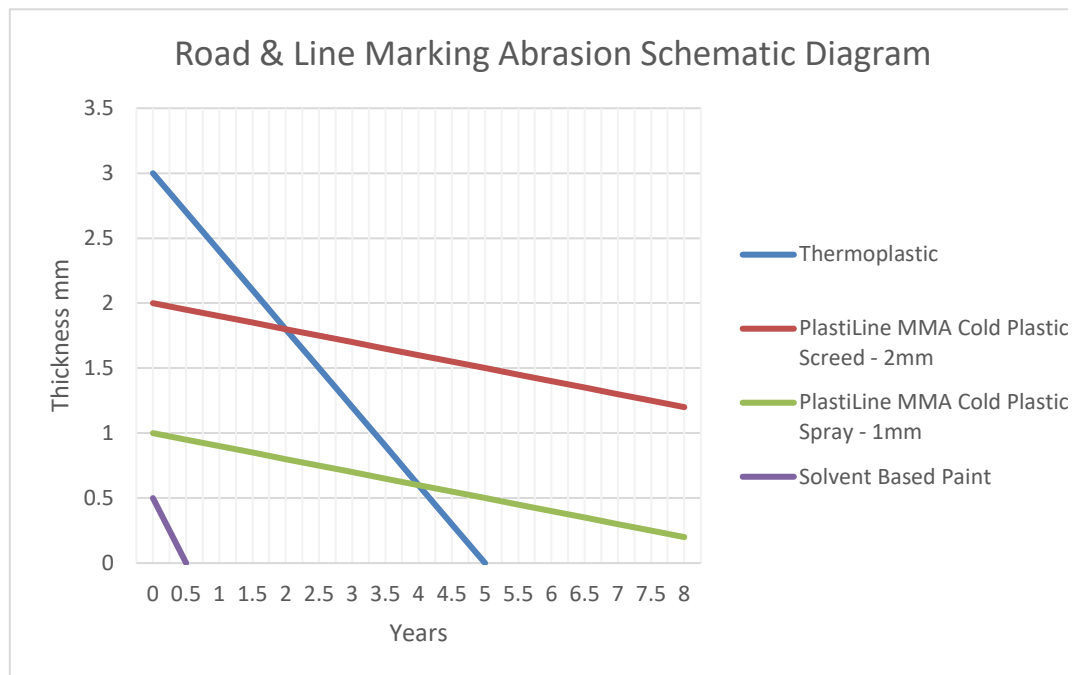
COMPARISONS Compared to Thermoplastics or hot melts:

In the last 50 years, hot melts or thermoplastics have become an attractive alternative for permanent road markings. The hot melt is supplied as a solid block, bar or bucket and is then melted in a cooker at high temperatures between 200 - 260°C. The melt must then be extruded manually or using a machine with slit dies and solidifies once cooled. Compared to MMA cold Plastics, hot melts are highly abrasive, meaning they are durable up to two or three years depending on the traffic load.

Like the extruded hot melts, they can be diluted with high boiling point solvents or oils to achieve a lower viscosity. Under high temperatures, these low-viscous hot melts can then be sprayed onto a surface with a thickness of roughly 1mm. However, the service life of these melts is then shorter, lying somewhere between those of solvent-paint and hot melts.

PlastiLine MMA Cold Plastic permanent road markings at a thickness of 2mm, on highways is estimated to last for six years on average and up to 10 years in the case of good quality asphalt.

Thicknesses of 1mm have correspondingly lower life time of around 2-3 years.



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PRODUCT INFORMATION

Colour	White, Yellow, Red, Black, Blue, Green
Finish	Coarsely textured matt finish
Mixing Ratio (Volume)	100:2 (Note special mixing instructions)
Density	2.05 kg/litre (typical for white)
Volume Solids	100%
Typical Film Thickness	1.5 - 3.0 mm DFT excluding extra drop on beads
Theoretical Coverage	<ul style="list-style-type: none"> ▪ 2kg/m² at 1 mm DFT without beads allow loss factors
Method of Application	Trowel, drawbox or hand pushed machines (contact Specialized Coating Systems for details)
Temperature Resistance	Dry continuous 80°C
Number of Coats	1
Application Temperature	5°C to +35°C Air
Solvent - cleaning	5°C to +40°C Ground Acetone
Viscosity	150 Ku @ 40°C
Hardener	PlastiLine MMA BP 50 Powder
Pot Life	12 - 15 minutes @ 20°C with 2% BP 50 Powder by weight

Hardener dosages and cure times for PlastiLine MMA Screed			
Temperature	BP 50 Powder % pbw.	Pot Life Approx. Min	Hardening Time Approx. Min
0 °C	2.0	14 - 18	50
+5 °C	2.0	12 - 15	40
+10 °C	1.5	12 - 15	35
+15 °C	1.5	10 - 12	30
+20 °C	1.0	10 - 12	30
+25 °C	0.5	10 - 12	25
+30 °C	0.4	9 - 11	25
+35 °C	0.3	8 - 10	20

PREPARATION

Concrete Road Surfaces

Concrete needs to be pre-treated by milling, shot blasting, high-pressure water blasting and primed with PlastiLine MMA Primer

Asphalt Road Surfaces

Remove incompatible paint systems, sweep surface to remove dust and debris.

APPLICATION

Screed by hand with a trowel

PlastiLine MMA Cold Plastic Screed is supplied in 5lt pails. An electric drill with a stirrer or dissolver is required for thorough mixing. To apply, all that is needed is a simple trowel and some masking tape. Draw the patten line around a stencil using chalk and put the masking tape along the outside of the line.

Roughly calculate the amount of compound required for that area (1lt per m² or 2k per m² with 1mm thickness). The amount of hardening powder required is adapted to the substrate temperature according to the hardening table above and mixed for half a minute (in warm temperatures) to one minute (in cold temperatures). Pour the screed out and smooth it without leaving trowel marks behind. Immediately scatter some glass beads with white granules onto freshly painted surfaces at 100-300gm/m² so they can sink into the compound while still wet. Remove the tape before the marking has been fully cured, that clear and sharp edges are formed.

Screed by hand with a draw box

Prepare the screed as previously described. Instead of a trowel you will need a draw box made of steel plate, like those used for hot-melt material. Place a piece of masking tape across the point at which the marking is to start and position the draw box in line with it. Fill the draw box with the liquid cold plastic which has been premixed with the hardener and pull the draw box along a side marker (straight plank, roof batten or aluminium rail) up to the end of the line. Here, an end line can be made using masking tape again or a metal sheet can be used to collect the residual material from the applicator head. Finally scatter the glass beads and aggregate

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CURING PROBLEMS & LIMITATIONS

- The amount of hardener was not calculated exactly to the quantity of material. Either there is not enough or too much
- Unsuitable additives, hardening powders can lead to massive curing problems, which at the very least will cause increased contamination when the surface is driven over concrete and mortar mixtures, such as a concrete retarder, accelerator or emulsion plasticiser, Silane or silicone surface treatments as well as epoxy coatings can disturb the curing process. That is the reason why we recommend conducting tests on midwifed surfaces. The minimum and maximum thickness must be observed
- Using the correct MMA material for each application is critical. Each PlastiLine MMA has different performance and flexible properties and should be chosen on a case by case basis.

UNIT SIZE

Part A -Steel Container – 4 Lt = 8.00 kg
Order the PlastiLine MMA BP 50 Hardening Powde

STORAGE

Shelf Life

6 months at 25°C – from date of manufacture

IMPORTANT NOTE

Whilst we endeavour to ensure that all advice we give about the product is correct, the information given in this data sheet is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so entirely at his own risk. As conditions of use, method of application and suitability of the substrate prior to painting are beyond our control, no guarantee is implied by the recommendations contained herein. We therefore do not accept any liability whatsoever or howsoever arising from the performance of this product or for any loss or damage arising out of the use of this product. The information contained in this sheet is liable to modification from time to time in the light of experience and ongoing product development programmes. It is the user's responsibility to ensure that this sheet is current prior to using the product

PRECAUTIONS

For complete safety and handling information please refer to the appropriate **Safety Data Sheets** prior to using this product.