



**NATIONAL COLD PLASTIC - MANUAL MARKING**

<p><b>PRODUCT DESCRIPTION</b></p>	<p>National Cold Plastic Manual Marking is a two-component Solvent free road marking paint based on MMA acrylic resin technology. This product cures fast and can be opened to traffic within a short period, after application. When cured completely the product demonstrates very high adhesion to the surface, abrasion resistance, low dirt pickup and tire mark resistance. It has better light reflecting properties and better visibility at all times, leading to higher levels of traffic safety.</p>
<p><b>RECOMMENDED USES</b></p>	<p>National Cold Plastic Manual Marking is recommended for pedestrian crossing, arrow markings, stop lines, rumble strips etc. Can be applied on asphalt, concrete pavements and interlocks in urban roads. This product has fast curing times and open to traffic times, with excellent cost to performance ratio over the entire life cycle period.</p>

**TECHNICAL DATA**

<p><b>COLOUR, DRY FILM</b></p>	<p>White, Yellow, Red (Other Colors available on special request)</p>		
<p><b>FINISH, DRY FILM</b></p>	<p>Flat finish</p>		
<p><b>VOLUME SOLIDS (ASTM D2697)</b></p>	<p>98 ± 2%</p>		
<p><b>SPECIFIC GRAVITY, ISO 2811-1</b></p>	<p>1.88 ± 0.06 Kg/L ( mix ) for white and varies with colors</p>		
<p><b>THEORETICAL CONSUMPTION</b></p>	<p>1 mm FILM THICKNESS: 1L/m<sup>2</sup> ≈ 1.88 kg/m<sup>2</sup></p>		
<p><b>TYPICAL CONSUMPTION FOR A FULL LINE OF 1000 Mts. LENGTH</b></p>	<p>Width</p>	<p>Thickness</p>	<p>Quantity for Full Line</p>
	<p>12 cm</p>	<p>2 mm</p>	<p>240 l ≈ 451Kg</p>
	<p>15 cm</p>	<p>2 mm</p>	<p>300 l ≈ 564 kg</p>
<p><b>RECOMMENDED DFT RANGE (DRY FILM THICKNESS)</b></p>	<p>1000–3000 microns ( 1– 3 mm)</p>		
<p><b>RECOMMENDED WFT (WET FILM)</b></p>	<p>1000–3000 microns ( 1– 3 mm)</p>		



<b>FLASH POINT</b>	Not Applicable
<b>POT LIFE @30°C/ CATALYST %/ SETTING TIME</b>	Refer table provided
<b>TRAFFIC ABILITY / CURING TIME</b>	1 hour after the completion of application ( Depends on climatic conditions)
<b>SOLVENT CONTENT SOLVENT- FREE</b>	Do not add solvent while applying

**POTLIFE / SETTING TIME/ % HARDENER PROPORTION OF TOTAL FORMULATION AT  
DIFFERENT TEMPERATURES**

<b>Temperature (°C) (Surface)</b>	<b>Hardener (50% DBPO) (%by Weight)</b>	<b>Pot life (min)</b>	<b>Setting Time (min)</b>
10	2.0	18	50
20	2.0	10	30
20	1.0	15	35
30	1.0	8	20
30	0.5	12	30
40	0.5	6	18

**APPLICATION INSTRUCTION**

<b>SURFACE PREPARATION &amp; APPLICATION</b>	<p>Road surface / substrate pretreatment</p> <p><b><u>General Information</u></b> The surface must be dry, clean and free from grease, oil and loose gravel and other contaminations. The surface and potential existing old markings must be checked for their carrying capacity and compatibility with the material to be applied. In case of doubt, test applications and adhesion tests are required. Ideally, old markings should be removed with appropriate mechanical procedures.</p> <p><b><u>Concrete or cement bound surfaces</u></b> The pavement components in new road surfaces that prevent good bonding (fine mortar layer, concrete slurries) must be appropriately removed (e.g. with high-pressure water jet, fine mill cut or similar). We recommend conducting test applications.</p> <p>It is essential, to have a sufficient and uniform coverage, to apply primer in order to obtain an optimum bonding of National cold plastic and concrete. Primer consumption may vary depending on</p>
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	<p>the concrete's porosity. Concrete substrates must have been cured for 28 days before application of National Cold Plastic Marking materials. The humidity of the concrete must not exceed 5% during the application for concrete primer. National Guard Epoxy Primer for cement Clear is the recommended primer for cement /concrete surfaces.</p>
<p><b>SURFACE PREPARATION &amp; APPLICATION</b></p>	<p><b><u>Bituminous surfaces</u></b> Any loose components such as chippings must be removed. Flux oils, releasing agents for road rollers are detrimental to good bonding of markings or can cause discoloration of the striping. Since a mechanical removal these is hardly possible, the surface should be exposed to traffic for 4 – 6 weeks or an initial marking of paint is to be applied. A bonding check is required before applying the final marking.</p> <p><b><u>Application techniques</u></b> With common cold plastic extruder or dispensing shoe machines or manually with dispensing shoe, trowel, spatula or similar. When applying manually, use templates or adhesive tapes to improve the formation of edges and borders of the markings. For large-scale marking jobs self-driving marking machines are used. For manual markings (e.g. urban area markings) small machines for manual application are used. The detailed settings depend on the application conditions and machine type and have to be adjusted according to the instructions of the machine manufacturer. It is important to ensure that material and drop-on materials are uniformly spread over the application surface and that the indicated quantities are used.</p> <p><b><u>Note:</u></b> Despite the exact layer thickness adjustment at the dispensing extruder, increased consumption may occur when applying the material on coarse surfaces. This is because the hollow parts of the surface are filled first before a measurable layer thickness is built up.</p>
<p><b>CONDITIONING DURING APPLICATION</b></p>	<p>Mix the material homogenously before addition of the catalyst and add the recommended percentage of the catalyst powder. Mix to a homogenous state for 1 minute after adding the catalyst. Transfer the entire contents to another container, mix again for 1 minute, and start the application. The substrate temperature and material shall be between 5°C and 40°C, maximum. The substrate should be free from moisture and condensation. Quantity of material mixed, should be such that after addition of hardener, it can be consumed within 7-8 minutes.</p>



**NATIONAL COLD PLASTIC - MANUAL MARKING  
INDUSTRIAL COATINGS**

**TECHNICAL DATA SHEET**

**APPLICATION DATA**

<b>APPLICATION METHOD</b>	Manual application using proper application tools or by special machines if facility exists
<b>CLEANING/THINNING</b>	Special thinner required for cleaning the tools
<b>THINNER (VOLUME)</b>	Solvent-free, do not add solvent while applying
<b>MIXING RATIO BY WEIGHT</b>	Refer to the table provided
<b>APPLICATION TOOLS</b>	Manually drawn Screed box, trowel, hand Roller, Squeeze, or by Extrusion Machine

**SYSTEM**

<b>RECOMMENDED SYSTEM</b> To be applied on prepared surface.	1x National Cold Plastic Manual Marking (DFT, 1mm -3 mm/coat, depending on the specified requirements)
	1x National Anti- Blackening Clear Coat – 250-300 gm/m <sup>2</sup> ( if required for white & other colors)

**ADDITIONAL DATA**

<b>PACKING SIZES</b>	<b>15 Kg for all colors</b>
<b>SHELF LIFE</b>	<b>6- 12 months when stored at 30°C</b>

**HEALTH & SAFETY**

<b>SAFETY PRECAUTIONS</b>	Generally, most of the MMA based materials are quite safe to handle with due precautions. As a rule, avoid skin and eye contact by wearing overalls, gloves, goggles, etc. Spillage on skin should immediately be removed by thorough washing with water and soap or suitable cleaner. Eye should be flushed with fresh water. Avoid inhalation of vapors and paint mist by wearing suitable mask. In the event of ingestion and eye contact, seek medical attention immediately. Painting must be carried out in well- ventilated area. Local safety regulations to be followed.
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**STORAGE & HANDLING**

<b>STORAGE</b>	Store the paint in proper storage conditions as per the local regulations. Keep the paint container in sealed condition under shed, away from direct sunlight and extreme temperatures. Do not stock paint material near to any ignition sources.
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**NOTE:** We warranty only the quality of our product and this data sheet is based on results obtained from experience and tests. We reserve the right to change data without prior notice. For surface preparation, safety details refer method of statement and safety datasheets.

This data sheet supersedes previous issued.  
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