NATIONAL COLD PLASTIC - SPRAY MARKING

PRODUCT DESCRIPTION	National Cold Plastic Spray Marking is a three-component Solvent free road marking paint based on MMA 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, high resistance to dirt pickup and tire marks. It has better light reflecting properties and better visibility at all times, leading to higher levels of traffic safety.
RECOMMENDED USES	National Cold Plastic Spray Marking is recommended for edge and centerlines on freeways highways, and airports. Can be applied on asphalt, concrete and interlocks. This product has fast curing times and short open to traffic times, with excellent cost to performance ratio over the entire life cycle period.

TECHNICAL DATA

COLOUR, DRY FILM	White, Yellow, Red (Other colors available on special request)		
FINISH, DRY FILM	Flat finish		
VOLUME SOLIDS (ASTM D2697)	98 ± 2%		
SPECIFIC GRAVITY, ISO 2811-1	1.78 ± 0.02 Kg/L (mix of Part A and Part B)		
THEORETICAL CONSUMPTION	0.8 mm FILM THICKNESS: ≈ 1L/m2 ≈1.78 kg/m2		
TYPICAL CONSUMPTION FOR A FULL LINE OF 1000 Mts. LENGTH	Width	Thickness	Quantity for Full Line
	10 cm	0.8 mm	≈110 L≈ 196 Kg
	15 cm	0.8 mm	≈150 L≈ 270 kg
RECOMMENDED DFT RANGE (DRY FILM	300- 800 microns (0.3– 0.8 mm)		
RECOMMENDED WFT (WET FILM)	300- 800 microns (0.3– 0.8 mm)		

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

POTLIFE / SETTING TIME

Mixing ratio: Approved hardener: 1:1 system at all temperatures (component B with 4.0 parts by weight of hardener powder)

***non-reactive component, mixed with hardener gets a limited storage stability / pot life. Remaining quantity should be removed out of the machine, (inclusive hoses) after finishing marking job.**

Temperature (°C) (Surface)	Pot life (Min)	Setting Time (min)
5	14	32
10	12	28
20	5	12
30	3	8
40	2.5	6
50	1.5	5

APPLICATION INSTRUCTION

SURFACE PREPARATION & APPLICATION	Road surface / substrate pretreatment **General Information** 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. **Bituminous surfaces** 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. **Interlock Surfaces:** All kind of interlocked pavements are moveable surfaces which can lead to crack formation or spallings on the marking. The material is used without any manufacturer's guarantee. Test applications, surface pretreatments are recommended. **Application techniques** Airless spray with common cold plastic plural component dispensing machines. For large-scale marking jobs self-driving marking machines 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 watch that material and drop-on materials are uniformly spread over the application surface and that the indicated quantities are used. **Note:** Despite the exact layer thickness adjustment at the dispensing machine, 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.

CONDITIONING DURING APPLICATION	National Cold Plastic Spray Marking materials must be homogeneously stirred in its original container before processing. Depending on machine or application technique the hardener powder or liquid is mixed with the defined component under adherence to the stated mixture ratio using an appropriate stirring device. Never prepare more material with hardener than is needed for the application (observe potlife). The non-reactive component is processed by homogeneously stirring 2 - 4 % hardener into it and filling it into the dedicated storage container for the non-reactive component. The container must then be sealed to avoid contamination with the reactive component. Subsequently the homogeneously stirred reactive component is filled into the dedicated storage container for the reactive component. Extremely clean working conditions are essential when processing the components. Minimal contamination or intermixing of the components may lead to premature hardening. Therefore, the use of different stirring devices or auxiliary tools for each component is recommended. Only merge the components in the mixing tube directly before application since even little intermixing leads to premature hardening with subsequent machine failure. Even with only short standstills of the machine it is necessary to rinse the mixing and application devices with special cleaner for marking machines The non-reactive component has a limited storage stability / potlife when combined with the hardener (powder or liquid). Therefore, residuals of the non-processed, premixed materials must be removed from the machine. Cold plastics (reactive systems) are solvent-free and must be applied without adding solvent (optimizing of material process ability. The cleaning must occur before the complete curing of the material takes place by using special cleaner for marking machines The exact machine adjustments should be done according to the manufacturer's instructions. Layer thickness and quantity of drop-on material, coated glass beads to BS 6088 specification, need to be evenly distributed (450-600 gm/Sq Meter) . Scattering losses on both line sides make modified machine adjustments necessary.

APPLICATION DATA

APPLICATION METHOD	Airless spray application using automated plural component dispensing machine
CLEANING/THINNING	Special thinner required for cleaning the tools
THINNER (VOLUME)	Solvent-free, do not add solvent while applying
MIXING RATIO BY WEIGHT	Refer to the table provided
APPLICATION TOOLS	Two component airless spraying machines with 1:1 dosing

SYSTEM

RECOMMENDED SYSTEM To be applied on prepared surface.	1x National Cold Plastic Spray Marking (DFT, 0.3mm -0.8 mm/coat, depending on the specified requirements) -spray drop on coated glass beads to BS 6088 specification, at 450-600 gm per square meter or 45- 60 gm/ linear meter (10 cm width), if retro reflection required
	1x National Anti Blackening Clear Coat – 250-300 gm/m2 (if required, for additional protection and durability)

ADDITIONAL DATA

PACKING SIZES	18 liters for all colors, Part A & Part B

SHELF LIFE	6- 12 months when stored at 30°c

HEALTH & SAFETY

SAFETY PRECAUTIONS	Generally, most of the MMA base 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.

STORAGE & HANDLING

STORAGE	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.

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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