

Methyl Methacrylate

The next generation of MMA markings



ENNIS-FLINT by PPG

MMA[®] Extended Season
colored lane treatments



We protect and beautify the world[®]



The industry-leading solution for bike, bus and other dedicated lanes

Improving upon our trusted ENNIS-FLINT® by PPG MMAX® methyl methacrylate (MMA) technology, *MMAX* Extended Season (ES) colored lane treatments deliver across-the-board advances in durability, workability and ease of use that outperform our competition.

The widest temperature application range and longest workability in the industry

For the first time ever, it is possible to apply MMA treatments on pavement surfaces as cold as 35° F (2° C) and as hot as 150° F (66° C). The product also delivers triple the working time of most competitors on surfaces at 110° F (43° C) or more.

Your choice of durable anti-skid aggregates

Choose between sand for reliable performance or corundum, the hardest, most wear-resistant anti-skid aggregate used in top-tier specifications.

Application methods that fit the way you work

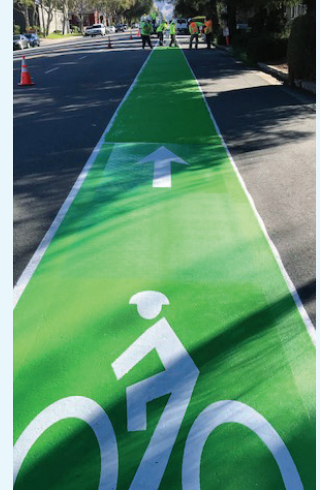
MMAX ES colored lane treatments can be applied with a squeegee and roller or sprayed. For squeegee and roller or certain types of spray equipment, the supplied aggregate and catalyst are thoroughly mixed directly



into the supplied metal container before application. For other types of spray equipment, the aggregate is not premixed, but, rather, is manually applied between spray coats. Ask your PPG representative for additional details.

Compatibility with *Ennis-Flint* by PPG *PREMARK*® preformed thermoplastic markings

PreMark preformed thermoplastic arrows, icons and other safety markings are pre-cut and can be layered directly on top of *MMAX* ES colored lane treatments. Formulated with high-quality resin, binder and aggregate, they can be manufactured with visibility-boosting reflective beads and/or safety enhancing anti-skid elements in one of ten different colors.



Design

The highest peaks and sustained hardness among competitors
Available in over 20 brilliant colors
Compatible with *PreMark* preformed thermoplastic markings



Installation

Maximum workability on substrates ranging from 35-150° F (2-66° C)
Can be applied using roller and squeegee or spray techniques
All components can be mixed directly in the provided container



Pedestrian Safety

Remarkable traction from sand or super-hard corundum aggregates
Enhances visibility of dedicated lanes while providing clear delineation and traffic calming

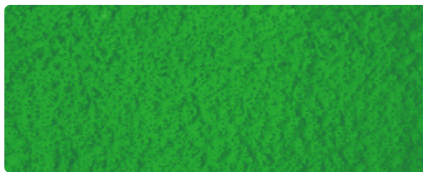


Compliance/Certification

Green and Transit Red colors meet FHWA chromaticity coordinates for bike and bus lanes
Produced in an ISO 9001:2015-certified facility



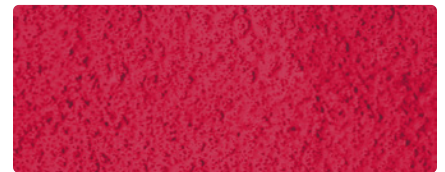
Standard Colors



Green**
999660G

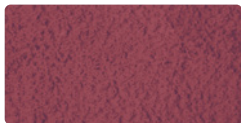


Transit Red**
999660TRAN

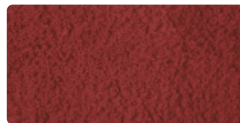


Red
999660R

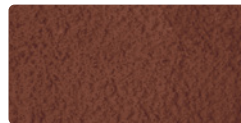
Premium Colors



NYC Red
999660RNY



Brick Red
999660BR



Terracotta
999660TC



Orange
999660OR



Yellow
999660Y



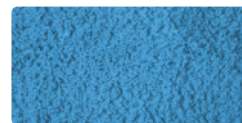
Purple
999660PR



Blue
999660BL



London Blue
999660TLB



Light Blue
999660LB



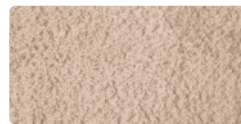
Seafarer
999660SF



Truffle
999660TR



Desert Khaki
999660KH



Irish Cream
999660ICRM



Hollywood Green
999660G349



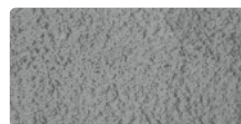
NYC Green
999660GNY



White
999660W



Smooth Grey
999660SG



Grey
999660GRY



Black
999660BK

* The color chips cannot be considered totally accurate color matches and are not to be used as approved standards. Please contact a PPG representative for additional information.

** Meets established FHWA color specifications.

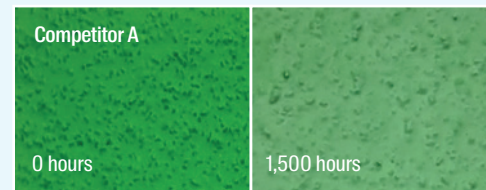
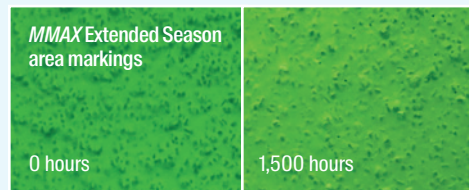
Benchmarking studies versus competitors

Performance	Spec Range: PPG QA	MMAX ES Green Area Markings	MMAX Green Area Markings	Competitor A	Competitor B	Competitor C
Viscosity (ASTM D562, Ku)	90 - 102	93 ●	91 ●	112 ●	134 ●	95 ●
Hardness Peak (ASTM D2240, Shore D)	55 - 90	81 ●	77 ●	65 ●	33 ●	72 ●
Hardness Sustained (Internal Spec, Shore D)	50 - 80	72 ●	70 ●	61 ●	28 ●	65 ●
Cure Time: Minutes @ 75° F (ASTM D711)	15 - 30	30 ●	24 ●	25 ●	24 ●	35 ●
Gel Time: Minutes @ 75° F (AASHTO T-237)	8 - 15	14 ●	11 ●	11 ●	11 ●	17 ●
Light Fastness: ΔE CMC/1,500h (ASTM G155)	< 3.0	1.33 ●	1.68 ●	6.02 ●	1.84 ●	1.25 ●
Aggregate Type (Mohs Scale Hardness)	-	Corundum: 9 ●	Corundum: 9 ●	Not supplied by manufacturer ●	Bauxite: 8.5 ●	Unknown
		Sand: 7 ●	Sand: 7 ●			

Packaging						
Space to mix aggregate in pail	Yes ●	Yes ●	No ●	Yes ●	No ●	No ●
Secondary container needed	No ●	No ●	Yes ●	No ●	Yes ●	Yes ●
Pail substrate	Steel ●	Steel ●	Plastic ●	Steel ●	Steel ●	Steel ●

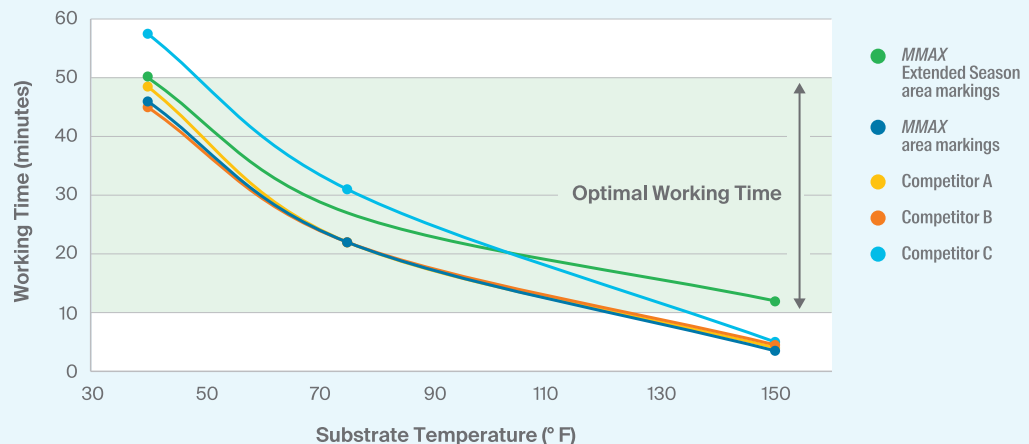
Exceptional color retention

MMAX Extended Season Green area markings retain their color longer than Competitor A's Green in ASTM G155 accelerated weathering.



Maximum workability on the widest variety of substrate temperatures

MMAX Extended Season area markings are the only product that provides sufficient working time at higher temperatures while maintaining low-temperature workability. Working time is defined as 75% of tack-free time.



WARNING: Certain colors of this product may contain chemicals known to the State of California to cause cancer and/or reproductive harm. For more information go to P65Warnings.ca.gov.

This document contains general information only and should not be construed as creating any warranties, express or implied. The color chips cannot be considered totally accurate color matches and are not to be used as approved standards. Please contact a PPG representative for additional information.

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