



Pavement Marking & Delineators

Date Last Edited: May 2024

Pavement Marking

Waterborne Paint

Epoxy

Wet Reflective/Recoverable Elements

Permanent Tape

Temporary Raised Pavement Markers

Removable Tape

Delineators and Marker Posts

Culvert End Markers

Delineator Flexible Post

Guardrail Reflectors

E.A.T. Marker Posts

Flexible Tubular Marker Posts

***Devices have been moved to Work Zone Traffic Control Devices.**

Questions Contact

DOTSignMarkWZMaterials@dot.wi.gov



Waterborne Paint			
Manufacturer	Product	Color	Approval Date
Sherwin-Williams	Sher-Flight Waterborne Pavement Marking Paint TM2259	White	MARCH 2024
	Sher-Flight Waterborne Pavement Marking Paint TM2248	Yellow	MARCH 2024
	Yellow Premium Waterborne (11Y3)	Yellow	JANUARY 2017
	Yellow Premium Waterborne (13Y1)	Yellow	JANUARY 2017
	White Premium Waterborne (13W1)	White	MARCH 2024
	White Premium Waterborne (11W2)	White	JANUARY 2017
Ennis-Flint, Inc.	High Build Waterborne Paint 985222 Yellow	Yellow	JANUARY 2017
	High Build Waterborne Paint 985221 White	White	JANUARY 2017
	Low Temp Waterborne Paint 985352 Yellow	Yellow	JANUARY 2017
	Low Temp Waterborne Paint 985351 White	White	JANUARY 2017
	Standard Fast Dry Waterborne 984902	Yellow	JANUARY 2017
	Standard Fast Dry Waterborne 984901	White	JANUARY 2017
	Fast Dry Traffic Paint 984932	Yellow	FEBRUARY 2018
	Fast Dry Traffic Paint 984931	White	FEBRUARY 2018
Diamond-Vogel	UC35-11926 Yellow WI ACR TRF FD (Previously called VP13-Y7 Yellow Waterborne Traffic)	Yellow	JANUARY 2017
	UC15-11928 White WI ACR TRF FD (Previously called VP13-W2 White Waterborne Traffic)	White	JANUARY 2017
	UC-3545699 Yellow WI HB TRF FD (Previously called VP13-Y6 Yellow Waterborne Traffic)	Yellow	JANUARY 2017
	UC15-45698 White WI HB TRF FD (Previously called VP13-W3 White Waterbrone Traffic)	White	JANUARY 2017
Swarco	Yellow High Build Waterborne Traffic Paint	Yellow	JANUARY 2017
	White High Built Waterborne Traffic Paint	White	JANUARY 2017
Ozark Materials	White Fast Dry Waterborne 14245	White	OCTBOER 2019
	Yellow Fast Dry Waterborne 24245	Yellow	OCTBOER 2019
	White Cold weather Waterborne 17245	White	NOVEMBER 2019
	Yellow Cold Weather Waterborne 27245	Yellow	NOVEMBER 2019

Slow Dry Epoxy			
Manufacturer	Product	Color	Approval Date
Poly Carb, Inc	Mark 55	White	JULY 2020
	Mark 55	Yellow	JULY 2020
	Mark 55.4	Yellow	Removed March 2024
	Mark 55.4	White	Removed March 2024
	Mark 55.9	Yellow	JANUARY 2017
	Mark 55.9	White	JANUARY 2017
Ennis-Flint, Inc.	HPS-2 Slow Cure Epoxy	Yellow	JANUARY 2017
	HPS-2 Slow Cure Epoxy	White	JANUARY 2017
Epoplex	LS-60	White	JANUARY 2017
	LS-60	Yellow	JANUARY 2017
	LS-65	White	JANUARY 2017
	LS-65	Yellow	JANUARY 2017
P3 Infrastructure	Clarus LL Slow Set Epoxy Pavement Marking	Yellow	JANUARY 2017
	Clarus LL Slow Set Epoxy Pavement Marking	White	JANUARY 2017
Sherwin Williams	Yellow Slow Cure Epoxy TM 8221	Yellow	APRIL 2017
	White Slow Cure Epoxy TM 8220	White	APRIL 2017

*If black epoxy is required, you shall use any of the above products that come in black.

Fast Dry Epoxy			
Manufacturer	Product	Color	Approval Date
Poly Carb, Inc	MARK-55.3	Yellow	JANUARY 2017
	MARK-55.3	White	JANUARY 2017
Ennis-Flint, Inc.	HPS-3 Fast Cure Epoxy	Yellow	JANUARY 2017
	HPS-3 Fast Cure Epoxy	White	JANUARY 2017
	HPS-4 Urethane Modified Epoxy	Yellow	JANUARY 2017
	HPS-4 Urethane Modified Epoxy	White	JANUARY 2017
Swarco	1186 Yellow Epoxy Traffic Paint	Yellow	JANUARY 2017
	1180 White Epoxy Traffic Paint	White	JANUARY 2017
	MUFA 10	Yellow	JANUARY 2017
	MUFA 10	White	JANUARY 2017
Sherwin Williams	Yellow Fast Cure Epoxy TM 8301	Yellow	APRIL 2017
	White Fast Cure Epoxy TM 8300	White	APRIL 2017

*If black epoxy is required, you shall use any of the above products that come in black.

Wet Reflective/Recoverable Elements			
Manufacturer	Product	Application Rate	Approval Date
3M	3M Wet Reflective Elements Series 70E/71E	4.1 lbs/gal of 3M Wet Reflective Elements 18-22 lb/gal of M247 Type 1 Bead	November 2018
Potters	VisiMax Plus	10 lbs/gal of VisiMax Plus 10 lbs/gal of M247 Type 1 Bead	November 2018
	VisiUltra EP (Previously named VisiUltra NC)	8 lbs/gal of VisiUltra 6-8 lbs/gal of M247 Type 1 Bead	October 2019

Permanent Tape			
Manufacturer	Product	Color	Approval Date
3M	3m Stamark All Weather Tape A381AW	Yellow	DECEMBER 2013
	3m Stamark All Weather Tape A380AW	White	DECEMBER 2013
	3m Stamark All Weather Tape A380AW-5 (Contrast)	White with Black	DECEMBER 2013
	Adhesive: 3M Brand P-50	-	
	SPA 60	-	

Temporary Raised Pavement Markers Type 1			
Manufacturer	Product	Color	Approval Date
Ennis-Flint, Inc.	Stimonite	White	-
	Stimonite	Yellow	-
3M	3M 290	White	-
	3M 290	Yellow	-
	3M 291	White	-
	3M 291	Yellow	-
Ray-O-Lite	Round Shoulder 8800 Series	-	-
	AA 9700 Series	-	-
Apex Universal, Inc	Apex 921 Series	White	-
	Apex 921 Series	Yellow	-

Removable Tape			
Manufacturer	Product	Color	Approval Date
Advanced Traffic Markings	ATM 200 Series	Yellow	Removed Effective June 2024
	ATM 200 Series	White	Removed Effective June 2024
	ATM 280	Black	Removed Effective June 2024
Brite-Line Technologies	Brite-Line Series 100	Yellow	JANUARY 2017
	Brite-Line Series 100	White	JANUARY 2017
	Delta-Line TWR	Yellow	JANUARY 2017
	Delta-Line TWR	White	JANUARY 2017
	Deltaline BTR	Black	JANUARY 2017
	TWR-HCL (Contrast) Removable	White with black	JANUARY 2017
	TWR-HCL (Contrast) Removable	Yellow with black	JANUARY 2017
3M	3M Stamark Wet Reflective Removable Tape 711	Yellow	JANUARY 2017
	3M Stamark Wet Reflective Removable Tape 710	White	JANUARY 2017
	3M Stamark Mask Tape Removable 715	Black	JANUARY 2017
	3M Stamark W.R. Removable Tape 711-5 (Contrast)	Yellow with black	JANUARY 2017
	3M Stamark W.R. Removable Tape 710-5 (Contrast)	White with black	JANUARY 2017
	3M Stamark 711IR	Yellow	MARCH 2024
	3M Stamark 710IR	White	MARCH 2024
Swarco	Director 2 Temporary Removable Tape	Yellow	Removed Effective June 2024
	Director 2 Temporary Removable Tape	White	Removed Effective June 2024
	Director 2 Temporary Removable Tape	Black	Removed Effective June 2024

Delineators & Marker Posts

Culvert End Markers			
Manufacturer	Product	Color	Approval Date
Safe-Hit	SH248GP3-WV	White	-
Pexco-Davidson	FG 500 Series	White	-
Carsonite	Survivor 01	White	-
Composites	Curve-Flex Marker 01	White	-
Shur-Tite	Shur-Flex Drivable Delineator (#SD0031)	White	-

Delineator Flexible Posts			
Manufacturer	Product	Color	Approval Date
Safe-Hit	SH248GP3-WS	White	-
Pexco-Davidson	FG 500 Series	White	-
Carsonite	Survivor 01	White	-
Composites	Survivor 02	White	-
Composites	Curve-Flex Marker 01	White	-
Shur-Tite	Shur-Flex Drivable Delineator (#SD0031)	White	-

Guardrail Reflectors			
Manufacturer	Product	Color	Approval Date
Pexco	FatCat Guardrail Marker	--	-
Artuk	STR413	--	11/12/2021

E.A.T. Marker Posts			
Manufacturer	Product	Color	Approval Date
Pexco-Davidson	FG 500 Series	Yellow	-
Carsonite	Survivor 02	Yellow	-
Composites			

Pavement Marking Approval Process

1. INTRODUCTION

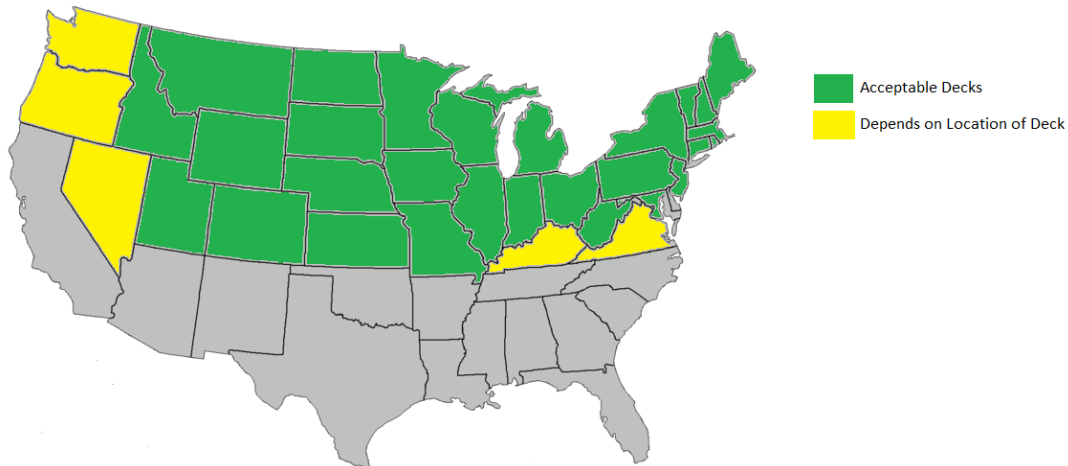
Pavement marking materials are covered by this approval process.

QUALIFICATION

The Wisconsin Department of Transportation provides manufacturers or vendors two options to apply for addition to the approved products list in Wisconsin. In order to be considered, the vendor or manufacturer must initiate the evaluation of their pavement marking material.

Qualification for Immediate Approval

1. The subject material has been tested and has NTPEP data for two (2) years or more from a Northern test deck below from within the last 10 years.



2. Refer to Appendix B for required test values.
3. Submit the required Application Form, Test Data, Installation Specifications, Product Specifications, Report, and Product Sample as follows:
 - **Application Form**
 - **Test Data:** Submit NTPEP test data from participation in Northern Test Deck for comparison to Wisconsin Department of Transportation's (WisDOT) qualification and performance requirements. The NTPEP data will include:
 - Durability Data
 - Retro-reflectivity Data
 - Color Data
 - Bead Data
 - Application Data
 - Traffic Data
 - Weather Data
 - Limitations

- **Installation Specifications:** Submit proper product installation instructions along with a website address where the installation specifications can be located.
- **Product Specifications:** Submit product specifications that include the material safety data sheet and any other literature along with a website address where the specifications can be located
- **Report:** Submit a written report containing all of the following information and a statement agreeing to the provisions of the application and review process.
 - Technical Assistance: The name(s), telephone number(s) and email addresses for the vendor or manufacturer representatives.
 - Manufacturer Quality Control Program: A written submission of a quality control program that monitors the manufacturer's production for WisDOT approval. Outline the details of the types of tests and frequency of tests on each of the lots produced and outline the manufacturer's laboratory product quality and accuracy control testing procedures.
 - Manufacturing Capability: The manufacturer must have, in operation, a plant adequate for and dedicated to the manufacturing of the specific pavement marking. Provide written assurance that the manufacturer is able to produce batch or lot sizes consistent with the quantities that are required for pavement marking projects. In addition, include verification that the manufacturer has produced similar material over the past two (2) years with success.
- **Product Sample:** Pavement marking material acceptance is based on the manufacturer's certification and quality control testing. The manufacturer or vendor may be asked to supply one pint of the product to WisDOT BTO Pavement Marking Program for verification. In addition, submit quality control test results to WisDOT as well as a manufacturer's written certification listing the batch or lot number, quantity and verification that the product being submitted for review meets WisDOT BTO specifications. If requested, send sample and supporting documents to:

Jeannie Silver
Department of Transportation
3609 Pierstorff St.
Madison, WI 53704
(608) 246-5408
Email: DOTSignMarkWZMaterials@dot.wi.gov

4. After the process is completed, WisDOT will notify the manufacturer or vendor of the results of the evaluation. If the product is accepted, it will be included on the Pavement Marking Approved Products List. If the product is rejected, the manufacturer or vendor can reapply after 6 months.

5. It is the responsibility of the manufacturer or vendor to submit **all** changes to WisDOT BTO to remain in good standing on the approved products list once the product has been added. If the product begins to show signs of failure before the end of its lifecycle, the manufacturer or vendor will be notified and will have 1 month to correct the problem or provide a resolution plan. If the problem is corrected, the product will remain on the approved products list. If the problem is not corrected, the product will be removed from the approved products list. The manufacturer or vendor may reapply after 6 months to be placed back on the approved products list.

ON-GOING APPROVAL

To recertify products to be included on the approved products list, the manufacturer or vendor is required to resubmit all the documents listed above with data from within the last 10 years every 5 years. The NTPEP data submitted must be current to within one (1) year of the recertification application date. Failure to recertify products will result in removal from the Approved Products List.

WisDOT reserves the right to update any standards and recertify products using the updated standards. WisDOT will notify manufactures if their product is removed due to an updated standard.

**Wisconsin Department of Transportation
Pavement Marking: Approved Products Application**

Manufacturer Information

Company Name: _____ Phone Number: _____
Address: _____
Email Address: _____
Website: _____

Product Information

Product Name and Model: _____

Type of Marking:

- | | |
|---|--|
| <input type="checkbox"/> Waterborne Paint | <input type="checkbox"/> Temporary Tape (Without Adhesive) |
| <input type="checkbox"/> Slow Dry Epoxy | <input type="checkbox"/> Delineator |
| <input type="checkbox"/> Fast Dry Epoxy | <input type="checkbox"/> Marker Post |
| <input type="checkbox"/> Permanent Tape | <input type="checkbox"/> Flexible Tubular Marking Posts |
| <input type="checkbox"/> Temporary Raise Pavement Markers | |

Has this product, or similar products been used previously by WisDOT? Yes No

If yes, please explain: _____

Documents to Submit:

**Support Documentation MUST be submitted to be considered for review*

- Quality Control Plan
- Data Sheets
- Installation Specifications
- Material Safety Data Sheet
- Technical Assistance
- Other Literature
- NTPEP Testing year & product name (Cold Weather Deck): _____

Signature

Signed: _____ Title: _____
Printed Name: _____ Date: _____

Submit this application and supporting documents to:

Jeannie Silver
Department of Transportation
3609 Pierstoff St.
Madison, WI 53704
(414) 333.6234
DOTSignMarkWZMaterials@dot.wi.gov

APPENDIX A

- Retro-reflectivity Data
 - Marking thickness
 - Pavement Type
 - Old or new
 - Concrete or asphalt
 - Application equipment and method
 - Reflectivity versus age
 - Traffic
 - Weather
- Color Data
 - Daytime color beads
 - Color drift over time
- Bead
 - Distribution & embedment
 - Type
 - Gradation
 - Coating
 - Application Weight
 - Roundness
- Durability
 - Marking thickness
 - Pavement Type
 - Old or New
 - Concrete or Asphalt
 - Adhesion to existing markings
 - Application equipment and method
 - Surface preparation
 - Durability versus age
 - Traffic
 - Weather
- Application Data
 - Required application equipment
 - Required application method
 - Speed
 - Weather limitation
 - Equipment modification costs (if any)
 - Dry time versus weather
 - Safety and health limitations

APPENDIX B

White Color Requirements							
Daytime Chromaticity Coordinates (Corner Points)							
1		2		3		4	
x	y	x	y	x	y	x	y
0.355	0.355	0.305	0.305	0.285	0.325	0.335	0.375

Yellow Color Requirement							
Daytime Chromaticity Coordinates (Corner Points)							
1		2		3		4	
x	y	x	y	x	y	x	Y
0.560	0.440	0.490	0.510	0.420	0.440	0.460	0.400

White					
Material	Expected Life (years)	Initial Retro	Retro After 1 year	Retro After 2 years	End of Life Durability
Paint	2	275	200	100	7
Epoxy (Type 1 Beads)	4	275	225	150	8
Epoxy (Other Beads)	5	475	325	250	8
Permanent Tape	8	650	400	350	8

Yellow					
Material	Expected Life (years)	Initial Retro	Retro After 1 year	Retro After 2 years	End of Life Durability
Paint	2	185	100	--	7
Epoxy (Type 1 Beads)	4	185	140	100	8
Epoxy (Other Beads)	5	325	250	175	8
Permanent Tape	8	425	335	250	8

Material	Expected Life (months)	Initial Retro	Retro After 6 Months	Internal Tape Strength
Temporary Tape - White	6	650	400	<2
Temporary Tape - Yellow	6	400	200	<2

APPENDIX C

MATERIAL DEFINITIONS:

Waterborne Paint – Conventional traffic paint consists of three interwoven elements: pigment, binder, and glass beads. Binder materials (or resins) are usually latex or acrylic materials that provide the adhesive and cohesive properties of the material.

- High-Build Waterborne Paint: A high-solids, water-borne paint that is thicker, more durable, and takes longer to cure than regular water-borne paint.

Epoxy: A durable two-component pavement marking material consisting of two components: a pigmented resin base and a hardener. Each component is heated separately and then thoroughly mixed and applied

- Modified Epoxy: Modified urethane is a two-component durable marking material with similar performance characteristics to those of polyurea. The product is marketed as being slightly more durable than epoxy but with quicker cure times and better UV color stability. Modified epoxy and urethane can be sprayed from any standard epoxy truck.
- Slow Cure Epoxy: Products that take longer than ten minutes to dry are categorized as slow cure epoxy.
- Fast Cure Epoxy: Products that take ten minutes or less to dry are categorized as fast cure epoxy.

Permanent Tape: This is a durable marking product that is inlaid on freshly laid bituminous surfaces or is grooved into concrete and older bituminous surfaces. These tapes bond with the pavement surface so that it cannot be removed by hand. This includes any inlaid installations that have achieved good bond with the surface.

Temporary Tape: This is a temporary marking material used for short-term applications such as work zones. These tapes are much thinner than permanent tapes and are pre-coated with a self-bonding adhesive. Temporary tape can be utilized to minimize pavement scarring. Temporary tapes have the ability to adhere to all surfaces without the use of heat, solvents, or other additional adhesive means and is immediately ready for traffic after application.