



Crack Sealant Innovations



Midwest Pavement Preservation Meeting
October 25-27, 2011

Your Destination...Our Priority





Objectives

- **TPF Field Validation Test Sites**
- **Inspection**
- **Monitoring**
- **MnDOT Performance Based Testing**
- **NTPEP Data Mine**



TPF 5 (225) Phase II Field Validation

- **Test Site Monitoring**
 - **Field rating**
 - 5 times over 4 yrs
 - **Collect samples for testing**
 - **Crack Movement**
 - **Fine Tune Parameters**





Phase II- Field Validation Matrix

ASTM Type	Treatment Material	State / Province							
		New Hampshire	New York	Michigan	Minnesota	Ontario	Rhode Island	Virginia	Wisconsin
Type II	Crafco AR+ (244)	Type II			Type II				Type II
Type I	Crafco Roadsaver 515					Type I		Type I	
Type IV	Crafco Roadsaver 231	Type IV		Type IV	Type IV	Type IV			
Type IV	Crafco Roadsaver 522	Type IV							Type IV
Type II	Right Pointe 3405		Type II		Type II	Type II	Type II	Type II	Type II
Type I	Right Pointe 1190						Type I	Type I	
Type IV	Right Pointe 3405M			Type IV	Type IV			Type IV	Type IV
Type IV	McAsphalt Beram 3060LM					Type IV	Type IV		Type IV
Type II	McAsphalt Beram 195	Type II	Type II	Type II					
Type II	McAsphalt Beram 190					Type II			
Type II	Maxwell Nuvo 3405			Type II	Type II	Type II			
Type II	Maxwell Nuvo 6690				Type II				
Type III	WR Meadows HiSpec	Type III					Type III		
Type IV	WR Meadows 3405M		Type IV	Type IV					
Type II	P&T Durafill 3405		Type II					Type II	
Type IV	UltraSeal 3407 LM					Type IV			
Type II	Hudson TMB 64/34 WITH FIBER						Type I		
Type I	P&T Durafill 1190NR		Type I				Type I		

Next Year
 Completed



Wisconsin

Sections	Total # of Cracks	Product Name	Sealant Treatment	Average Crack Spacing (ft)
1	42	Crafco 244	$\frac{3}{4}$ "X $\frac{3}{4}$ "	50
2	42	Crafco 522	$\frac{3}{4}$ "X $\frac{3}{4}$ "	52
3	36	McAsphalt 3060LM	$\frac{3}{4}$ "X $\frac{3}{4}$ "	50
4	39	Right Pointe 3405	$\frac{3}{4}$ "X $\frac{3}{4}$ "	70
5	39	Right Pointe 3405M	$\frac{3}{4}$ "X $\frac{3}{4}$ "	62

Minnesota

Sections	Total # of Cracks	Product Name	Sealant Treatment	Average Crack Spacing (ft)
1	40	Crafco 231	$\frac{3}{4}$ "X $\frac{3}{4}$ " $\frac{1}{2}$ "X $\frac{1}{2}$ " 30X15mm	34
2	30	Crafco 244	$\frac{3}{4}$ "X $\frac{3}{4}$ " No Rout	33
3	25	Crafco 241	$\frac{3}{4}$ "X $\frac{3}{4}$ " No Rout	38
4	30	Right Pointe 3405M	1"X1"	50
5	45	Right Pointe 3405	1"X1" No Rout	38
6	55	Maxwell Nuvo 3405	1"X1" $\frac{1}{2}$ "X $\frac{1}{2}$ " 30X15mm No Rout	38
7	45	Maxwell Nuvo 6690	1"X1" No Rout	

Ontario

Sections	Total # of Cracks	Product Name	Sealant Treatment	Average Crack Spacing (ft)
1	35	McAsphalt Beram 190	20X20mm 30X15mm 40X10mm	120
2	20	McAsphalt Beram 3060LM	20X20mm	150
3	50	Crafco 231	20X20mm 30X15mm 40X10mm Clean & Seal	190
4	25	Right Pointe 3405	20X20mm	108
5	75	Maxwell Nuvo 3405	20X20mm 30X15mm 40X10mm Clean & Seal	52
6	30	Ultraseal	20X20mm	78
7	30	Crafco 515	20X20mm	40

Route Inspection



Field Inspection



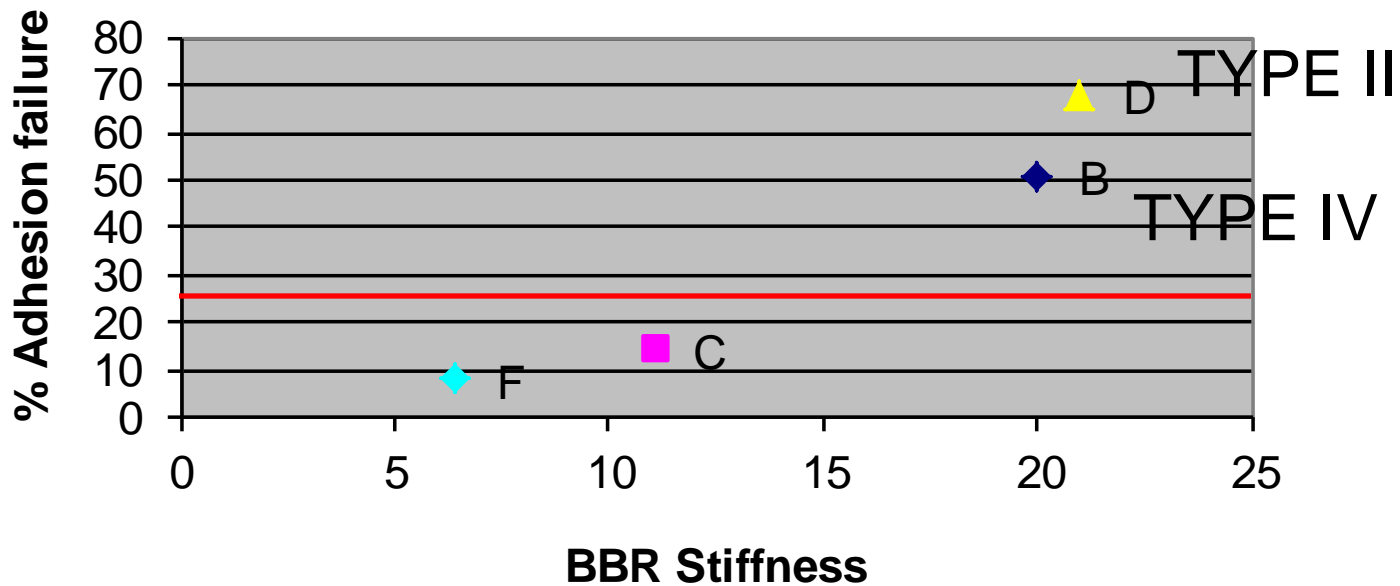
Crack Movement - Pins



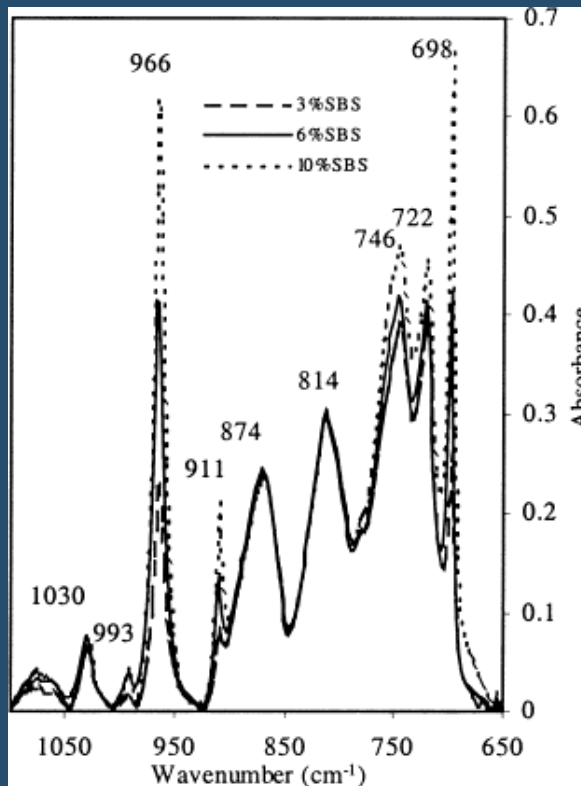


MnDOT Performance Based Testing

CS-BBR Stiffness vs Field Adhesion Loss



Chemical Analysis



- Sealant B, C & F – Type IV
- Polymer content
 - B-6.8%
 - C-12.8%
 - F-11.8%
- Filler content
 - B-17%
 - C-14%
 - F-12%





New formulations



- Maxwell Nuvo-foam boxes
- Maxwell Nuvo 6690 Type II- 1/2 hr to traffic
- Right Pointe Type II





www.ntpep.org

A screenshot of the NTPEP website displayed in a Windows Internet Explorer browser window. The browser title is 'AASHTO - NTPEP - Home - Windows Internet Explorer'. The address bar shows 'http://www.ntpep.org/Pages/default.aspx'. The website has a blue header with navigation links: 'About AASHTO', 'Bookstore', 'Software', 'Meetings', 'Committees', 'Programs', 'Newsroom', and 'Resources'. Below the header is a search bar and a 'Take the Shortcut!' button. The main content area features the NTPEP logo (an hourglass) and the text 'National Transportation Product Evaluation Program'. A sidebar on the left lists 'NTPEP Web Site' links: Home, Technical Committees, Documents, NTPEP DataMine, and Member Services. A central banner image shows a worker in a high-visibility vest using a hose on a road surface, with the text 'HOT MIX ASPHALT CRACK SEALERS' below it. A 'Highlights' section is partially visible. On the right, there is an 'NTPEP Contacts' section listing Greta Smith, Kathryn Malusky, Evan Rothblatt, and Daniel Stegmaier with their phone numbers and email addresses. The Windows taskbar at the bottom shows the start button, several open applications, and the system clock at 9:37 AM.





NTPEP DataMine - Windows Internet Explorer

http://data.ntpep.org/Login.aspx

File Edit View Favorites Tools Help

NTPEP DataMine

NTPEP DataMine

- Home
- My DataMine
- Login
- Register
- Help

Registration Information

To view data that has been released for Public review through the program, you are not required to register. Return to the [Home](#) page and click on the product category of interest.

To submit a product you must register and login to do so.

Some data that has been released is restricted to view by State Transportation Agency representatives. To view restricted data you must register and login to do so. [Please register for all Technical Committees you are interested in viewing test data and audit results for.](#) Your registration will require approval by an AASHTO administrator. Please contact Greta Smith <mailto:gsmith@ashto.org> if you require this approval.

Login

Log In
Please log in using your e-mail address and password.

E-Mail Address: *

Password: *

Log In

Get Password
If you do not remember your password, please select Get Password to retrieve your password.

E-Mail Address: *

Get Password

Register
To access your personalized My DataMine area, please register. It's much easy.

Register

Done Internet 100%

start 2011 MPPP.ppt [Com... NTPEP DataMine - Wi... 9:40 AM





NTPEP DataMine - Windows Internet Explorer

http://data.ntpep.org/Module/JSCS/TestManagement.aspx

File Edit View Favorites Tools Help

NTPEP DataMine

Save

Cell	Crack	Label	0-2 ft Adhesive	0-2 ft Cohesive	2-4 ft Adhesive	2-4 ft Cohesive	4-6 ft Adhesive	4-6 ft Cohesive	6-8 ft Adhesive	6-8 ft Cohesive
1	1	1-1								
1	2	1-2								
1	3	1-3								
1	4	1-4								
1	5	1-5								
1	6	1-6								
1	7	1-7								
1	8	1-8								
1	9	1-9								
1	10	1-10								

Paste Save

Cell	Crack	Label	8-10 ft Adhesive	8-10 ft Cohesive	10-12 ft Adhesive	10-12 ft Cohesive	Debris Rating	Spalling	Tracking	Pull-Outs
1	1	1-1								
1	2	1-2								
1	3	1-3								
1	4	1-4								
1	5	1-5								
1	6	1-6								
1	7	1-7								
1	8	1-8								
1	9	1-9								
1	10	1-10								

Paste Save

Done Internet 100%

start 2011 MPPP.ppt [Com... NTPEP DataMine - Wi... 9:52 AM



Questions?



Your Destination...Our Priority

