UNIQUE PAVING MATERIALS

Cleveland, Ohio

Started in 1959
Unique is the oldest continuous cold mix producer in the USA.
Over 140 Bulk Locations of UPM Permanent Repair Material Bags of UPM and Pavement-Maintenance Preservation Products Available Nation-wide

The cold wet weather is setting records for many parts of the country.
It is becoming increasingly important to transportation agencies to gain public support for low cost pavement preservation treatments applied to roads while they are still in good condition versus heavy rehabilitation or full roadway reconstruction, which are applied to roads in poor condition.

Reference:
Performance Evaluation of Various Rehabilitation and Preservation Treatments Final – January 6, 2010
U.S. Department of Transportation
Federal Highway Administration
Office of Asset Management
HIAM-1
Washington DC 20590-0001
## Treatments

<table>
<thead>
<tr>
<th>Treatments</th>
<th>Description</th>
<th>Timing of Application, yrs</th>
<th>Distress Type</th>
<th>Extended Pavement Service, yrs</th>
<th>Cost/line Mile (2009$)</th>
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</thead>
<tbody>
<tr>
<td><strong>Minor Rehabilitation</strong></td>
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<tr>
<td>Thin Overlay</td>
<td>A HMA overlay with one lift of surface course generally</td>
<td>4 to 24</td>
<td>rutting; ride; and raveling</td>
<td>3 to 23</td>
<td>$29,409 to $249,699</td>
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<tr>
<td></td>
<td>with a thickness of 38 mm (1.5 in) or less</td>
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<td>Chip Seal</td>
<td>A surface treatment in which the pavement is sprayed</td>
<td>2 to 13</td>
<td>cracking and raveling</td>
<td>3 to 8</td>
<td>$6,732 to $145,976</td>
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<td></td>
<td>with asphalt (generally emulsified) and then immediately</td>
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<td>covered with aggregate and rolled. Chip seals are used</td>
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<td>primarily to seal the surface of a pavement with non load-</td>
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<td>associated cracks and to improve surface friction,</td>
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<td>although they also are commonly used as a wearing</td>
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<td>Selective Treatments Present</td>
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<td>Selecting the optimum process/product requires:</td>
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<tr>
<td>• Research</td>
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<tr>
<td>• Experience</td>
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<tr>
<td>• Cooperation</td>
<td></td>
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<td>Hot in-Place Recycling</td>
<td>A process which consists of a</td>
<td>3 to 8</td>
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<td>$31,136 to $130,383</td>
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<td>surface with heat, mechan</td>
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<td>material, mixing the material, adding virgin asphalt and a required,</td>
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<td>and then replace</td>
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<td></td>
<td>pavement</td>
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<tr>
<td>Integra Seal&lt;sup&gt;3&lt;/sup&gt;</td>
<td>$19.75/5 gal (or 1gal/120ft&lt;sup&gt;2&lt;/sup&gt;</td>
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<td></td>
<td></td>
<td>$0.31/yard&lt;sup&gt;2&lt;/sup&gt; $2,182 per</td>
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<td>sealer with Gilsonite for parking lots</td>
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<td></td>
<td></td>
<td>lane mile</td>
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<td>Ravel Check&lt;sup&gt;3&lt;/sup&gt;</td>
<td>Designed to penetrate oxidized asphalt, rejuvenate by</td>
<td>anytime</td>
<td>Cracking, oxidation, initial</td>
<td>3 to 5</td>
<td>$1.10/yard&lt;sup&gt;2&lt;/sup&gt;</td>
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<tr>
<td></td>
<td>returning maltene/asphaltenes back to AC. Will lock lose aggregate,</td>
<td></td>
<td>raveling</td>
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<td>fill minor cracking and stop raveling. $55/5gal,</td>
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<td>90ft&lt;sup&gt;2&lt;/sup&gt;/gal or 450ft&lt;sup&gt;2&lt;/sup&gt; or $1.10/yard&lt;sup&gt;2&lt;/sup&gt;</td>
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<tr>
<td>UPM&lt;sup&gt;3&lt;/sup&gt;</td>
<td>Permanent Pothole Repair Material, Guaranteed to</td>
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<td>$32-$40</td>
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<td></td>
<td>outlast surrounding pavement</td>
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**Major Rehabilitation/Repair**
UNIQUE provides multiple BEST-IN-CLASS Preservation Rejuvenation and Repair Products.

**INTAFLEX**
- Premium Permanent Road Repair Material- The Industry Standard.
- SPM- Spec mix to meet specific customer performance needs.
- Cold Pour crack filler: 70 % Solids, Latex enhanced asphalt emulsion
- Environmentally friendly asphalt based sealer enhanced with Gilsonite.
- Specialty concrete patching materials exceeding industry standards in set time and strength.
- Complete line of asphalt adhesion packages for all HMA applications
- Asphalt surface preservative and rejuvenator, enhanced with Gilsonite.
- Tacks and emulsions for general paving applications.
- Tacks and emulsions for general paving applications.
- Various hand and motorized installation tools for both asphalt and concrete.
### CONCRETE PRODUCTS

<table>
<thead>
<tr>
<th>Product</th>
<th>Features</th>
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| HPFS    | · High Early Strength  
         | · Freeze-Thaw Resistant  
         | · Open to Foot Traffic in 1 hour, Vehicle Traffic in 2 hours |
| Water Stop | · Non-Shrink, Volume Stable  
             | · 2-3 Minute Set Time  
             | · User Friendly, Easy Clean-up |
| OHVR    | · Self-curing  
         | · From Featheredge to 4”  
         | · Indoor and Outdoor Use |
| Flexicrete HP | · High Abrasion Resistance  
                     | · Superior Bonding Strength  
                     | · High Compressive, Flexural Strengths |

For more information, contact Josh Pemberton at 800-441-4880 ext. 241 or email us at concrete@uniquepavingmaterials.com
WHAT DOES QUALITY LOOK LIKE FOR COLD MIX?

Product rating is composed of six major performance parameters compared to an absolute standard:

1. Cohesiveness
2. Workability
3. Cold Workability
4. Film Thickness
5. Sieve Analysis
6. Strip Test

Parameters are weighted based on comparative field-lab correlation; creating a balanced rating, if achieved will guarantee superior field performance.

Cold-mix should be seasonally graded to guarantee workability in all weather.

All parameters are interdependent, overall field performance deteriorates rapidly if any one parameter fails.
Road damage in St. Louis suburb caused by water flowing under the road from adjacent hillside. Water is forced up through the surface. Multiple repair materials tested including hot mix, typically failing within 10 days.

UPM installed Nov. 28, 2012.

16 months later, no further repairs.
UNIQUE maintains a national demonstration database containing hundreds of repairs.

UNIQUE is engineered to perform in wet cold weather.

UPM®, Permanent Pavement Repair Material
Demonstrating UPM® in High Volume traffic and Heavy Loads.
Install Conditions: Wet Above 40°F
Pavement Conditions: Some cracking, mostly solid
Installation Date: February 13, 2012
Time Elapsed: 1 Year
Location: Vancouver, WA, Gas Station Entry
Contacts: Bart Shadbolt

Very wet conditions
Loose material removed
Installed in water

Finished Repair
One year later
The average savings to the City of Lexington is $340,260, annually.
BEST in CLASS PRODUCTS and SERVICE

- Best in Class Emulsion Based Crack Filler, 70% residue
- Hot Mix Adhesive Promoter, Maximize TSR
- Concrete Patch Material
- UPM Green Best in Class Pothole Repair
- UPM Best in Class Pothole Repair
Contact us at the UNIQUE booth of follow-up with your local Representative

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603-361-7386
mwohlfahrt@uniuqepavingmaterials.com

UNIQUE Paving Materials
Providing valuable products, from valuable people, to valuable customers.

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