RESERVATION PRODUCTS

ABOUT YOUR PRESENTER



- 25+ Years Pavement Preservation
- Asphalt & Concrete
- Fun Fact: The word "asphalt" appears on birth certificate





PRESERVATION PRODUCTS

Protect roads, bridges, and buildings from hydro harm. Our solutions are successful, and we service our customers by providing beneficial support in the form of comprehensive design review and technical advice during construction and application.

ULTRASEAL WATERPROOFING SYSTEM

The Ultraseal Waterproofing System is a built-up multilayer system used to protect the bridge deck from chlorides, water penetration and other harmful materials.



WHY IT MATTERS

Ultraseal works.

Ultraseal is hot-applied in place, unlike its closest competitor, and is an easyto-use system at new construction or during maintenance. It is long-lasting and can survive multiple maintenance cycles. Plus, Crafco offers training and assistance directly and through distributors and supply centers on this unique waterproofing solution and all products.

Ultraseal is a win-win.

For state DOTs: It's an innovative solution that supports your goal of moving toward 100-year bridge life. For contractors: It creates new opportunities for growing business through the Infrastructure Bill. For construction pros: It's easily trained on and applied in a single session, and you can start now. For taxpayers: It protects your investment in infrastructure.

WHY ULTRASEAL?

- 100% solids, no field mixing
- *No VOC restrictions or applicator license required
- Less expensive than competing systems
- Many Contractors you already sell to have the equipment



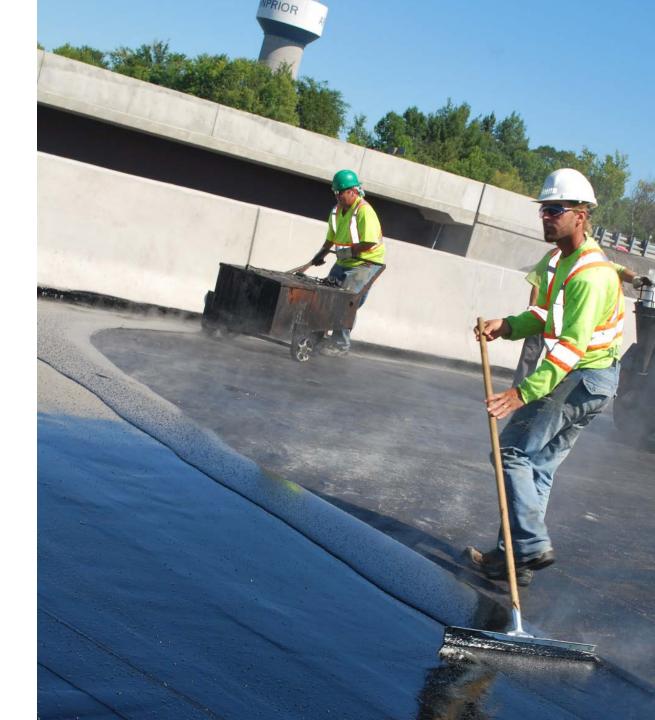
ULTRASEAL WORKS

- Flowable/Pourable
- Seamless, Completely Monolithic
- Highly Adhesive-Tenacious Bond
- Tough, Thick and Self-Healing



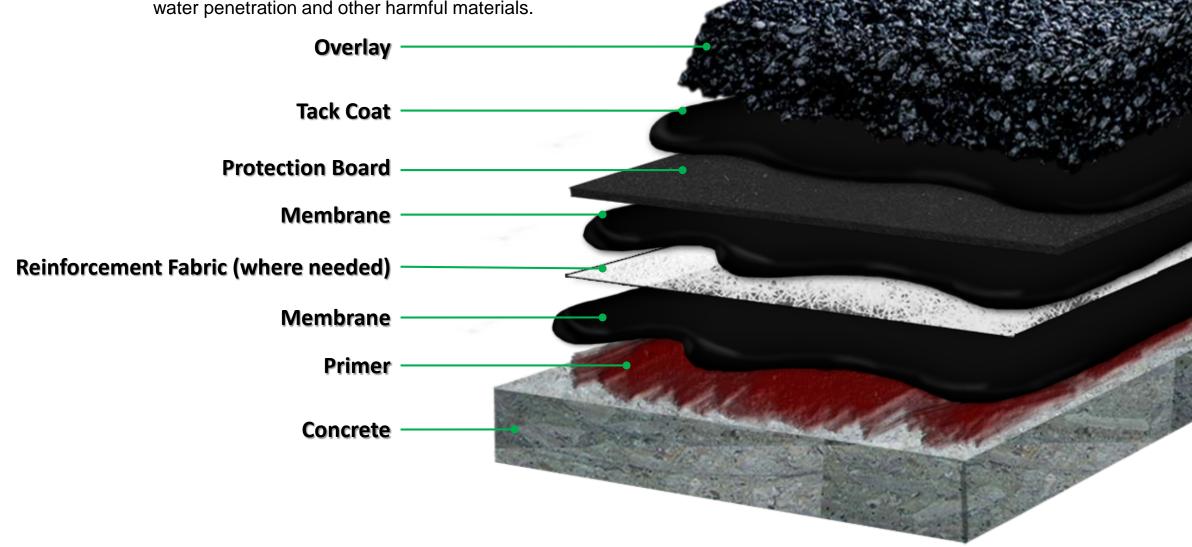
WIFM?

- Low Cost ~ \$3.00 / FT²
- High Performance
- Volume = Equipment Rental
- Maintainable
- Training available contractors or DOT's
- Decades of performance
- Ideal for rehabilitation project or new construction



ULTRASEAL BRIDGE DECK WATERPROOFING SYSTEM

Is a built-up multilayer system used to protect the bridge deck from chlorides, water penetration and other harmful materials.



– KANSAS BRIDGE CASE STUDY —

This bridge deck preservation project in Topeka was recognized for its superior collaboration in construction planning, design, and execution by the Kansas Contractors Association. The winning project was a test initiative involving multiple entities, including Crafco customers HAMM Companies and Bettis Asphalt and the Kansas Department of Transportation.

The teams used Crafco Ultraseal 3750 as the bridge deck waterproofing membrane.



UNIQUE PROBLEMS—SOLVED

Extreme weather



Ultraseal is ideal for areas that experience extreme weather conditions:

- Bridges that will otherwise be harmed by the **freeze/thaw cycle** and caustic salt application
- High-wind conditions that make stick-and-peel solutions
 unsuitable
- Places where temperature fluctuations cause delamination

Traffic movement



Application of the Ultraseal system is not hampered by:

- Heavy truck traffic—vibration that makes pre-formed solutions impractical does not affect this build-in-place solution
- **High usage volumes**—Ultraseal can be installed by closing just one lane at a time to minimize impact to traffic
- Falling debris—even popping corn kernels couldn't stop Ultraseal!

Labor shortages

Life-cycle considerations



Ultraseal can be applied at any point in the bridge life cycle:

- When building new, applying the Ultraseal system is a great solution to achieving long deck life
- **During routine maintenance**, the system can be applied after the driving course is milled off or an existing Ultraseal membrane can be left untouched
- After a major accident, emergency repairs can be made by flood coating with the same Ultraseal system for a seamless solution



Labor shortages are affecting all contractors. Select a solution that:

- Is **easy to apply** and doesn't require a team to wrangle a 75-foot roll—Ultraseal comes in a 4x8' sheets that are hot-applied
- Can be **built-in-place** to address the unique conditions of the jobsite as you see them
- Takes **less than a day to train on**, with Crafco and our distributors available to help in person or via video call



Step 1: Prime

Ultraseal is the ideal solution for high-traffic areas and can be used even in the presence of significant vibration



Step 2: Apply

The Ultraseal waterproofing membrane is efficient and easy to apply, even for a small team, with less than a day's training.





Step 3: Protect

The protection course then goes down quickly in stress-free 4x8' sheets, completing the process.







Quality • Success • People • Integrity • Relationships • Innovation • Tidy

Wide Crack Treatment

Difficult Repair Areas

Mastic products provide solutions for distresses that are too large for crack sealing, yet too small for complete reconstruction.

- Wide Cracks (<1 ¹/₂ inches)
- Longitudinal & Transverse Cracks
- Potholes
- Depressions
- Alligatored Pavement
- Joint Failures
- Rumble Strips
- Uneven Pavement
- Parking Lot Fixtures/Maintenance
- Bridge Decks/Railroad Tracks
- Manhole Levelling
- Spalled Concrete



What is Mastic Sealant?

Asphalt mastic is hot-applied repair material made of polymer-modified binder and engineered aggregate



Mastic One[®] Composition

- <u>Binder</u>- Asphalt modified with polymers and oils to better resist shoving and cracking.
- <u>Aggregate</u> designed to provide mass and stability for compression resistance and to meet load bearing requirements, while still allowing the material to flow.

Mastic Attributes

Prepackaged/Easy to Apply Flowable/Pourable **Aggregate Filled** Flexible **Bulkable Durable/Resilient** Waterproof **Highly Adhesive Rapid Set**



Voidless/No Compaction required Resistant to De-icing Chemicals

Mastic One[®] meets ASTM 8260 Specs Type I and II

Crafco Mastic One[®] and Mastic One[®] Type 2 meet ASTM D8260 specifications for hot-applied asphalt aggregate-filled mastic

- Mastic One[®] meets ASTM D8260 Type I spec
- Mastic One[®] Type 2 meets ASTM D8260 Type II spec

TestASTM D8260 Type I Specification LimitsMastic Resilience (ASTM (8260)50% minimumEffects of Rapid Deformation (ASTM D2794) (-7°C)3 passing specimens no chipping, cracking or separation 8 N-mCrack Bridging (ASTM C1305 modified) (-7°C)Pass 3 cyclesMastic Stability (ASTM D8260) (70°C)40.0 mm maximum

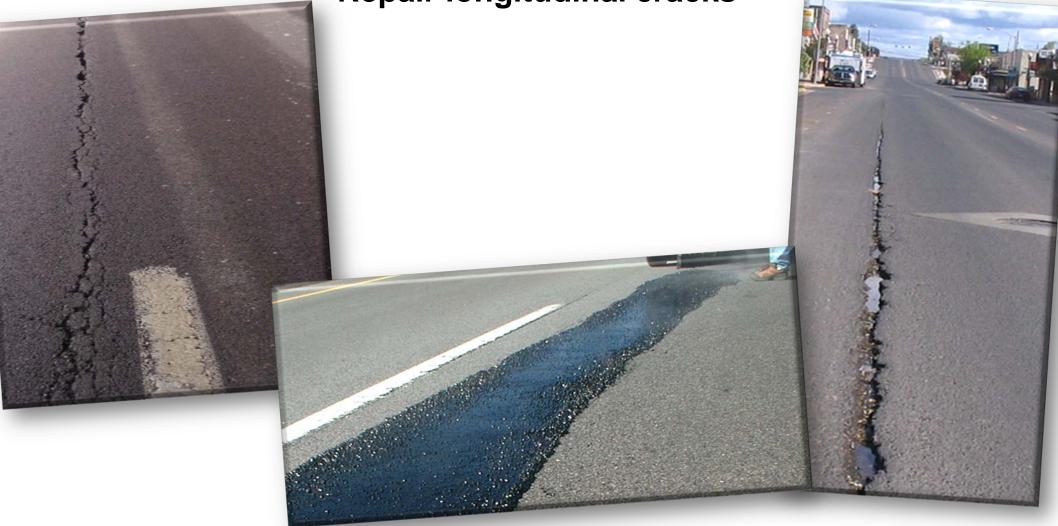
Mastic Applications The Flexible Repair Solution

Repair wide cracks





Repair Iongitudinal cracks

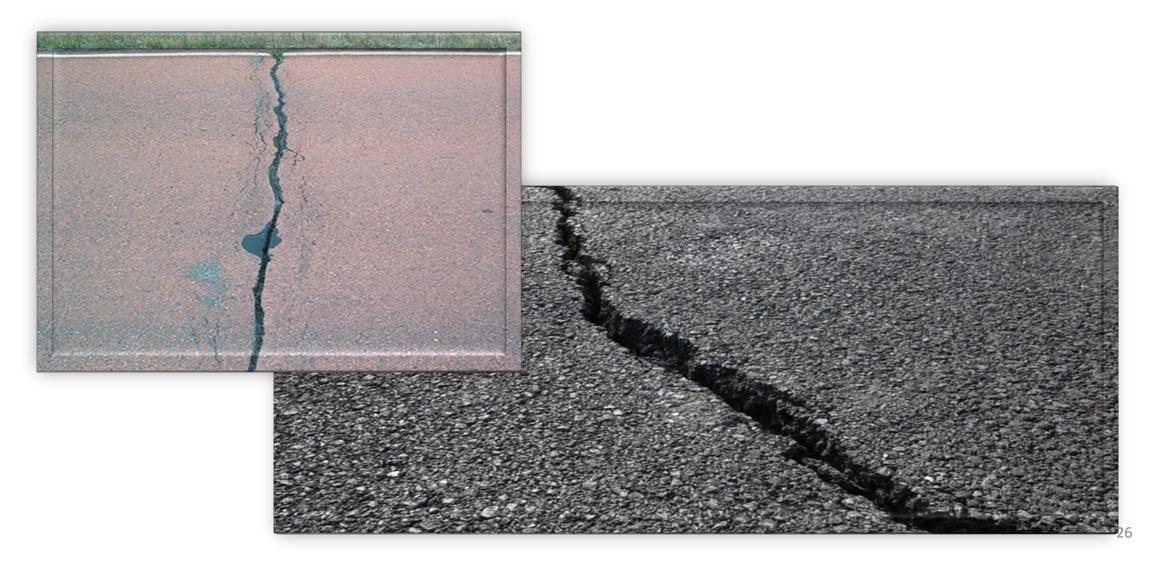




Repair transverse cracks



Recessed thermal cracks



Fill potholes





Joint failures





Mastic Application Video

Repair and maintenance of highway rumble strips



CLICK VIDEO BELOW



Level uneven pavement



Use Mastic for parking lot fixtures and maintenance





Bridge deck approaches



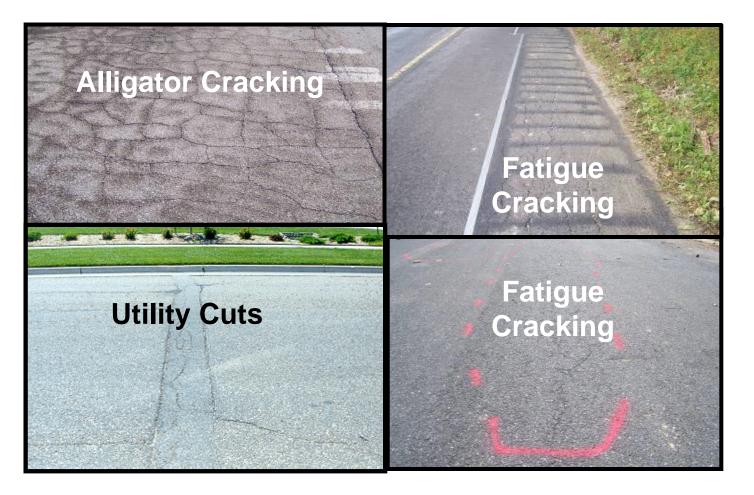
Mastic evens out railroad crossings



Manhole covers



Pavement surface pre-treatment

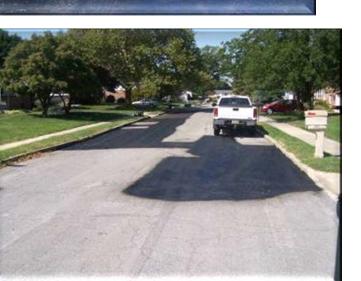


Many types of distresses need to be repaired before a surface treatment...

- Standard Crack treatments will not address all the defects.
- To remove and replace asphalt is costly and time consuming.

Pavement surface pre-treatment









Sunken curb repair





Alligatored Areas



Mastic Installation - Equipment



Use only an indirectly-heated melter with sufficient agitation such as the Crafco Patcher II, Crafco Patcher 4, or other approved melter.

If appropriate melters are not used, application difficulties, pump system damage, and extreme wear can result!!

Mastic Installation - Equipment

- Effective horizontal agitator system
- Maintain a uniformly mixed product
- Thermostatically controlled hot oil jacketed heating system
- Means to dispense product
- Heat transfer oil between 450 and 525°F (323 274°C)



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