Nova Scotia Asphalt User Producers- 2011

Rosphalt 50-LT --- A 1- step Waterproofing/Wearing Course System

Eliminates Membrane and Protection Board
 Uses standard paving equipment and best practices
 More durable than other HMA lasting 3.5 times longer
 More cost competitive to Torch/Spray applied systems
 More cost competitive to Concrete Overlays

Rosphalt[®] performance

Features:

- Skid resistance
- Waterproofing
- Smooth ride quality
- Resistance to fatigue
- Deformation resistance
- Durability
- Long life

Benefits:

- Quick installation
- Ease of application
- Lower cost compared to other waterproof systems
 Use of conventional equipment

Plant mix modifier – what is it?

- Thermoplastic polymer based additive that is added as a powder directly to the mix
- Supplied in bags or in bulk form
- Very easy to implement with conventional HMA plant and equipment
- Currently projects in USA, Canada and China





Membrane + HMA overlay

LMC overlay R 50- LT Epoxy Asphalt

Torch or Spray Applied Systems

Rosphalt[®] Advantages

- Dry mix additive
- Non-hazardous
- 1 step waterproofing/wearing course
- Greater flexibility (performance)
- More cost effective compared to other systems
- Less install time—Reduces traffic control concerns
- Outperforms Membranes with HMA overlays by 3.5 times
- Long Term durability (replaced concrete and epoxy overlays)
 - Menomonee Valley Bridge WiDOT
 - Triboro Bridge MTA Bridges & Tunnel
 - Tobin and Ruggles (Boston)
 - Ted Williams Boat Section
 - George Washington Bridge (1M vehicles per week)

Efficient and Effective Solution

Getting In – Getting Out – Staying Out

250,000 Ft3 install time comparison estimate after deck prep!

- Spray Applied System with HMA overlay 23 days
- Concrete Overlays 21 days
- Membrane with HMA overlay -7 days
- Rosphalt[®] 50-LT 3 days

OPPORTUNITY TO PROTECT THE PROVINCE'S INVESTMENTS

The Performance

Hydraulic Conductivity
Volumetric Design and Compaction
Density Development
Volumetric and Workability
Fatigue
Flexibility

Volumetric design & compaction

 Most HMA or PMA designs at 4-7% AV (air void) while Rosphalt 50-LT <2% AV (air void) providing property values to enhance performance

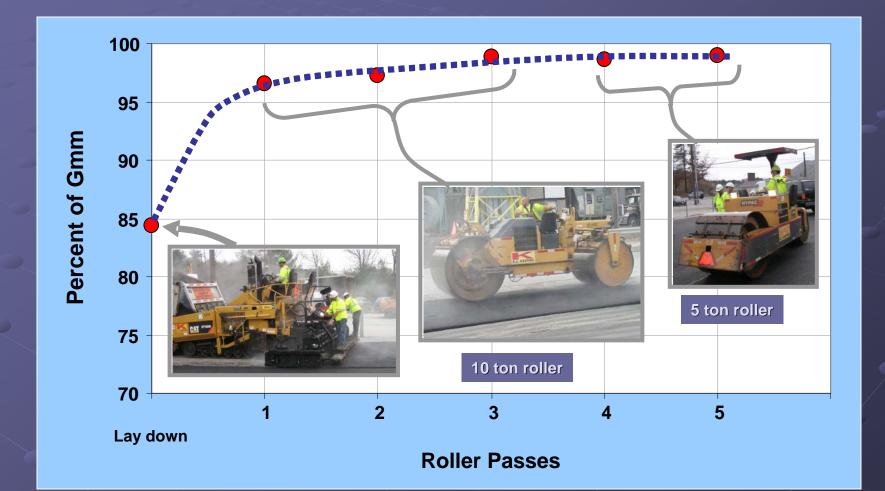
Rosphalt 50-LT provides the enhanced value:

- Deformation resistance
- Fatigue resistance
- Low temp cracking resistance
- Long Term Durability
- Moisture resistance
- Skid resistance
- Better Workability

Rosphalt JMF exceeds all other HMA's and will not ravel or fall apart!

Rosphalt volumetric designs have long history of proven success.

Density development, field



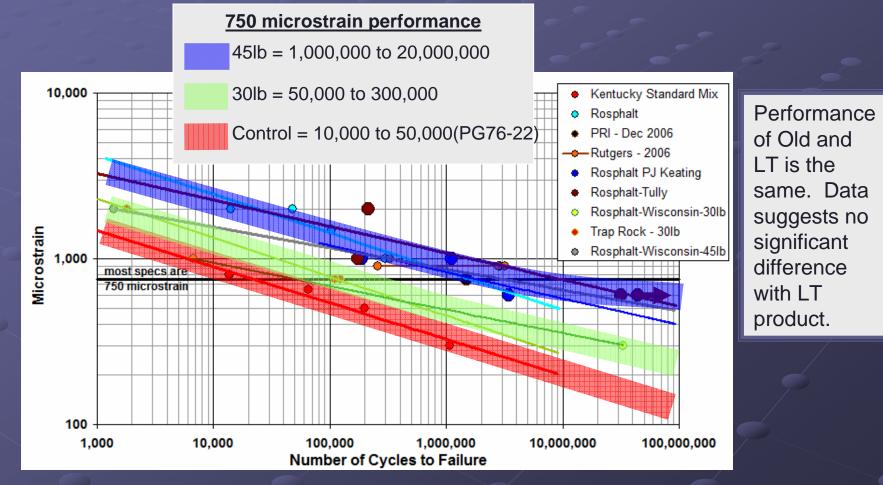
Volumetrics and workability

- Rosphalt 50-LT gets density quickly—even when rollers are in static mode.
 - Case in point Ndes @50 blows Vs 75 or 100 with other HMA or Superpave designs.

Optimal binder for Rosphalt process is point at which mastic skeleton is optimized – A visco-elastic thermoplastic flexible binder

Density development in field validated all laboratory work

Rosphalt LT Flexible Beam Fatigue

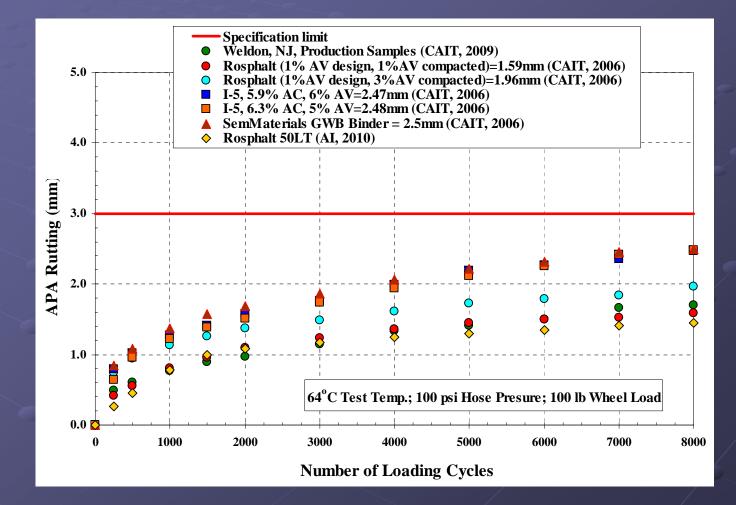


Flexibility

 Rosphalt 50-LT materials all have significantly lower stiffness
 KY Standard = PG76-22

Average E*, MPa	
KY Standard	4,400
Rosphalt	1,370

APA Rut Analysis



Rosphalt[®] – Paving the way Less install time and fewer lane closures

23,000 tons installed in 15 days no road closure

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Rosphalt[®] value

When the paving application is difficult and traffic control is critical....think Rosphalt[®]

Thank You!

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