

Highly Modified Asphalt Mixtures: Construction

Buzz Powell



Terminology Review



High modulus asphalt mix (HIMOD or HMAC) Stiffness



Highly polymer modified binder (HiMA) Proprietary



High polymer binder (HP) Asphalt Institute (non-proprietary)



High polymer grade binder (HPG) TxAPA (guidance document)



Highly modified asphalt mix (HiMod) Utah, Missouri,..

NCAT Pavement Test Track



HiMA Binder Track History



2009 Group Experiment virgin thinner section_{N7} HiMA



2010 mill/inlay virgin “N7-like” failure salvaged_{N8}



2012 Green Group 35% RAP base layer_{S5}



2012, 2015 Preservation Group thinlays_{south/north}



2015 Cracking Group 4½-inch crackproof buildup₇



2018 Thicklay paved 7-inch thinlay foundation_{N10,N11}



HiMA Construction Notes



Only construction issues were with MTD₀₉, tank₁₅



The HiMA version of HP binder has a time limit



Heat accelerates cross linking, reduces “shelf life”



Weather delays, weekends, shipping delays



Other HP binders have higher viscosity, no shelf life



HiMA for initial project(s), HP after plant retrofit



Thicklay density with Evotherm at 275F.



2018 NCAT Pavement Test Track





HPG Binder Tips and Tricks

Post Categories: [Liquid Asphalt](#)

Thanks to Anderson-Columbia, Hunter Industries, Lone Star Asphalt, Madden Contracting, and Texas Materials for their project feedback.

Categories

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[ALL-HANDS](#)

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PLANNING:

- HPG should only be used on interstates, limited access roads, or straight runs. It doesn't rake or compact well in areas that must be hand worked.
- Ordering Binder:
 - Check with supplier on lead time for ordering and during production.
 - Is there a minimum load order for HPG binder?
- Trial Batch: Find another section or mix to put remainder of trial batch binder in. Don't let sit in the tank for extended period.
- Production: Daily communication and feed from field to plant to supplier. Report any changes in consistency immediately to all. Keep binder supplier in the loop at all times, Group chat.
- Plan your work to run this mix daily until complete. Don't piece meal HPG mix.

Planning Temperatures Asphalt Plant Trucking MTV Paver Compaction Testing.

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NCAT Report 25-01

NCAT Report 25-01
November 2025



Determining Structural Layer Coefficient and Comparative Life Cycle Assessment for Asphalt Mixtures with HiMA™ Technology **x 1.7 !**



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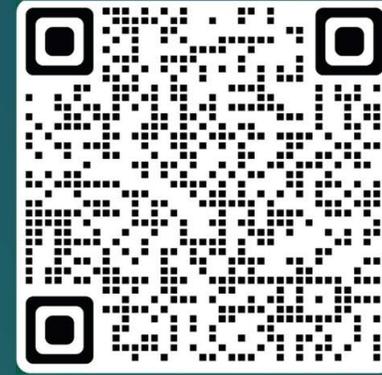
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