



LAMMG

Two-way Shape Memory Polymer Sealant

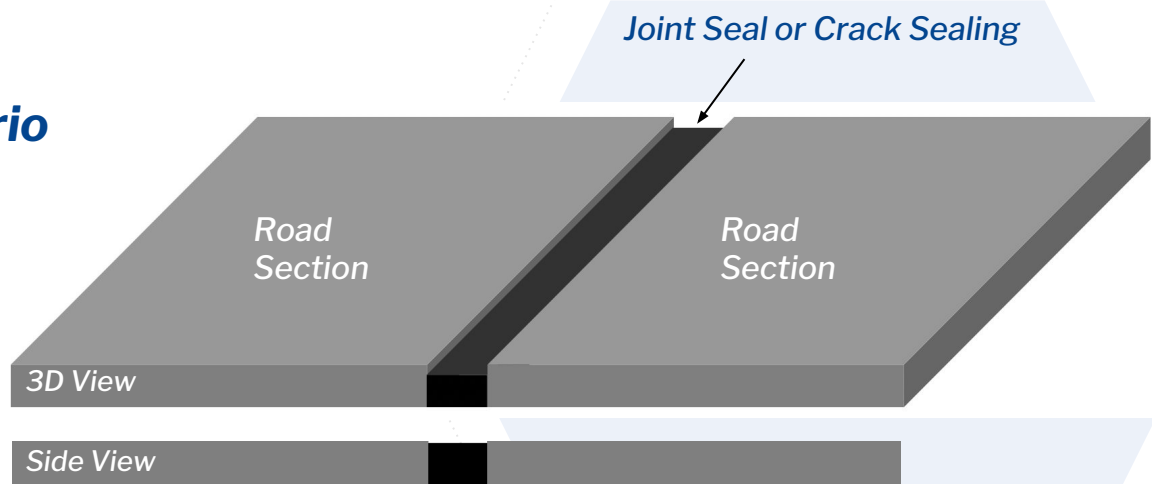
for

Expansion Joints & Crack Sealing

in

Cement/Asphalt Concrete Pavement, Roads, and Bridge Decks

Scenario



Conventional Sealant

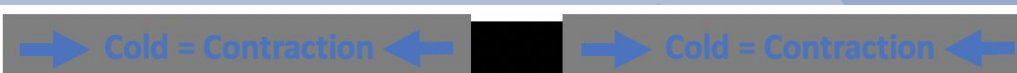


In cold temperatures, the road sections and the sealant contracts which causes cracking and interfacial adhesion failure



In hot temperatures, the road sections and the sealant expand which causes overflow and cracking

LAMG Sealant



In cold temperatures, the road sections contract but the sealant expands to maintain adhesion and the proper gap



In hot temperatures, the road sections expand but the sealant contracts to remain in the reservoir properly



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LAMG Sealant Performance Characteristics

Outperforms all 13 different conventional sealants tested by independent laboratory – Texas A&M Transportation Institute¹

- LAMG Sealant achieved over 2000 cycles with only 35% load drop
- Out of 13 conventional sealants, only 3 reached 2000 cycles, but experienced load drops over 2X higher!

Demonstrated performance at accelerated loading facilities at:

- LTRC: Louisiana Transportation Research Center
- MnROAD: Minnesota's Cold Weather Pavement Testing Facility

Improved UV stability

Over 100% elongation upon cooling (EUC) and contraction upon heating (CUH) within -45 °C to 60 °C

Good fatigue resistance at low temperature of -35 °C

Great durability under rain/salt water attack

Anticipated sale price of ~\$3.5/lb.

¹Hu, X.; Zhou, F.; Scullion, T. "Development of the crack sealant adhesion test," FHWA/TX-09/0-5457-2, Texas A&M Transportation Institute, College Station, Texas, April 2009.