

## **Hot Mix Asphalt Produced With Recycled Ground Tire rubber (GTR) and Trans-Polyoctenamer (TOR) in the Dry and Wet Process Outperform SBS Modified Mix**

This is a Summary of a Report

Submitted By:

Thomas Bennett  
Rutgers University Asphalt/Pavement Laboratory (RAPL)  
Department of Civil Engineering and Environmental Engineering  
623 Bowser Road  
Piscataway, NJ 08854

### **Hot Mix Asphalt with GTR + TOR:**

Has a much greater fatigue life than polymer-modified and unmodified asphalt binders.

Tensile Stress Ratio (TSR) values indicate that the addition of TOR to Hot Mix Asphalt aids in reducing the moisture sensitivity of the Hot Mix Asphalt.

Frequency Sweep at Constant Height (FSCH) test results indicate that Hot Mix Asphalt with GTR + TOR would be more rut resistant at higher temperatures than PG76-22 Hot Mix Asphalt. Also, the Hot Mix Asphalt with GTR + TOR had 1.0% more asphalt binder than the PG76-22 Hot Mix Asphalt.

Repeated Shear at Constant Height (RSCH) test results showed that the Hot Mix with GTR + TOR accumulated the lowest amount of permanent strain as compared to Hot Mix Asphalt with polymer-modified and unmodified asphalt binders.

**We can help you produce this high-performing mix:**

**Without expensive reactor equipment  
using only a base grade (58-, or 64-) PG binder  
for the same price or less than using SBS polymer modified  
liquid binders.**