



# WARM MIX PROJECT YIELDS WINNING RESULTS



When customers call MWV about innovative asphalt solutions, they may represent a city or state department of transportation. Commonly used roads for daily driving, trucking lanes, and highway passages generally consume the most asphalt resources.

However, there are instances when private asphalt opportunities arise that involve major parking lot structures, airport runways or even the occasional race track.

Carolina Motorsports Park, Kershaw, South Carolina, is a perfect example

of how a private asphalt paving project with big demands for technical precision keeps the organization thinking about new solutions for unique challenges.

“Racetrack paving has to be precise,” Jochen Tartak, General Manager of Carolina Motorsports Park, said in a recent interview (pictured above in middle). “A bad track shows its wear early, breaks down tires, and slows down drivers. We can’t allow any track variability or the racers and their fans won’t come back. In a way, asphalt is our business.”

Tartak recently led a tour of his regional kart track and spoke about the nuances of kart racing and why consistency on the track is important for driver safety and to performance.

“Many NASCAR drivers began their careers racing karts when they were kids and still use this form of motorsports to train. The racing karts do not have suspensions, making it very physically demanding on the driver and asphalt because they create such high lateral loads.”

In 2009, Tartak contacted Blythe Construction, Charlotte, North Carolina, for a review of what options might work to improve the track’s performance. While only seven-tenths (.70) of a mile in distance, the track includes 16 turns and numerous places where different sections of the asphalt join together, known as tie-ins.

“The job included numerous tie-ins on the track where drivers are moving at speeds up to 75 miles per hour. These joints must be seamless,” commented Allen Hendricks, asphalt division manager at Blythe.

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Racetrack paving requires precision: a poorly paved track shows its wear early, breaks down tires, and slows down drivers. Additionally, tie-ins must be perfect or driver safety may be at stake. The above tie-in was paved at Carolina Motorsports Park, Kershaw, SC.

*(Continued from front)*

A poorly laid tie-in will create bumps in the track which causes hardship on the driver and could potentially create a safety issue if the driver loses control while taking a turn over the tie-in.

Small bumps in the pavement are amplified when the driver is sitting so close to the ground in a kart weighing less than 200 pounds without shocks.

“We decided given the tight parameters of this job that the Evotherm additive was the perfect way to get the desired extended workability that we needed on this project,” Hendricks commented.

“We needed an easy to use system that required no extra equipment, could handle a longer than normal haul to get from the asphalt plant to the track, and offered maximum workability once we were on site to get those tie-ins perfect.”

To accommodate the intense conditions and ensure a smooth ride, Blythe’s engineering team decided to add extra fines to their polymer modified surface mix. The Type C surface mix included 10 percent reclaimed asphalt pavement (RAP). “We were very in-tune to trying to achieve the desired outcome of our customer,” Hendricks said. “We tweaked the mix design specifically for this job to get an economical yet high performance mix using a polymer modified PG 76-22 binder.”

When using a polymer-modified asphalt, workability is often an issue. The mix sticks to the equipment and begins to set up quickly as it cools. To accommodate the 60-mile hauling distance from Charlotte, NC, to Kershaw, SC, the mix was produced at 325°F and dosed with Evotherm 3G at NuStar’s terminal in Charlotte, NC.

“Evotherm’s ability to improve both the workability and compactability of polymer modified binders has been validated in a recently published study by the Western Research Institute (WRI)”, adds Everett Crews, Ph.D., asphalt technical director for MWV Specialty Chemicals.

“Evotherm acts as a lubricity aid within the asphalt cement, providing added insurance to the contractor when working with PMAC mix designs.” This was indeed the case in Kershaw. The mix did not harden as quickly, giving Blythe a longer working window on this highly technical job, which was important to get the tie-ins perfect.

“I had never worked with Blythe before this job,” Tartak said. “They understood what we were trying to achieve, they took time to visit the track and work closely with us. I trusted their recommendation and it has been a winner.”

Blythe Construction was the first asphalt contractor to use a warm mix asphalt chemistry in North Carolina. Their sister company, Hubbard Construction Company, Winter Park, Florida, was the first to apply a warm mix technology in the U.S. while the parent company, Eurovia, is the largest provider of warm mix asphalt in Europe.

Blythe’s willingness to take risks with innovative products like Evotherm are beginning to pay dividends. The Carolina Motorsports Park project won SCAPA’s Outstanding Performance on a Specialty Project award at SCAPA’s annual conference.



*Blythe Construction’s Berry Hall, Billy Ray Akins and William Slappey with the SCAPA’s Outstanding Performance on a Specialty Project Award.*



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