

John R Boone and Tarmac Topsport “Mixing in the Premier League”

John R Boone has supplied a continuous mixer that has transformed production speed and quality for Tarmac’s Topsport sports pitch reinforcement blend of low-density polypropylene fibre, sand and selected topsoil.

What do the Shrewsbury Town and Carlisle United Football pitches, Ascot Racecourse and the Guards Polo ground have in common with the Manchester United, Manchester City, Everton and Bolton Wanderers’ training grounds?

Answer: they have all had their grass surface reinforced with Tarmac’s Topsport reinforced sports surface. Topsport protects high wear sports surfaces all over the UK, and now a John R Boone continuous Delta Blade mixer is helping to make sure that Tarmac are providing their customers with exactly the blend that they need.



Topsport is produced at Tarmac’s Eaton Hall quarry in Cheshire by mixing a small but carefully metered percentage of polypropylene fibre with the sand that is quarried on site. For some blends carefully selected topsoil is added to create a “complete mix”. The individual polypropylene strands

are approximately 50mm long, and have a very low bulk density. The fibres come to site as highly compressed blocks on pallets and are then “combed” into the mixer, which means that in many cases fibres arrive at the mixer in clumps. The sand and topsoil have a much higher density than the fibre, making the materials especially difficult to mix together.

Achieving a significant improvement in product quality was vital to Tarmac, because quality issues resulting from the mixer they were using were restricting the market available to the company. Tarmac had also identified further market opportunities that, if they were to be exploited, would require an increase in production capacity. The key therefore was to generate a high throughput, high shear mixer that provided a truly homogenous mix of three disparate materials. The mixer is configured to a relatively long aspect ratio, which gives both an ideal environment for the high-shear mixing required and the time required for a homogenous mix to develop.

John R Boone maintains in-house test mixing equipment that represents every major variation of their production mixers, and undertook extensive in-house testing of materials supplied by Tarmac, ensuring



that every blend could be achieved within Tarmac’s specification. The continuous plough type HDBM mixer that JR Boone supplied was equipped with a patented Delta Blade and high speed cutters, which quickly break up difficult and agglomerated materials and distribute them completely through the mix. The components are fed in together at the top of the mixer and through the speed and shape of the Delta blades are completely fluidised, passing through the high speed cutters and mixing throughout the entire length of the mixer. The homogeneous mix is discharged via an adjustable weir plate which can be used to vary the residence time in the mixer to match the production rate required, typically 40 MT/hr.

Staff at Tarmac Eaton Hall declare themselves “delighted” with the performance of their new mixer. As Tim Edwards, Sales Manager at Topsport put it, “we could see significant market opportunities for our products, and John R Boone’s equipment and support have been crucial in helping us to achieve our targets”.

