

## Ringway

# Gripclean builds better bonds

Ringway's answer to bond coats, Gripclean, offers strength, 'non pick-up' and controlled break – and has been applied to the M11 in its largest UK use so far.

It is now widely recognised that if the layers of a pavement are properly bonded together they can act as one and collectively give a stronger structure.

Testing has proved the benefits to be had from bonding pavement layers and highway authorities and their contractors are using high strength and durable bond coats, such as Ringway's Gripclean material.

Gripclean was first used on Ringway's long term contract with Transport for London three years ago. It has now been applied on an M11 resurfacing project during March this year – the largest use of Gripclean so far.

Strength of pavement construction has been one of the main drivers for the introduction of bond coats along with durability. Operations Director of Ringway Specialist Services Rob Gillespie, says: "It is now important to look at long term solutions, and it is in the best interest of contractors for

them to ensure their products last longer and are therefore more cost effective."

Gripclean is a fast breaking bond coat that has been specially formulated to be 'non pick up', so that it does not stick to and get tracked around by vehicle tyres. This makes Gripclean very suitable for use in urban sites and also prevents it from contaminating adjacent areas or being trodden into houses.

The bitumen emulsion hits the ground at 85°C and it bonds instantly with the pavement layer underneath. A 'film' is then formed over the emulsion, giving it its non pick up advantages. Developed by another Ringway company, Jean Lefebvre, Gripclean can also contain a controlled break additive, called Nybreak, that can considerably speed up the breaking time and maximises the working window for laying procedures.

Bond coats and tack coats available on the market have all been tested using the Torque

Bond Test. This evaluates the effectiveness of the bond in surfacing. "The results from these tests showed Gripclean to be a stronger adhesive and give a better performance than tack coats and other bond coats available on the market," says Ringway Contracts Manager Nick Radford.

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To guarantee precise application of the bitumen emulsion according to each client's specifications, Ringway has a fleet of computer controlled Acmar spray tankers especially for this purpose. Originally just three tankers were needed. The fleet has now doubled due to the number of clients opting to use bondcoats over the last two years. The company has also invested in a further tanker this year to deal with the continuing growth in the market. This will join the existing fleet in early summer.

Each tanker can carry up to 13.5t of bitumen emulsion and has an on board computer that controls every aspect of the application, including width, length and rate of spray and how much Nybreak is added. Nybreak is mixed with the Gripclean emulsion in the tanker's spray jets and can reduce breaking time by up to two thirds.

Over 100t of Gripclean was used to bond surfacing layers on the M11 in the largest use of the material thus far





**Application of Gripclean is computer controlled from dedicated spray tankers**

“We are always looking to evolve our products. We are currently investigating ways of developing the controlled break further, to make it possible to extend the setting time if required for projects containing a reinforcement grid,” says Gillespie.

Over the last 12 months Ringway has worked on a number of resurfacing contracts for Hanson. At first Ringway supplied standard tack coats, but then introduced Hanson to Gripclean. “Once the benefits of Gripclean had been demonstrated, the bond coat became the preferred product for

Hanson, whose surfacing team was impressed with Gripclean’s performance and has used it ever since,” says Radford.

The recently completed M11 project was a major resurfacing of the carriageway between junctions eight and nine, covering 4km in each direction. The existing concrete carriageway had come to the end of its useful life and has now been reconstructed by Hanson using a low noise surfacing material.

Ringway applied Gripclean to the concrete and then between each pavement layer. In total, in excess of 100t of the modified

bitumen emulsion was sprayed on this scheme. “This is the largest use of Gripclean in the UK so far, and it has proven very successful in terms of completing the project ahead of schedule,” says Radford. “This was partly due to the quick setting bond coat, as well as the back up provided by a fleet of tankers and a good working relationship with Hanson, which has been built up over a number of schemes.”

Hanson had two pavers working on the project at all times and Ringway has been able to keep up with the high volumes needed to ensure work was continually progressing.

Since it was introduced, Gripclean has been used on a number of major projects including the M20 in Kent and airport surfacing projects at Heathrow and Gatwick. Ringway is also using Gripclean on most of its long term contracts with local authorities, including TfL and Surrey Highways. “Gripclean is also used by South West Highways in Devon where it was chosen after being tested against its competitors,” says Radford.

“So far, Gripclean has been very well received by both clients and contractors and we hope the demand for it will continue to rise,” adds Gillespie.



Nybreak mixed in the spray tanker jets can reduce breaking time by up to two thirds