

Aggregate Industries

SuperHitex to the rescue

High skid resistance at approaches to junctions is a top priority and Aggregate Industries has developed a long term alternative to specialist overlays which is soon to have HAPAS approval.

Application of anti-skid overlays at busy junctions and slip roads has become common practice as highway authorities strive to reduce accidents. Such treatments typically last for just four years before they start to disintegrate, creating a need for costly and time consuming removal and reapplication.

Highways authorities understandably prefer tried and tested materials to minimise the risks, and have had little alternative to anti-skid overlays approved by the Highways Authorities Product Approval Scheme (HAPAS). But a recently developed surface course material – SuperHitex – which completely removes the need for overlays is on the brink of gaining HAPAS approval.

Asphalt specialist Aggregate Industries has responded to overlay longevity problems by developing its well established Hitex thin surfacing to create SuperHitex. The new version incorporates higher polished stone value (PSV) aggregates than Hitex to give the material enhanced skid resistance properties.

“Most highway authorities apply anti-skid overlays soon after road reconstruction, which can add several days to the programmed time of roadworks. But because SuperHitex is a surface course that has in-built anti-skid properties, it can be laid on the approach to junctions during the reconstruction works, which reduces delays and disruption to road users, and offers considerable cost saving,” says Aggregate

Industries South East Surfacing general manager Ross Kelly.

“Plus, SuperHitex has the same service life as other thin surfacings which means it lasts considerably longer than its overlay counterparts. Many overlays are resin based so can only be applied in good weather conditions, but because SuperHitex has a bituminous binder its use is far less weather dependent.”

SuperHitex was first used on UK roads in 1999 and is currently going through the HAPAS approval regime to demonstrate that

SuperHitex has built in anti-skid properties and can be laid on the approach to junctions during reconstruction work, reducing delays to road users





Crawley Fastway – a new guided bus network – is one of the latest sites to get the SuperHitex treatment

its skid resistance performance is equivalent to Clause 924 approved overlay materials.

“Hitex was one of the first thin surfacings to gain HAPAS approval under Clause 942,” says Kelly. “SuperHitex uses the same formulation except for the aggregate – Hitex uses aggregate with a PSV of between 50 and 68, depending on the site, whereas

involved scrim testing of the material and showed that the SuperHitex surfacing achieved an average Sideways Force Coefficient (SFC) value of 0.59, which is well above the required intervention level.

The section of the A205 on which the SuperHitex was laid included eight pedestrian crossings and two roundabouts in quick

than expected and the subsequent scrim testing showed the skid resistance to have improved with time.”

According to Ross, the increases in SFC values between application and six months are probably due to the initial bitumen coating over the surface aggregate being worn off by traffic action.

The British Board of Agrément, which governs the HAPAS approval scheme, is currently reviewing independent laboratory test data and Aggregate Industries’ scrim testing results for SuperHitex. Aggregate Industries is confident that the approval process will prove to be a formality, and expects to have the approval certificate later this year.

“When you consider whole life costings, the arguments for using SuperHitex instead of a new surface course and an overlay are compelling,” says Kelly. “SuperHitex is only marginally more expensive than other thin surfacings and can be expected to have a service life of between 10 and 15 years, depending on traffic loadings and volume.

“Over that fifteen year period an anti-skid overlay would have to be laid and reapplied at least four times. The cost of this work is also in addition to reconstruction of the surface course. SuperHitex not only reduces the initial outlay but minimises future maintenance.”

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Ross Kelly

SuperHitex uses aggregate with a minimum PSV of 70. Therefore gaining 942 approval for SuperHitex should not be difficult, but in addition we hope to gain a modified approval stating that it complies with the performance characteristics of Clause 924 as well.”

Following a number of scrim tests on SuperHitex, Aggregate Industries is confident that the material can perform as well as, if not better than, the anti-skid overlays currently available. Aggregate Industries has carried out scrim testing on SuperHitex to assess the material’s skid resistance, with favourable results.

A thorough investigation into the skid resistance characteristics of 20,000m² of SuperHitex laid by Aggregate Industries on the Greenwich stretches of the A20 and A205 has been carried out. The investigation

succession. If a traditional anti-skid overlay had been used, the entire road would have had to be treated which would have taken some time to do and been in addition to the surface course reconstruction. Using SuperHitex not only saved money but also considerably reduced the amount of time on site which resulted in fewer delays for the travelling public.

Aggregate Industries also carried out scrim testing on the A40 near Northolt in north west London. A 35mm thick layer of SuperHitex was used to replace the surface course on a 1km stretch of the road which had experienced a high accident rate in the past.

“We carried out the first scrim testing soon after the material was laid, with further testing after three and six months,” says Kelly. “Early skid resistance was good with a greater SFC