

Premium

Nynas Endura F1

HOT MIX ASPHALT APPLICATIONS

Nynas Endura F1 is a highly modified Premium hot mix binder. The product has excellent workability characteristics and has been specially developed to deliver the optimum balance between toughness and flexibility.

SITE NAME:	E4 MOTORWAY, KROPP INTERCHANGE, HELSINGBORG, SWEDEN
TASK:	Surfacing a concrete road with reflective crackings
CLIENT:	The Swedish Transport Administration (Trafikverket)
CONTRACTOR:	NCC Roads, Kvidinge Asphalt Plant
PROJECT TIMESCALE:	May 2010.

Requirements

Large scale trials of flexible surfacing materials are under way in Sweden. The hope is that flexible bitumen can be a key component in repairing surfacing courses with significant crack formation.

Solution

Nynas is playing a central part through the specialised binding agents it has developed over time. This year, Nynas has begun marketing a highly modified 'soft' bitumen product from its Performance Programme 'Premium' range called Nynas Endura F1. This binder opens up new possibilities in addressing reflective cracking.

Details

Laboratory assessments were first carried out to evaluate Endura F1's deformation properties. Then several successful trials were conducted during 2009 that compared the Nynas Premium product to a conventional polymer modified bitumen by applying both to older concrete roads. In order to widen the scope of the evaluation, a comparison was also made on sections of road that were flat face milled with glass fibre reinforced grid over the concrete joints; and then covered with a binder course plus a thin layer surfacing course.



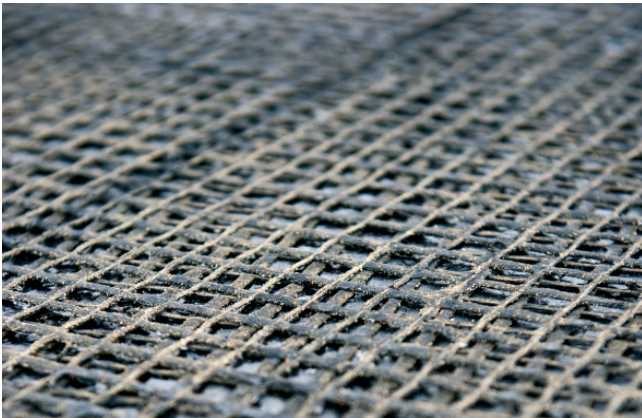
All in all, the tests confirm Endura F1's excellent properties. The new product combines the flexibility of the soft bitumen and the durability provided by the polymer modification and, thanks to the tailored mixture design the result is a highly flexible asphalt surface.

During the summer of 2010, large scale surfacing work has been carried out at the Kropp Interchange, where E4 and E6 motorways converge. The client "Trafikverket" opted to use Nynas Endura F1 instead of rubber asphalt on one test section where the old concrete road was surfaced with a 40 mm thick asphalt layer.

Nynas Endura F1

HOT MIX ASPHALT APPLICATIONS

NCC Roads and the Swedish Transport Administration, which commissioned the work are counting on the Nynas Endura F1 to help the asphalt contain the movements in the underlying concrete road. With a conventional solution, there would have been a risk that the rigid asphalt would have cracked over the concrete joints, a process known as reflective cracking.



However, there is overwhelming evidence that Endura F1 is more than just an effective alternative to replace older concrete roads with asphalt. Another potential area of use is smaller roads with widespread crack formation caused by, for instance, ageing surface courses.

Contact information and the latest news visit
www.nynas.com

Endura is a Nynas registered trade name.

