

Build long-lasting roads with Wetfix®

Adhesion promoters for the asphalt industry

In 2008, we asked ourselves: how can we show the long-lasting effect of using Wetfix? To demonstrate this, we conducted a durability study on the condition of 16-year-old asphalt that was treated with Wetfix.

Adhesion promoters based on our Wetfix amine surfactants have been used for many years to enhance the bond between bitumen and aggregate in asphalt mixtures and other bituminous applications.

Lab tests and anecdotal evidence from the field shows that Wetfix is effective as an adhesion promoter, but hard, measurable confirmation on long-term effectiveness is hard to come by. Industry experts and clients rightly demand definite proof, so we, along with the Swedish authorities, undertook a study to validate the effectiveness of Wetfix over the long term.

Durability study at Swedish airport

The study was carried out in 2008 on a Swedish airport site where the asphalt was laid in 1992. Rigorous lab tests at the time of installation showed there was a need to include our Wetfix product in the binder to meet durability specifications. The ratio of stiffness modulus at 10°C, before and after conditioning (10 x -20/+20°C freeze thaw cycles and 5 days soaking at 60°C) was determined, the so called ITSM ratio*.

16 years later, cores were taken from the airport pavement and tested under exactly the same conditions as before. The results in figure 1 clearly show the initial gain in ITSM ratio that was obtained and that the same level of enhanced resistance to the elements is still present after all the years in service.

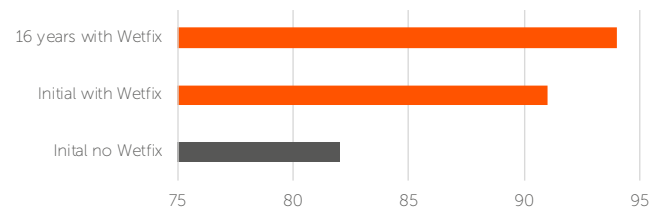


Core sample taken from the runway pavement used in the ITSM test

This study therefore provides clear evidence that amine adhesion promoters fortify the bond between bitumen and aggregate over the long term, significantly improving the durability of asphalt throughout its life.

The addition of a small amount of Wetfix adhesion promoter to the binder, at little extra cost to the formulation, enables road constructors to produce asphalt with better long-term durability and a longer life cycle.

Figure 1 - ITSM ratios



FAS Method 454-98 (ASTM D4123 - 82(87))

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We operate in over 80 countries around the world and our portfolio of industry-leading brands includes Eka, Dissolvine, Trigonox, and Berol.

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