JetBond®

Technical brochure

JetBond™

A premium tack coat for airport asphalt overlays

JetBond is a proprietary tack coat developed in response to the increasing risk of asphalt overlay delamination and slippage, as higher tyre pressures and stresses from aircraft braking shear continually increase.

What is JetBond?

JetBond is a premium modified bitumen emulsion tack coat. It has been specifically formulated to provide improved adhesion of the asphalt overlay and to resist softening during prolonged periods of hot weather.

High surface temperatures can easily penetrate to the overlay's interface and severely undermine adhesive and cohesive properties of a conventional tack coat.

JetBond protects runway overlays from debonding that can occur due to extreme aircraft braking during periods of hot weather. JetBond was also developed with trafficability and rapid curing in mind. A trial in Queensland demonstrated superior curing times and zero pick-up by paving and asphalt delivery trucks just 30 minutes after application.

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JetBond™

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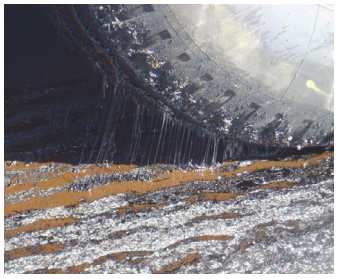
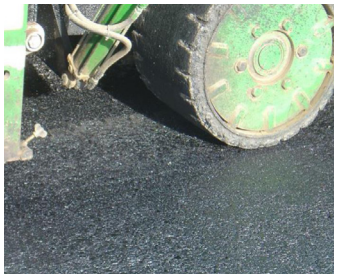


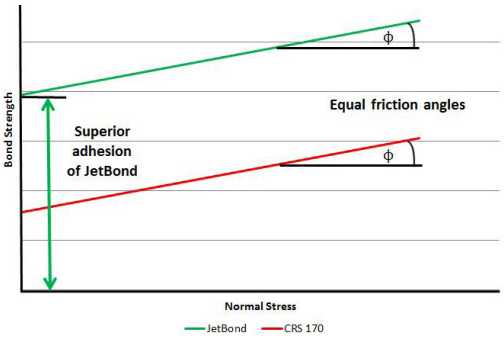
Pick up on tyres with conventional tack coat.



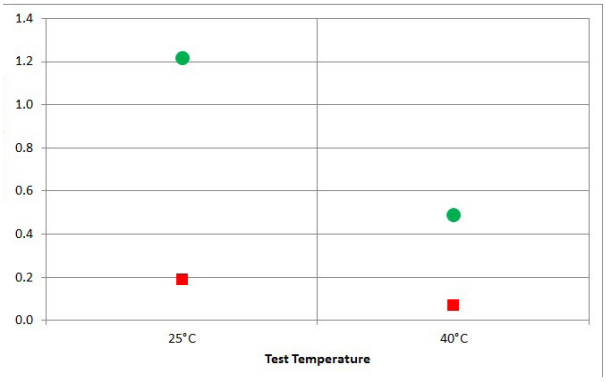
No pick up on tyres with JetBond.

What sets JetBond apart?

- Fast-curing so lost time is minimised
- No pickup so product stays where it needs to be and not on tyres
- 4 to 5 times stronger higher adhesion
- Withstands extreme aircraft braking
- Withstands hot weather.



Superior adhesion of JetBond.



JetBond bond strength still maintained in high temperatures.

How JetBond works?

Aircraft braking stresses are high. The high tyre pressures and heavy wheel loads result in shear stresses that are four to five times greater than a heavy braking truck on a motorway. The resulting shear stresses peak through a zone between 30-80mm below the surface. This includes the interface between the overlay and the underlying pavement. With conventional tack coat, these interfaces are the weak-link in the pavement structure and loss of bond can result in delaminations and surface slips. Such slips can damage aircraft and have resulted in runway closures in the past.

The strength of the bond between the overlay and the pavement is based on the friction as well as the adhesion. The easiest and most cost effective way to improve the bond is to increase the adhesion properties of the tack coat.

Laboratory results show that JetBond provides 4 to 5 times the adhesion of conventional tack coats products at 40°C.

The high tyre pressures and heavy wheel loads from aircraft braking can result in delaminations in pavements constructed with traditional tack coat.

How to apply JetBond?

JetBond is a premium modified bitumen emulsion and is easily applied using the same equipment and processes as any conventional CRS 60 bitumen emulsion tack coat product. The improved curing time achieved by JetBond results in reduced delay between spraying and asphalt paving. This increases productivity and reduces runway disruption.

For further information please email
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or contact your nearest Fulton Hogan office.
www.fultonhogan.com/contact_us