

Crack Sealing

Preventative pavement maintenance

Overview

Airfield pavements are subject to the harsh conditions of weather and climate, as well as heavy and repetitive loads from aircraft and other vehicles. These typical service conditions lead to minor pavement defects, including cracks on the surface. The life of a pavement is therefore not only dependent on design and quality of construction but also maintenance activities to prevent minor defects from becoming major safety or functional issues.

Crack sealing is a preventative maintenance activity that deals with cracks to stop water ingress into the pavement and prevent deterioration of the underlying pavement layers. Crack sealing will address immediate safety concerns and extend the life of pavements, while saving on the cost and disruption of major pavement maintenance.

Downer provides end-to-end solutions for the construction and maintenance of airfield pavements. Our experienced team understands the critical risk and operational requirements of airfield maintenance. We have experience in applying crack sealing across the full spectrum of airfields, including:

- Regional
- Remote
- Australian Defence
- Domestic and international airports, including Sydney, Alice Springs and Ayers Rock (Connellan) airports.

Key benefits

Downer's crack sealing solutions are cost-effective and can be applied without impacting airport operations. Crack sealing delivers numerous benefits to airport owners, such as:

- Prevention of water ingress into pavement layers
- Eliminating foreign object debris (FOD)
- Delay of pavement deterioration
- Increased pavement life expectancy
- No disruption to airport operations.

Crack sealing types

Downer has the expertise to treat longitudinal and transverse cracking in airfield pavements. Our solutions are tailored to the environment, materials and operational constraints of each airfield.

TREATMENT TYPE SUITABILITY

Bitumen bandaging

Cracks of 1 to 5mm wide with the potential for further movement or cracks greater than 5mm wide with the potential for water ingress

Rout and seal

Cracks of 1 to 5mm wide with the potential for further movement or cracks greater than 5 to 15mm with minor movement and the potential for water ingress

Band-aid

Cracks of 5 to 15mm wide with relatively large movement or cracks deep and difficult to clean out

Overbanding

Cracks of 5 to 15mm wide with relatively large movement or cracks deep and difficult to clean out, where asphalt resheeting is proposed

DESCRIPTION

A bitumen emulsion or polymer modified bitumen strip typically 50 to 75mm wide to treat open joints or cracks, typically in asphalt pavements

Cracks are routed and cleaned to form a reservoir and seal the cavity with a flexible joint sealant, typically in concrete pavements

A bitumen band-aid treatment typically 50mm wide, up to 30mm thick applied with a screed

A geostrip typically 250 to 300mm is applied centrally over a crack after tack coating and prior to asphalt resheeting of 60mm