

IDENTIFYING COMMON CRACK SEALANT CHALLENGES

Adhesion Failure – Sealant not adhering to sides or bottom of the crack. “Pull-Ons” may occur when the sealant is pulled out of the crack by tire action.

Cause	Solution
Crack was not clean	Clean using compressed air or heat lance. Clean all vegetation and incompressibles from the crack. Ensure the crack is dry prior to application
Surface was wet	Allow to dry or use a heat lance
Low Sealant Application Temperature	Verify temperature gauges on melter, heat to correct temperature
Cold Ambient Temperature	Allow temperature to rise, use a heat lance. Not only do you risk adhesion failure in cold temperature application but often too much sealant is used because cracks are opened all the way and when the climate warms, the sealant is pushed out of the crack as they close and “snakes” appear on the pavement

Cohesion Failure - Sealant itself is cracking while adhering to the sides of the crack. This primarily happens during the winter. However, it can happen in warmer temperatures as well.

Cause	Solution
Sealant choice is too stiff, sealant is not flexible enough	Use softer grade sealant
Excessive pavement distress	Pavement may not be a candidate for successful crack sealing
Reservoir not large enough	May have been applied in hot ambient temperatures when cracks are not open enough to allow an adequate amount of sealant. Route to open reservoir.
Sealant installed too deep in crack	Use correct width to depth ratio, use backer rod, stone dust or sand if crack’s depth is excessive

Spalls - The edges of the crack break away from the sealant

Cause	Solution
Excessive pavement distress	Especially in distressed pavement, cracks should be routed to provide a stable surface for the sealant to adhere.

Bumps in asphalt overlays are often referred to as sealant snakes.

Cause	Solution
Excessive sealant applied	Use recessed or flush application
Crack sealant is adhering to overlay	Apply detackifier such as Glenzoil to reduce sealant adhesion to overlay
Too soft crack sealant used	Use stiffer sealant