

Maintenance Advisory

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JWR:DB:TC

Use of Spray Emulsion and Aggregate for Joint and Crack Treatment on Concrete Pavement

When sealing transverse joints and cracks in concrete pavement, any method that utilizes stones or other incompressible material is not recommended and should be avoided. Their use is inappropriate and could cause dramatic pavement failure. Working transverse joints and cracks allow for thermal expansion of the pavement. As the temperature increases, the joints are designed to provide relief for pavement expansion. Based on research and experience, the use of incompressible materials in the joints may cause blow-ups in the pavement. The repair of blow-ups typically involves expensive full depth concrete repair.

A hot applied sealant should be used to seal joints and cracks in concrete pavements before excess spalling develops. The type of hot applied sealer should be selected based on the width of the joint or crack and the associated distress along the edge of the joint or crack. For joints and cracks with an associated distress less than 1" wide, the use of a hot applied sealer is appropriate. For joints and cracks with an associated distress greater than 1", a hot applied crack filler material should be used. It is recommended that [Performance Guide 10100](#) be reviewed prior to starting a crack sealing activity.

For isolated areas of surface distress or pothole repairs, the Pavement Spot Seal Patching (Kettle) and the Pavement Spot Seal Patching (Pavement Repair Machine) methods listed in [Performance Guide 10100](#) may be the appropriate method.