

CRACK SEALING 101

Why Crack Seal?

If regular maintenance is not performed, pavement quickly deteriorates.

Crack sealing prevents moisture and incompressibles from entering into the crack and causing further pavement deterioration. The benefits of crack sealing include:

- Extended pavement service life
- Greater pavement support
- Reduced rate of crack deterioration

When should cracks be sealed?

Crack sealing should be performed within the first year after cracking occurs. Base, sub-base, and asphalt deterioration begin immediately when cracks appear.

The optimal time of year to crack seal is Spring and Fall when temperatures are between 41-65 F

What cracks can be sealed?

| | |
|--------------|--------------------|
| Longitudinal | Transverse |
| Reflective | Construction Joint |
| Lane Joints | Large Block Cracks |

What cracks CANNOT be sealed?

Fatigue / Alligator
Edge cracking
Slippage Cracks

Hot Pour Crack Sealant Application Tips

To ensure effective crack sealing, follow these tips from the Federal Highway Administration's Crack Seal Application Check List:

- Follow the manufacturer's application temperature requirements.
- Agitate the material for uniformity.
- If melter is equipped with a heated hose, heat the hose to operating temperature prior to beginning sealant application.
- If melter does NOT have a heated hose, verify the hose is unplugged and clear before beginning sealant application.
- During idle periods, recirculate material through the hose into the material vat to maintain heat temperature.
- Check sealant temperature periodically.
- Keep melting vat at least 1/3 full for material uniformity.
- Fill cracks and channels from the bottom up.
- Center sealant overband over the crack.
- Reapply sealant to low areas where sealant settled or too little was initially applied.
- Apply 10 feet of crack sealant; allow to cool than check adhesion before continuing.

Crack Sealant versus Crack Filler

The terms crack sealant and crack filler seemed to be used interchangeably in the industry. But there is actually a distinct difference.

| | Sealant | Filler |
|-------------------|--------------------------|-------------------------------|
| Types of Cracks | Working Cracks | Non-Working Cracks |
| | Transverse thermal | Longitudinal reflective |
| | Transverse reflective | Longitudinal cold joints |
| | Longitudinal reflective | Longitudinal edge cracks |
| | Longitudinal cold joints | Distantly spaced block cracks |
| Types of Material | ASTM D 6690 | ASTM D 5078 |
| | Low Modulus | Asphalt Rubber Material |