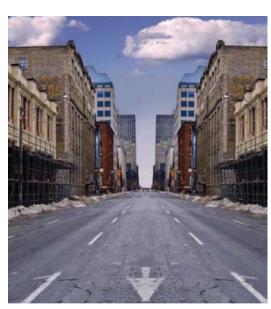


## Hot-Applied Crack Sealing In Winter – Get Your Game On!

Crack sealing is often thought of as a task best suited for warmer seasons and climates. While spring and fall are optimum times for crack sealing, winter may also be a good time as long as you follow a few important tips. Crack sealing can be performed in virtually any outside air temperature as long as the crack is dry and warmed to 40°F (4.4°C), which is easily done with a hot air lance. There are several states that routinely do crack sealing in the winter such as MT, NY and others. One advantage of sealing in the winter is that the cracks are already open and can more easily be sealed.

An important point for government agencies and contractors is that you can extend the pavement preservation construction season by crack sealing. When most types of preventive maintenance and preservation techniques can't be done because they are emulsion-based, the asphalt plant is closed, or the materials themselves will not cure appropriately – you can still install hot-applied crack sealants!



## Get Your Game On – Best practices in winter when you are crack sealing

In the event that crack sealing must be performed in the winter, here are a few tips to keep in mind:

- 1. Clean, dry cracks and proper temperature are the keys to effective crack sealing. Sealant manufacturers typically recommend pavement temperature exceeding 40°F (4.4°C). If pavement temperature is lower than 40°F, it may be warmed using a hot air lance. The hot air lance a) removes moisture, b) removes vegetation, c) removes clay, and d) warms pavement to ensure sealant adhesion. Some specifications, like the Montana Department of Transportation, allow crack sealing in roadway temperatures as low as 35°F (1.7°C).
- 2. For Art Brandow, Maintenance Supervisor for the Albany section of the New York State Thruway, having a dry road is even more important than air or pavement temperature. His crews usually wait at least a day after new snowfall to start sealing, after changing temperatures and traffic have had a chance to dry out the pavement. Be sure to inspect the cracks for ice or deicing chemicals/materials because they will negatively affect sealant adhesion and should be removed.
- 3. When using hot-applied sealant in the winter, the Federal Highway Administration suggests choosing a softer, more flexible sealant for working cracks. As the crack expands or contracts over time, a flexible sealant will be able to move with the crack whereas a harder sealant will become brittle and shatter.

- 4. Apply sealants at the upper-end of their recommended application temperature range. All hot-applied sealants have a recommended application temperature that is determined to be appropriate to achieve good adhesion. In cold weather, sealant may cool in the application hose or applicator and not reach the pavement at the proper temperature. Raising the temperature of the material while in the melter can aid in compensating for this temperature loss.
- 5. To ensure that their equipment is ready to work in the cold, Brandow and his team start their crack sealant machine and other equipment in the morning before heading out in the evening to seal. This gives the engine plenty of time to warm up and adapt to the environment. Also, storing the melter inside overnight allows the machine to retain more heat resulting in fast heating time in the morning. Some melters are equipped with an overnight heater, so plug them in overnight to improve heating time.
- 6. Striking off the sealant with a squeegee helps the New York State Thruway ensure none of the sealant escapes from the crack. Sealing disks attached to the end of the application wand can achieve a similar result as striking off the sealant. The key is to keep the sealant narrow and tight to the pavement to minimize exposure and damage from traffic and snow plows.

## Get Your Game On – Best practices in winter when it is too cold to crack seal

If it is too cold to crack seal today, spend your time preparing for better weather so that you can immediately get to work as the weather improves. Any breakdowns during the season have an expensive cost – lost time and revenue. To make the most of your time and investment, follow these tips:

- 1. Service your equipment per the manufacturer's maintenance schedule.
  - a. Heat Transfer oil should be changed every 500 hours or once/year, whichever comes first.
  - b. Replace or service items like: hydraulic oil; engine oil, filters and fluids
  - c. Service your burner just like your home furnace these burners need regular service to maintain peak efficiency
  - d. Clean the inside of your sealant tank. The side walls, bottom and ceiling should be scraped to remove all sealant that has built up during the season. This build up slows heating and recovery time and eventually falls into the tank clogging your pump and wand tip.
  - e. Check your pump output. Is it delivering the proper gallons per minute to make your operation efficient?
  - f. Inspect your application hose and hose cover for cracks, holes and dry rot and replace for safety. If you have an electric hose that needs service, this is a great time to send it in.
  - g. If you need assistance contact Crafco, Inc. or PMSI (Paving Maintenance Supply).
- 2. Provide equipment operation and safety training for your crew. Crafco, Inc. and PMSI (Paving Maintenance Supply) have programs setup to assist you.
- 3. Pre-order your crack sealing equipment, materials and tools so you have everything you need to get a fast start when the weather clears.
- 4. Attend industry trade shows and association meetings to keep abreast of the latest technologies and advancements in the industry.
- 5. Network with customers to let them know you are prepared to begin as soon as the weather is appropriate

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