

# Crack-sealing and seal-coating tips

Sealing cracks and applying chip seals make pavements last longer. But it has to be done well or the money is wasted. Key issues in cracksealing are methods and timing. For chip seals the key is stone quality, says UW-Platteville Civil Engineering Professor Tom Nelson who taught the T.I.C.'s Spring Roadway Maintenance workshop.

Spring and fall have the best weather for asphalt pavement crack sealing. Temperatures between 45° and 65° F put the cracks at the middle of their working ranges. In summer when pavement expansion narrows the cracks you may not be able to get enough sealant into the crack, while winter-widened cracks require more sealant.

Rout or cut narrow cracks at least 1/4 to 3/4 inch wide to make room for the sealant, Nelson says. Remove dust and moisture before you fill it. Hot air lances like those from Linear Dynamics, Cimline and Seal-All, are excellent crack-cleaning tools.



Cracks must be at least 1/4" for sealant to work.

Apply the sealant and squeegee the material to force it into the crack, level the surface, and remove the excess. It is important to form an overband that is less than 1/8 inch thick or snowplows will peel the sealant right out. Blotting is the next important

step. Sand or toilet paper works well, but you must be sure to use low quality toilet paper that is only one thickness or ply.

## Chip seals need dry, dust-free stone

Either crushed stone or pea gravel will work for chip sealing as long as it is free of dust and moisture. Dusty, wet gravel won't stick in the asphalt cement. Pea gravel has better skid resistance and holds under traffic better. Crushed stone is more readily available and resists pull-out by snow plows.

"Look at the performance of past chip seals," says Nelson. "They should last about five years, so if you are getting crushed gravel pulling out from snowplows within a year or two, switch to a more rounded material."

It is important to remove the excess stone, Nelson says. "Many operations use vacuums because it lets them reuse the stone, cuts dust, and keeps stone out of lawns."

If you would like copies of tables showing equipment, typical sealant configurations, properties and types of sealants, contact the T.I.C. by phone, e-mail, fax or mail. Watch Crossroads for info on the next T.I.C. Spring Roadway Maintenance Workshop.



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