

WHY DOES THE TOWNSHIP USE CHIP SEAL ON THE ROADS?

INTRODUCTION

We get asked this question and want to be able to provide a response. Chip Sealing is a cost effective method to extend the pavement life of a roadway. For every 1 mile of roadway that is paved it costs approximately \$100,000.00 to overlay the road. We attempt to get 20+ years of life out of the overlay. In order to get that life span out of the roadway, we must seal the roadway (very similar to how property owners seal their driveway) the most cost effective method is utilizing Chip Sealing. The Chip Seal will last an average of seven years, which will vary with the type and amount of daily traffic. Potential candidate roads are reviewed annually for condition and added to the Chip Seal program if warranted.

This fact sheet is to provide the residents of Warwick Township information about what and why we use Chip Seal to maintain our road system.

HOW IS Chip seal different from asphalt overlays?

The difference is in the construction method. Hot Mix Asphalt pavement is produced by heating liquid asphalt and mixing it with aggregate, with the mix then spread and compacted to form a durable road structure and riding surface. Chip Sealing uses the same ingredients as asphalt paving, but the construction method is different. With chip seals, a thin film of heated asphalt liquid is sprayed on the road surface, followed by the placement of small aggregates (“chips”). The chips are then compacted to orient the chips for maximum adherence to the asphalt, and excess stone is swept from the surface. The ingredients of hot mix asphalt and chip seals are the same; only the construction methods are different.

Can I drive on a freshly Chip Sealed Road? Yes, you can drive on a Chip Seal right after it is applied. However, it is important to drive slowly and attempt to avoid braking sharply within the first few hours that the Chip Seal is placed. This allows the aggregate chips to adhere to the emulsifying binder strongly.

Does the Chip Seal look and feel different than asphalt? Yes. As you can see in the photo, the Chip Seal has larger rock pieces than asphalt. This means it is a rougher surface. On warm days the aggregate chips will continue to work their way into the underlying asphalt, thus reducing the roughness of the road.



Why are we using chip seal instead of asphalt? Warwick Township has chosen to use seal coats in order to stretch limited dollars and focus on pavement preservation. Chip Seals cost much less than asphalt (\$1.00 per square yard for Chip Seal, compared with around \$7.00 per square yard asphalt). Chip Seals work best to preserve pavement that is in good condition. This is why the base of each street is repaired and paved with asphalt before the Chip Seal is applied.

Why use Chip Seals?

- Chips Seals provide the opportunity to maintain many roads for a lower cost.
- By extending the time between asphalt overlays, Chip Seals result in lower costs over the long term.
- Chip Seals eliminate the need to crack seal.
- Chip Seals enhance safety by providing good skid resistance.
- Chip Seals provide an effective moisture barrier for the underlying pavement against water intrusion by sealing cracks in the pavement.
- Chip Seals prevent deterioration of the asphalt surface from the effects of aging and oxidation due to water and sun.
- Chip Seals are used only on low traffic routes, less than 2,500 vehicles per day.
- Chip Seals help eliminate black ice situations.
- In hot weather, Chip Seals re-seal cracks by flowing back together.