PreMark® In-Lane Rumble Bars
APPLICATION INSTRUCTIONS

First-time applicators should contact Ennis-Flint Inc. for product support and on-site training.

Equipment:
• Ennis-Flint® 3000 EX propane heat torch with pressure regulator and 25 ft. hose
• Gas Powered Blower or Broom
• Chalk Sticks and Chalk Snap Line
• Adequate Supply of Propane

Manufacturer’s Torch Advisory: It is recommended that PreMark® Rumble Bars be installed using an Ennis-Flint® 3000 EX propane heat torch. This torch has a fan-shaped nozzle that allows for better control of the heat being applied to the material. The fan shaped nozzle design will assist the installer to avoid overheating the material which can result in a loss of bar height.

SAFETY PRECAUTIONS:
Protective clothing, consisting of leather work shoes, long pants, gloves, safety goggles, and a safety vest should be worn. Avoid all contact with the molten Bundy® material and propane torch flame. If you get molten material on your skin, flush the area immediately with plenty of water then seek medical attention. Do not attempt to pull the molten material off your skin. If accidental contact occurs, wash contaminated skin with soap and water and remove contaminated clothes immediately. If accidental contact with the eyes occurs, immediately flush eyes with plenty of water for at least 15 minutes; remove contact lenses; call a physician.

Equipment such as the Ennis-Flint® 3000 EX heat torch operates on vaporized propane gas. Use the largest size cylinder possible. The propane cylinders must be used in the upright position with the valve being the uppermost part. Never lay the cylinder down on its side. This will allow liquid gas to flow into the torch and is not recommended. Do not use the torch if the propane cylinder is not in the upright position.

Moisture: Pavement must be dry. Ensure that no moisture is present prior to positioning the rumble bar material on the pavement surface.

Surface: Asphalt and concrete must be free of dirt, dust, salt, deicing agents, chemicals and significant oily substances. Do not apply on top of paint, cold plastic, or plural component marking materials.

Material: PreMark® rumble bar material shall be kept dry all times in storage, in transit, and on the project. Avoid extreme storage temperatures. PreMark® material should be stored indoors between 35° F and 90° F. Handle with care in temperatures below 50° F as the material will be less flexible. The packages should be stored flat and stacked a maximum of 30 packs high. Shelf life is 24 months. PreMark® preformed thermoplastic does not have any minimum road or ambient temperature requirements for application.

INSTRUCTIONS FOR APPLICATION ON BITUMINOUS ASPHALT:
1. Prepare application area thoroughly. Ensure no moisture is present by drying the area with propane heat torch.
2. Position the PreMark® performed thermoplastic base material (typically a 4” or 8” width).
3. Heat a 3 ft. length section of the base material until all the indents in the surface of material have closed and the material is molten.
4. Immediately position the rumble bars along the base material in the 3 ft. section which is molten, maintaining the proper distance from the edges as illustrated below.
5. Press the bars into the 3 ft. section of molten base material.
6. Carefully reheat until the edges of the rumble bar section just positioned start to become molten. The flame from the Ennis-Flint 3000 EX heat torch should be directed at the edges of the rumble bars. This should be done with the nozzle parallel with the path of the material to avoid overheating the rumble bars. The edges of the bars will appear glossy when they begin to melt. The edges have been reheated sufficiently when they have sealed with the base material. There should be no visible gaps between the two materials.
7. Repeat steps 2, 3, 4, and 5 until all the rumble bars are installed.
8. Inspect the recently applied base material to ensure that complete bonding has occurred over the entire area. After the base material has cooled to near ambient temperature, try to lift an edge, or cut an area in the interior of the material with a chisel. Try to lift a portion of the material, if the material can be lifted without evidence of asphalt on the underside, insufficient heat has been applied. If possible, reapply heat until adequate bonding has occurred. Note: Do not leave the project until sufficient bond has been established. Attempts to reheat at later date will be unsuccessful due to trapped moisture beneath the base material.
9. After it cools, chisel test the area that has the most defined edge between the base and a bar. This is done by driving a cold chisel, or putty knife, through the bar, and attempting to pry the bar off the base material. Verify that the two materials have fused together. If the bar comes loose from the base material and is shiny underneath repeat step 6 as necessary.