



APPLICATION INSTRUCTIONS

PreMark® Manhole Protection Ring

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

CAUTION: During application an open flame is required. Ensure that no flammable gases are present prior to application.

SURFACE APPLICATION, GENERAL REQUIREMENTS:

- Equipment:**
- Flint 2000EX™, or equivalent propane fueled torch with pressure regulator and 25 ft. of hose
 - Gas Powered Blower or Broom
 - Adequate Supply of Propane
 - Paint roller (for sealer applications only)
 - Utility Knife, Putty Knife
 - Hammer and Chisel
 - Water sprayer (optional)
- Moisture:** Pavement must be dry prior to positioning the PreMark® Manhole Protection Ring material.
- Surface:** Surface must be free of dirt, dust, deicing agents, chemicals and significant oily substances. PreMark® can be applied on asphalt, portland cement concrete (in conjunction with PreMark® sealer), and new, or old thermoplastic. Portland cement concrete must be free of all curing compounds. When applying on old thermoplastic scrape off any loose material and remove the oxidized (powdery) layer by grinding the surface, or heating the surface and scraping off the oxidized layer to expose fresh material. Do not apply on top of paint or cold plastic.
- Material:** Keep PreMark® dry at all times. Avoid extreme storage temperatures. PreMark® should be stored indoors at temperatures between 35° F. and 90° F. Packages should be stored flat and stacked a maximum of 25 high. PreMark® should be handled with care in temperatures below 50° F, as it will be less flexible in colder weather. Shelf life is 12 months. PreMark® sealer should be used for applications on non-bituminous pavements.
- Temperature:** PreMark® does not have any road or ambient temperature requirements.

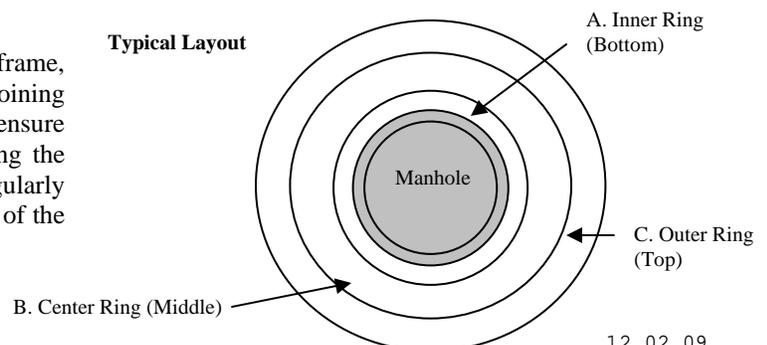
SAFETY PRECAUTIONS:

Protective clothing, consisting of leather boots, or work shoes, long pants, gloves, and either safety goggles or a face shield, and a safety vest should be worn while applying PreMark®. Avoid all contact with the molten PreMark® material and Flint 2000 EX® heat torch flame. If you do get molten material on your skin, flush the area immediately with plenty of water and then seek medical attention. Do not attempt to pull the molten material off of your skin. In the event of accidental skin contact with the sealer wash contaminated skin with soap and water and remove contaminated clothes immediately. In the event of accidental sealer contact with the eyes, immediately flush eyes with plenty of water for at least 15 minutes; remove contact lenses; call a physician.

INSTRUCTIONS FOR APPLICATION ON ASPHALT:

1. Clean intended application area thoroughly. All loose particles, sand, dust, etc. must be removed. Utilize a power blower or compressed air if available, otherwise sweep thoroughly.
2. Ensure that no moisture is present prior to positioning the PreMark® material on the pavement surface. Surface moisture is not often visible so you should assume that some moisture is present. Remove moisture by drying the application area with a propane fueled torch such as the Flint 2000 EX.
3. Position the narrowest ring, “A”, around the manhole frame, collar, or riser. There should be no gaps between the adjoining segments. You may overlap the edges slightly. Check to ensure that proper layout and alignment is obtained before heating the material. Ensure that the top surface is facing up. Regularly spaced indents have been manufactured into the top surface of the PreMark® material making the top easily identifiable.

Typical Layout



4. Heat the PreMark® by moving the flame from your torch in a sweeping motion, approximately 2 feet wide. Heat slowly, but steadily keeping the nozzle of the torch about 4 to 8 inches above the material. Maintain a minimum distance of 4 inches between the torch nozzle and the material. Any closer will cause superficial scorching of the material without adequate melting throughout. Continue to heat the PreMark® until the indents are fully closed. The closing of these indents will provide a visual cue during application that the material has reached a molten state. The PreMark® material must be heated to its melting temperature to achieve a bond with the pavement. Insufficient heat will result in inadequate bonding and failure.
5. Wearing protective gloves, immediately position ring "B", the second widest ring, on top of the first ring, while the first ring is still molten. **Caution: Avoid contact with the molten material.** Heat the second ring following the procedure in step 4 above. Immediately after this ring has been heated until all indents have been closed, then, while wearing protective gloves, position the final ring "C" which is the widest, over the second ring while avoiding contact with the molten material. Heat the final ring following step 4 above until all indents have closed.
6. Inspect the recently applied PreMark® Manhole Protection Ring to ensure that complete bonding has occurred over the entire area. After the material has cooled to near ambient temperature, try to lift an edge with a putty knife, or screw driver, or cut an area in the interior of the material with a chisel where it appears the material has received the least amount of heat. If the material can be lifted without evidence of asphalt on the underside, insufficient heat has been applied. Simply reapply heat until adequate bonding has occurred. Note: Do not leave the project until a sufficient bond has been established. Attempts to reheat at a later date will be unsuccessful.
7. PreMark® will cool and set rapidly within a couple of minutes of application. If desired, setting time can be accelerated with a spray of cool water.

INSTRUCTIONS FOR APPLICATION ON NON-BITUMINOUS SURFACES:

1. Follow steps 1 and 2 as stated for application on asphalt. Note: Worn, polished concrete should be ground or milled so the surface becomes rough.
2. Delineate the area to receive the PreMark® using a chalk line, chalk or crayon. Once the marking has been traced, or the area delineated, remove the marking from the pavement.
3. Apply sealer approved for use with PreMark® to areas outlined in chalk or crayon. Allow it to dry until it will not transfer to the finger when touched. The more porous the surface, the more sealer is required. **Caution: Do not attempt to speed up the drying process by using an open flame as the sealer is flammable at this stage.** Remember: It is important to cover the entire area with sealer where the PreMark® will be applied.
4. Continue with Steps 3 through 6 as stated above under "Instruction for Application on Asphalt" until application is complete. Note: When trying to lift the recently applied PreMark® material (step 6) off of the non-bituminous surface it is unlikely that any part of the pavement will be lifted up (with the PreMark®). Adequate bonding has occurred if the PreMark® separates and part of the PreMark® remains stuck to the pavement.

NOTES:

- Closed indents act as a post-application visual cue that the application procedures have been followed.
- Do not allow 2 pieces of PreMark® to remain in direct contact with each other, as they will bond together especially in hot weather.
- You can "cut and paste" with PreMark®. Use a knife to score the material and carefully break it along the score. In warm weather you can use scissors.
- Don't throw or drop PreMark® in lower temperatures, as it will be less flexible in colder weather.
- Oil impervious PreMark® can be applied immediately after completion of daily paving operations.
- Dispose of all materials in accordance with all applicable federal, state and local laws and regulations.

PreMark® has a patented visible indent system, US Pat 5,861,206

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