

## Preformed Thermoplastic Application Instructions

### Safety Precautions:

- Protective clothing, consisting of leather boots/work boots or work shoes, long pants, gloves, safety glasses or a face shield and a safety vest should be worn while applying product.
- ALWAYS WEAR HEAT RESISTANT GLOVES WHEN WORKING WITH PREFORMED THERMOPLASTIC.
- Portland cement concrete surfaces may spall when heated with the propane torch; therefore safety glasses must be worn when applying to cement concrete surfaces.
- Avoid all contact with the molten material and heat torch flame. If you do get molten material on your skin, flush the area immediately with plenty of water and seek medical attention. Do not attempt to pull the molten material off of your skin.

### Surface Application-General Requirements:

- Asphalt and concrete must be free of moisture, dirt, dust, and chemicals or significant oily substances.
- Surface should be moisture free for 24 hours prior to application for best results. Use torch to remove any moisture from area to be marked.
- Portland cement concrete must be free of all curing compounds. Any residual salts or de-icing chemicals must be removed prior to application. **Preform thermoplastic primer is recommended on all concrete surfaces prior to installing preform thermoplastic markings.**
- **Primer is recommended for all old asphalt surfaces that are oxidized, have polished exposed aggregate.** Test small area via the bond test noted in Instruction #5 below to test whether the surface needs to be primed prior to application.
- Preformed can be applied on new or old thermoplastic. When applying on old thermoplastic, scrape off any loose material. Ensure that the remaining thermoplastic surface is clean. If the old thermoplastic is oxidized (powdery surface), grind or heat it and scrape the top surface so fresh material is exposed.
- Do not apply on top of flaking paint or cold plastic.

**Temperature:** Preformed Thermoplastic can be applied at temps below freezing as long as other conditions are met.

### Instructions for Application on Asphalt or Non-Bituminous Surfaces:

1. **Clean Surface:** 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 completely.
2. **Moisture Removal Instructions:** Using a Heat Torch or similar heat source, utilize the pre-set pilot valve setting to get a blue flame with an orange or yellowish tip. Then squeeze the torch handle to achieve maximum output. Hold the torch nozzle 8-10 inches above the pavement. Using the torch in a circular motion, heat the surface until all surface and sub-surface moisture is removed. Extend the heating 3-6 inches outside of the pre-marked area. Note: concrete surfaces may spall when heated with the torch, therefore safety glasses must always be worn when removing moisture from Portland cement surfaces.
3. **Place Thermoplastic:** Once the surface is clean and all moisture has been removed, mark placement of material with chalk if needed, and immediately position the first base segment. In using a torch, the applicator should utilize the preset pilot valve setting (do not squeeze handle) to get orange tipped flame to heat the material. Do not operate the torch at maximum output. Hold the torch so that the torch nozzle is 6-8 inches over the Preformed Thermoplastic material. If material is splattering with the introduction of the torch, the flame is too close to the material or the pilot valve needs to lower the intensity and eliminate the splattering.
4. **Heat / Torch the Material:** Begin heating the placed marking by moving the flame from your torch slowly but steadily over the material. The material must be heated to its melting temperature to achieve a bond with the pavement. Insufficient heat will result in inadequate bonding and failure. To ensure that heat is evenly applied to the entire marking, move the torch in a sweeping motion, approximately 2' wide, keeping the nozzle of the torch about 6 to 8 inches above the material. Caution: Maintain a minimum distance of 6 inches between the torch nozzle and the material. Any closer will cause superficial scorching without adequate melting throughout.
5. **Check Bond:** Inspect the recently applied marking to ensure that complete bonding has occurred over the entire area. After the product has cooled to near ambient temperature, cut an area in the material with a chisel where it appears the material received the least amount of heat. For white product this will appear the whitest in color.
  - **Applied on asphalt:** If the material can be lifted without evidence of asphalt on the underside, insufficient heat has been applied.
  - **Applied on Portland cement concrete:** When trying to lift the product, adequate bonding has occurred if the thermoplastic separates and part of the thermoplastic remains stuck to the pavement.

If upon inspection it has been found that 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.

6. **Dry Time:** Preformed Thermoplastic will cool and set within a couple of minutes of application. Dry times will vary based on roadway temperature, thickness of material and the amount of heat applied during application. If desired, setting time can be reduced by covering the applied marking with water after application.