



SprayWall Test Plate Procedure

Preparation

- Ensure the spray machine, transfer pumps, spray guns, and other equipment are all in proper working order.
- Ensure the B-side material in the drum is heated and thoroughly mixed.
 - 100 to 120 Degrees Fahrenheit
- Set the A-side, B-side, and hose heaters. Recirculate the B-material until all heaters are to the specified temperatures.
 - A-side – 90 degrees Fahrenheit
 - B-side – 160 degrees Fahrenheit
 - Hose – 160 degrees Fahrenheit
- Check air supply to the spray machine, transfer pumps, spray gun, and PPE.
 - Transfer Pump A – 45 psi. to 50 psi.
 - Transfer Pump B – 100 psi. to 200 psi.
 - Spray Gun – 90 psi.
- Slowly pressurize the machine to the specified ranges and check that the static pressure remains stable. The goal here is to have the A-side and B-side pressures within the specified range.
 - Hydraulic – 700 psi. to 1000 psi. (This range will vary. Factors like hose length, spray machine ware, atmosphere, etc. will affect the hydraulic pressure.)
 - A-side – 1100 psi. to 1500 psi.
 - B-side – 2000 psi. to 2500 psi.
- Purge material into a bucket and ensure the dynamic pressure is within the specified ranges. While purging, inspect the fan pattern for uniformity. The goal here is to have the A-side and B-side pressures within the specified range. Hydraulic pressure will vary drastically while spraying. This is normal.
 - Hydraulic – Varied
 - A-side – 800 psi. to 1000 psi.
 - B-side 1500 psi to 1800 psi.
- Once all of the steps list above are complete, move on to spraying the test plate.

Equipment

- 12" x 12" x 1/8" polished or mirror finished metal plate. At least Stainless Steel or Aluminum.
- Box knife.
- Thick work gloves.
- Releasing agent such as Omni Wax and cloth rags.
- Dial or digital calipers.
- Digital temperature gun.

Spray Process

- Apply a thin coat of Omni Wax to the test plate.
- Moving from side to side once, apply a thin dust coat to the plate. The dust coat is intended to bring the plate to a temperature range of 70 to 90 degrees Fahrenheit. Use the temperature gun to check for this. Dust coat again if needed.
- Once the plate is up to temperature, begin applying material.
- Spray at an approximant distance from the plate of 24 inches.
- Move from right to left, extending the fan beyond the area of the plate and ensuring that the center of the fan passes over the entire plate. Start with the center of the fan at the outside of the top right-hand corner of the plate and move left to the outside of the top left-hand corner. Without stopping the spray or moment of the gun, move the center of the fan down the plate by approximately ¼ its height. Now repeat the process until the center of the fan passes over the bottom of the plate. Repeat the process moving bottom to top. Once finished with the top to bottom and back application, turn the gun left at 90 degrees and repeat.



Dust Coat.



Right to Left Top to Bottom.



Turn 90, Top to Bottom, Right to Left

- Build material until you achieve 200 to 250 mils.
- Use a box knife to remove the sides of the test plate. Removing the sides allows the test plate to more easily removed from the plate. This also produces a cleaner sample that may be used in quality control testing.
- Cut all four sides of the plate. This will need to be done immediately after the spray has stop. The material cures very quickly and once cured the box knife will not be able to cut through it.
- While wearing thick work gloves, pull the sample from the plate and set it aside in a clean location. Ensure the sample is laid flat. The gloves are needed to prevent the worker from being burned. The material can reach temperatures up to 250 degrees Fahrenheit.
- Clean any material left on the test plate, reapply the releasing agent, and spray another plate.
- The third or fourth plate sprayed will be a good base for the material being produced by the machine.



- Inspect the test plates for color, cure time, and any visual defects.
- Use the calipers to check for mil thickness and uniformity of the sample. The sample must have a uniform thickness if it is ever needed for testing. A 10% variance in thickness is tolerated. For example, with a goal of 250 mils, the thinnest the sample can be at a given point is 225 mils with the thickest at 275 mils.
- Record job site information and the lot numbers on the material used. Store the sample and its corresponding information in a secure location.

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