



Purpose: To verify the flash point of lane dressings, lane cleaners, and ball cleaners.

Materials:

- SETA Flash Series 3 flash point tester
- SETA Flash Quick Start Guide
- 2mL sample syringe
- MSDS of sample to be tested
- Kimwipes
- Laboratory notebook
- Matches/ lighter
- Butane canister

Procedure:

1. Charge the Gas Canister
 - a. Slide the ON/OFF gas valve to the OFF position and disconnect the silicone tubing from the brass insert.
 - b. Lift the gas canister from its holder and turn it upside down so that the transparent section is uppermost.
 - c. Charge the canister with butane through the filler valve, in the base of the transparent section, until the liquid level is within a few millimeters of the filler valve.
 - d. Turn the canister the correct way and insert it back into the holder.
 - e. Reconnect the silicone tubing to the brass insert.

2. Prepare the Instrument
 - a. Read Quick Start Guide before continuing.
 - b. Unlock and open the sample cup lid.
 - c. Check that the correct 'O' ring seal is fitted.
 - d. Using a Kimwipe, wipe the sample cup clean.
 - e. Close and lock the sample cup lid.

3. Set the Test Flame Size
 - a. Switch the gas supply ON.
 - b. Light the Pilot and Test jets using either matches or a lighter.
 - c. Adjust the control valve on the gas cylinder until the Pilot Jet flame is approximately 12mm long.
 - d. Adjust the Test Jet flame to 4mm diameter by rotating the Pinch Valve.
 - e. Allow the flame to stabilize for at least thirty seconds before final adjustment.
 - f. Switch the gas supply OFF.



4. Set the Test Parameters

- a. Power up the instrument.
- b. Set the timer.
 - i. Press and hold down the Set Timer button.
 - ii. When display reads "Set Test Time," release the Set Timer button.
 - iii. Rotate the control knob to select **Auto** mode.
 - iv. The value shown on the display will be saved after 4 seconds.
- c. Set the Temperature.
 - i. Press and hold down the Set Temperature button.
 - ii. When display reads "Set Temperature," release the Set Temperature button.
 - iii. Rotate the control knob until the expected flash point temperature (obtained from MSDS) is displayed.
 - iv. The value shown on the display will be saved after 4 seconds.

5. Run the Test

- a. Record the reported flash point from the manufacturer's MSDS in the laboratory notebook.
- b. When the sample cup has stabilized at the set temperature the display will show "Ready."
- c. Be sure that both the Pilot and Test Flames are **NOT** lit!
- d. Load the syringe with 2mL sample and inject the sample into the sample cup through the filler orifice.
- e. Remove the syringe.
- f. Press then release the Set Timer button to start the timer countdown.
- g. Switch the gas supply ON.
- h. Light the Pilot and Test Jets.
- i. Check the Test Jet flame is 4mm in diameter; adjust if necessary by turning the Pinch Valve.
- j. When the countdown reaches zero a warning beep will sound.
- k. Open and close the shutter for a period of 2.5 seconds.

6. Results

- a. Flash
 - i. If a flash is detected the second line of the display will show "FLASH."
 1. Record the temperature and result.
- b. No Flash
 1. If a flash is not detected the second line of the display will be blank.
 2. Switch gas supply OFF.
 3. Reset sample cup temperature to a slightly higher temperature and repeat Section 5. (This may need to be done several times before flash point is reached.)

7. End of Test

- a. Switch the gas supply OFF and wait until the test and pilot flames are extinguished.
- b. Press and release the Set Temperature button to reset the Flash Detector and temperature display.
- c. Unlock and open the lid, remove used sample with syringe, and clean the sample cup with a Kimwipe
- d. Power down the instrument.