

Standard Method of Test for Diesel Fuel Flash Point Determination by Rapid Flash Point Tester

SCDOT Designation: SC-T-105 (7/09)

1. SCOPE

To perform a quick flash point analysis of diesel fuel to discover the possibility of contamination. If the sample flashes within 5° C of ASTM D975 specification, the State of South Carolina Department of Agriculture will perform further testing.

2. REFERENCED DOCUMENTS

- 2.1. AASHTO Standards
- 2.2. ASTM D975

3. APPARATUS

- 3.1. ASTM 9 C Thermometer
- 3.2. Heat resistant gloves
- 3.3. Rapid Flash Point Tester
- 3.4. Water

4. TEST SPECIMENS

- 4.1. One quart of diesel fuel

5. PROCEDURE

- 5.1. Shake diesel fuel sample.
- 5.2. Fill outer cup of flash point tester to fill line with water.
- 5.3. Add diesel fuel to inner cup to just above ridge.
- 5.4. Light the burner and the ignition tip adjusting the size of the flame to the size of a pea.
- 5.5. Use the flame to remove any bubbles from the diesel fuel in the inner cup.
- 5.6. Place the top complete with thermometer on the sample cup. Starting temperature should be no higher than 20° C to 26° C.
- 5.7. Lower ignition tip into cup for 1-2 seconds. If a blue arc appears, then the sample has flashed.
- 5.8. If a blue arc does not appear, place the sample cup complete with top into the outer cup of the tester.
- 5.9. Check every 2° C to see if the sample flashes. Take care not to let the temperature rise too rapidly.
- 5.10. Record the temperature at which a blue arc of flame appears.

6. CALCULATIONS

None

7. REPORT

Report flash point in °C to the nearest degree. Test results are reported on Lab Form MSC 002.