

Black Cement Heat Reflective Testing

Test was conducted on January 18, 2016 in the Life Paint Research & Development Facility.

Test Procedure

- Materials
 - o Standard A602 Black Cement
 - o Subject 1, Black Cement (BC1)
 - o Subject 2, Black Cement (BC2)
 - o Subject 3, Black Cement (BC3)
 - o 250 Watt Infra Red Bulb & Ballast (Heat Lamp)
 - o Thermometer IR Hand Held Gun
- Heat Lamp was turned on and warmed up for 5 minutes.
- Standard A602 was placed beneath heat source for 21 minutes and temperature readings were recorded every 3 minutes with thermometer.
- BC1 was placed beneath heat source for 21 minutes and temperature readings were recorded every 3 minutes with thermometer.
- BC2 was placed beneath heat source for 21 minutes and temperature readings were recorded every 3 minutes with thermometer.
- BC3 was placed beneath heat source for 21 minutes and temperature readings were recorded every 3 minutes with thermometer.

Variables

- Distance of thermometer to source of temperature.
- Placement of subjects in exact spot beneath heat source.
- Placement of thermometer aim (IR light) on subject

Lab technician was aware of these variables, before testing, and was cautious to avoid any of these variables from affecting the test results.

Results (Temperature recorded in Fahrenheit)

Time	Sample A602	Sample BC1	SampleBC2	SampleBC3
0 min	59°	59°	59°	59°
3 min	132°	131°	126°	133°
6 min	149°	138°	137°	141°
9 min	165°	142°	145°	149°
12 min	184°	152°	150°	151°
15 min	195°	154°	154°	156°
18 min	215°	156°	156°	161°
21 min	219°	167°	158°	168°

Standard

BC1

BC2

BC3



Conclusion

Sample BC2 is the most effective formulation for infra red heat resistance. It is also the weakest pigment in color strength. Sample BC3 may not be as effective as BC2, but the color sample is much closer to a true black or asphalt color. Sample BC3 also has good infra red heat resistance when compared to the standard sample, A602.