

Report prepared for: n.virol

Subject: Comparison of Thermal Paints

Report No 5645/15
Date 15/10/15

Further to our previous report

Report no. 5341/13

Date: 20/09/13

Three samples of paint were received for comparison of thermal and reflective properties. In addition a standard trade emulsion was also tested.

Samples:

1. Sure Therm
2. Insopaint
3. Thermo emulsion
4. Standard Trade Emulsion

The samples were applied to a Germanium crystal and allowed to dry. The absorbance and reflectance were compared using Fourier Transform Infra-red Spectrophotometry, measured using Attenuated Total Reflectance.

The resulting Traces indicate that sample 3 has lower absorbance and higher reflectance than samples 2 and 1. Sample 1 has the highest absorbance.

The samples were painted on to plasterboard and allowed to dry.

They were subjected to a wide spectrum light source for 1 hour. The temperature of the surface of the paint was measured immediately after the light source was removed, and the time measured for the surface to return to the ambient temperature 19C.

Results

Sample	Temp after 30 mins	Time to ambient
1 Sure Therm	31	35 mins
2 Insopaint	30	15 mins
3 Thermo emulsion	25	10 mins
4 Trade emulsion	30	15 mins

The above results show that sample 3 Thermo emulsion absorbs less heat and reflects more back. Sample 1 absorbs the most heat and retains it for longer. The Insopaint is no different to standard trade emulsion

Brenda Peters MICorr. FTSC. FIMF

Suretherm: From 31° to 19° = Shows a 12° difference over 35 minutes = This gives a 1° reduction every 2.9 minutes

Trade Emulsion: From 30° to 19° = Shows a 11° difference over 15 minutes = This gives a 1° reduction every 1.36 minutes

The difference in heat loss between the two paints down to ambient temperature is 113.235%.

In comparison Suretherm retains its heat 113% longer than standard trade emulsion.



Brenda Peters MICorr. FTSC. FIMF.