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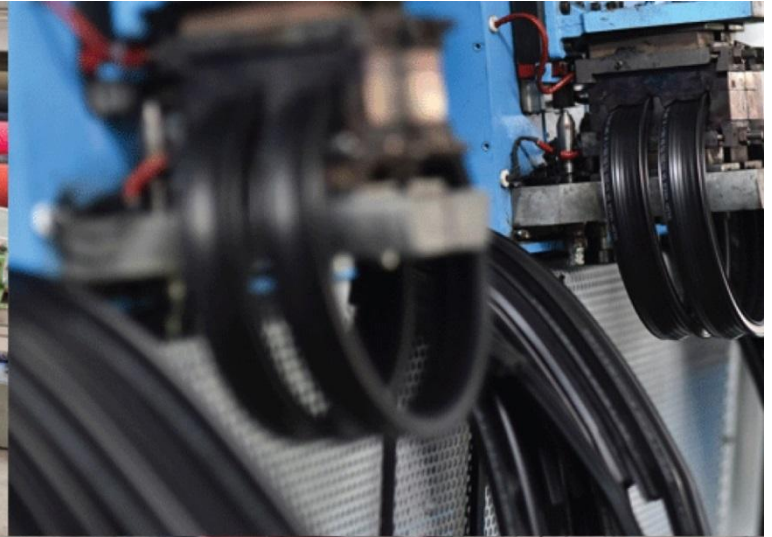


ELECTRO MAGNETIC innovative technologies

Kerone Research & Development Centre (KRDC)

B/47, Addl. MIDC, Anand Nagar, Ambarnath (East), Thane- 421 506, India

Tel- +91-251-2620542/43/44/45/46, Email-info@kerone.com, www.kerone.com



**Continuous Infra-red Heat  
Treatment for Drying of Paint**



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Customer :	M/s. Auto Tuff Safety Glass
Process :	Continuous Infra-red Heat Treatment for Drying of Paint

**TEST REPORT No: 47/KRDC/LAB/17 Mum 01/01/2019**

Date Sample reception : 01/01/2019  
ID : 47/LAB/77

**SAMPLE DESCRIPTION:**

Sampling : As Requested  
Sample Condition : Acceptable  
Quantity : 1 container of Paint  
Sampling date : 10/01/2019  
Product : Paint  
Requirement : Drying of Paint  
Start Date test : 10/01/2019  
End Date test : 10/01/2019

**LABORATORY EXPERIMENTAL SET UP:**



**Format: F/R&D/01**

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**LAB INFRARED HEATING SYSTEM SPECIFICATIONS:**

<b>Medium Wave IR Emitter with special reflectors</b>	6 No( 03 kW, each having 240 mm heating length)
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**ENVIRONMENT-LABORATORY AMBIENT CONDITIONS:**

<b>Temperature (degree C)</b>	28.2°C (±5°C)
<b>Humidity (%)</b>	≤ 63% RH
<b>Pressure (kN/m2 or kPa)</b>	Not recorded

**Note for recommendation:** Environmental conditions have a direct impact on test results. Accuracy and consistency of test data are affected by the laboratory conditions

**EQUIPMENTS USED:**

<b>Name of Equipment</b>	<b>Picture of Equipment</b>	<b>Specifications</b>
<b>Compact Thermal Imaging Camera</b>		<b>Model: FLIR E-30</b> <b>Resolution: 160x 120</b> <b>IR Thermal sensitivity of 0.10°C</b>

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<p><b>Mayer Bar Coater</b></p>		<p><b>Coating Thickness: 12 microns</b> <b>Coating Length: 8/9 inches</b></p>
<p><b>Thermo Hygrometer</b></p>		<p><b>Model No: HTC-2</b> <b>Temperature accuracy: <math>\pm^{\circ}\text{C}</math> (1.8<math>^{\circ}\text{F}</math>)</b> <b>Temperature resolution: 0.1<math>^{\circ}\text{C}</math> (0.2<math>^{\circ}\text{F}</math>)</b> <b>Humidity range: 10%~99% RH</b> <b>Humidity accuracy: <math>\pm 5\%</math> RH</b> <b>Humidity resolution: 1% RH</b></p>

**SAMPLE PREPARATION AND METHOD/PROCEDURE:**

The experiment has been performed on glass sheet to speed up the drying rate of given paint. For this experimental run, given paint has been applied on glass sheet with the help of bar coater. Then this glass sheet has been placed under infrared exposure and time required for drying has been noted.

**ANALYTICAL RESULTS:**

Sr. No.	Setting Temperature ( $^{\circ}\text{C}$ )	Temperature on Product ( $^{\circ}\text{C}$ )	Time required for Drying (seconds)
1.	150	150	60
2.	180	180	40

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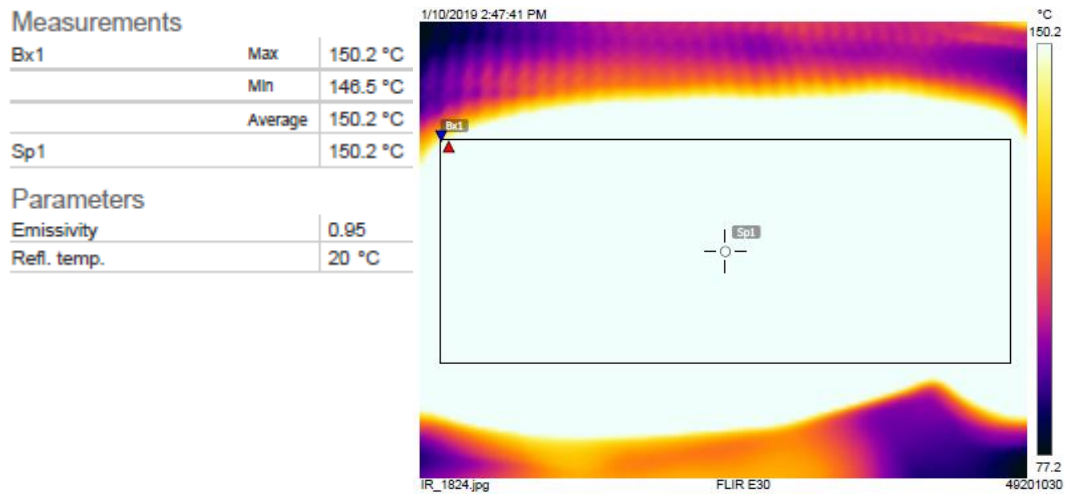
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### THERMAL IMAGE OF TEMPERATURE PROFILE:



### BEFORE AND AFTER PICTURES OF TREATED SPECIMEN SAMPLE:



### OBSERVATIONS:

The drying behavior of paint has been investigated under the infra-red heating system. It has been found that there is complete drying without burning.

*K Komal*

Miss Komal Bhoite  
Tested By

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