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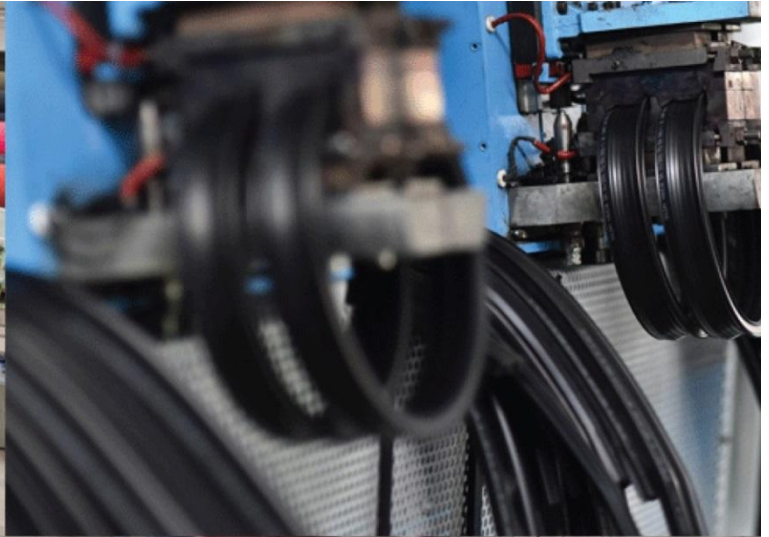
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ELECTRO MAGNETIC innovative technologies

Kerone Research & Development Centre (KRDC),
B/47, Addl. MIDC. Anand Nagar, Ambarnath (East), Thane- 421 506, India
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**Infra-red Heat Treatment for
Annealing of Polymer Granules**



ELECTRO MAGNETIC Innovative technologies



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Customer :	M/s. Solvay Specialities India Pvt. Ltd.
Process :	Infra-red Heat Treatment for Annealing of Polymer Granules

TEST REPORT No: 47/KRDC/LAB/17 Mum 30/01/2020

Date Sample reception : 30/01/2020
ID : 47/LAB/160

SAMPLE DESCRIPTION:

Sampling : As Requested
Sample Condition : Acceptable
Quantity : 2 kg
Sampling date : 07/02/2020
Product : Polymer Granules
Requirement : Annealing with 200°C
Start Date test : 07/02/2020
End Date test : 07/02/2020

LABORATORY EXPERIMENTAL SET UP:



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The value obtained is already corrected for possible recover value stated, if applicable. This document may not be reproduced or disclosed wholly or partly in any part thereof without the written consent of the laboratory management or customer. This document relates only to the specimen samples processed. The processed sample will be kept in this laboratory for 7 days from the date of heat treatment.



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LAB INFRARED HEATING SYSTEM SPECIFICATIONS:



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

Temperature (degree C)	27°C (±5°C)
Humidity (%)	≤42% RH
Pressure (kN/m2 or kPa)	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:

Name of Equipment	Picture of Equipment	Specifications
Infrared Thermometer		Model: FLUKE 566 Temperature Range: -40°C to 650°C Display Resolution: 0.1°
Thermo Hygrometer		Model No: HTC-2 Temperature accuracy: ±°C (1.8°F) Temperature resolution: 0.1°C (0.2°F) Humidity range: 10%~99% RH Humidity accuracy: ±5% RH Humidity resolution: 1% RH

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SAMPLE PREPARATION AND METHOD/PROCEDURE:

The experiment has been performed on given sample of polymer granules to speed up the heating n rate. For this experimental run, polymer granules has been placed under infrared heating system with uniform single layer for a time period till it reaches temperature of 200°C and the time required for the same has been noted.

ANALYTICAL RESULTS:

Quantity of treated sample: 100 grams

Time required for sand to reach temperature 200°C: 2-3 minutes

BEFORE AND AFTER PICTURES OF TREATED SPCIMEN SAMPLE:

1. KT-820 GF:



BEFORE



AFTER

2. KT-820:



BEFORE



AFTER

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OBSERVATIONS:

The heating behavior of Polymer Granules has been investigated under the infrared irradiation heating system. The heating rate is found to be increasing with respect to increasing heating time. It has been found that as per physical investigation, it has been observed that there is uniform heating with required surface temperature, but some deformation and little colour was observed.

A handwritten signature in black ink that reads "K. Komal".

Miss. Komal Bhoite
Tested By

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