



**KERONE**



**NSIC - CRISIL**



A CRISIL-NSIC RATED COMPANY  
ISO 9001: 2008 COMPANY  
AFFILIATED TO THE UNIVERSITY OF NOTTINGHAM  
MEMBER OF AMICAL

**DATE: 12/03/2017**

**CLIENT:** KOEL COLOURS PVT. LTD.

**JOB:** Batch electrical tray dryer.

**PROCESS:** Colour ink pigments drying (Batch Process)

**PROCESS PARAMETERS:**

- 1. Installed Heat Load : 3.5KW
- 2. Heating Cycle Time : 16 Hours
- 3. Setting Temperature : 6 hours 60°C and after 6 hours 65°C
- 4. No. of Trays : 4 Nos.
- 5. Tray sizes in Inches : (l\*b\*h)

Tray 1	22*17*1.25
Tray 2	22*17*1.25
Tray 3	22*17*1
Tray 4	22*17*1

- 6. Distance between 2 trays : 2.25 inches
- 7. Batch Load in Kilograms :

Tray 1	4.019
Tray 2	3.979
Tray 3	3.549
Tray 4	3.555

**TRIAL SETUP:**

Trays are arranged upside down as tray 1, tray 2, tray 3 and tray 4.



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### TRIAL READINGS AND OBSERVATIONS:

Sr. No.	Time	Chamber Temperature(°C)	Product Temperature(°C)				Observations
			Tray 1	Tray 2	Tray 3	Tray 4	
1	After 6 hours	60	40.6	38.2	41.4	42.8	Partially dry and soft.
After 6 hours, chamber setting temperature changed to 65°C from 60°C, so 1st 6 hours setting temperature is 60°C and after 6 hours till the last readings setting temperature is 65°C.							
2	After 8 hours	67	43.6	42.4	43.6	44	In 1st & 4th tray, colour at corner plates starts changing into pink.
3	After 10 hours	65	43.8	42.4	42.2	45.2	Appearance of Pink colour shade increases in all trays & white colour shade started appearing.
4	After 12 hours	64	44.2	41.4	53.4	43.8	Material dried & pink colour shade increases more with white shade.
5	After 14 hours	67	50.6	53.6	50.2	57.2	Material becomes spongy and brittle.
6	After 16 hours	65	56.8	54.4	62.8	59.6	Material becomes more spongy and more brittle, no drastic change.

### TRIAL PICTURES:



After 1 hour



After 2 hours

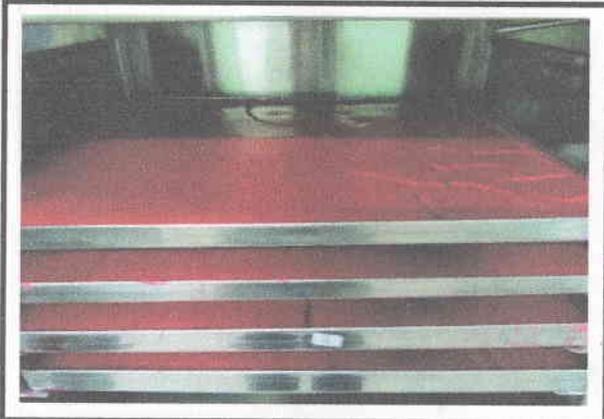
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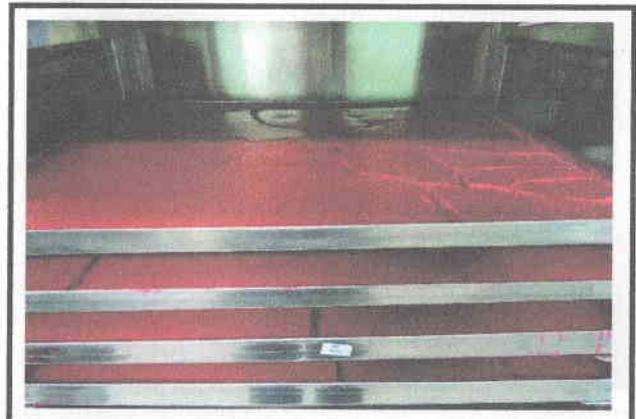
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After 3 hours



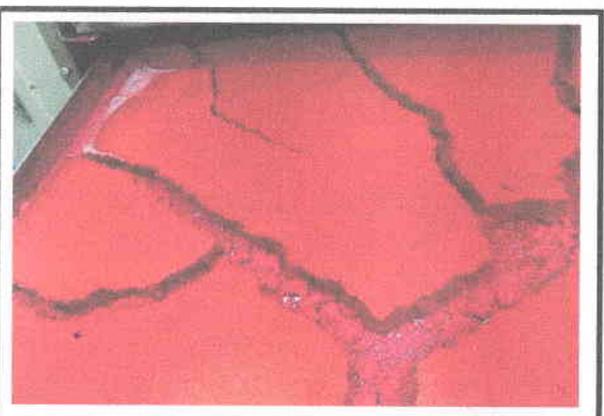
After 4 hours



After 5 hours



After 6 hours



After 8 hours



After 10 hours

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After 12 hours



After 14 hours



After 16 hours

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**MISS. KOMAL BHOITE**  
**TESTING INCHARGE**

**MR. GAURAV MESTRY**  
**CHECKED BY**