



SHAKAMBHARI ISPAT & POWER LTD.
(Formerly known as Ess Dee Aluminium Ltd.)

STANDARD TEST METHOD

Title: Determination of Heat Resistance of Printing Inks			Page No. 1 of 2
STM No.	Version No.	Effective Date	Next review date
SIPL/STM/006	00	06.07.2026	05.07.2028

1.0 PURPOSE

1.1 To define a test method for determination of the heat resistance of printing inks.

2.0 SCOPE

2.1 This STM applies to the Quality Control department.

3.0 REFERENCE(S) & ATTACHMENTS

3.1 References

3.1.1 In-house

3.2 Attachments

3.2.1 Nil

4.0 RESPONSIBILITY

4.1 QC Department Person

4.1.1 To carry out the testing as per the STM.

4.2 QC Department Head:

4.2.1 To prepare and ensure the implementation of the STM.

4.3 QA Head:

4.3.1 To approve the new or revised STM, and to ensure the implementation of the defined system.

5.0 DISTRIBUTION

5.1 Quality Assurance

5.2 Quality Control

6.0 DEFINITION(S) & ABBREVIATION(S)

6.1 **Definitions:** Nil

6.2 **Abbreviations**

6.2.1 HR: Heat Resistance

Prepared By:	Checked By:	Approved By:
<i>[Signature]</i> 05.07.2026	<i>[Signature]</i> 05.07.2026	<i>[Signature]</i> 05.07.2026

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 SHAKAMBHARI GROUP #SteelWithin		SHAKAMBHARI ISPAT & POWER LTD. (Formerly known as Ess Dee Aluminium Ltd.)	
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7.0 PROCEDURE**7.1 For Raw Materials – Inks**

- 7.1.1 Take the suitable substrate for which the ink is intended. In case of inks for foil printing, take washed Blister / Strip Aluminium foil, place it on the bar-coater pad, and clamp.
- 7.1.2 Apply a few drops of ink or toner on the foil-washed surface of the substrate and take the drawdown using the bar coater.
- 7.1.3 Dry the coated sample of aluminium foil in the oven at $75 \pm 10^\circ\text{C}$ for 10-12 seconds.
- 7.1.4 Set the desired temperature of the Heat-Sealing Machine as per the ink specification; the dwell time at the sealing jaw is 1 second.
- 7.1.5 Fold the ink-coated Blister / Strip Aluminium foil with Paper / Bare Aluminium foil in such a way that the ink-coated surface of the foil comes in contact with the paper / bare foil.
- 7.1.6 Carefully place the folded material in between the heat-sealing jaw.
- 7.1.7 Apply pressure of the sealing bars using the switch.
- 7.1.8 Remove the sample from the sealing jaw.
- 7.1.9 Visually observe that the ink should not get transferred onto the paper / bare foil. Minor traces of the sealing jaw knurling shall be considered as result pass.

7.2 For Surface Printed Substrate

- 7.2.1 Fold the surface-printed substrate with Paper / Bare foil in such a way that the printed surface of the foil comes in contact with the paper / bare foil.
- 7.2.2 Carefully place the folded material in between the heat-sealing jaw.
- 7.2.3 Apply pressure of the sealing bars using the switch.
- 7.2.4 Remove the sample from the sealing jaw.
- 7.2.5 Visually observe that the ink should not get transferred onto the paper / bare foil. Minor traces of the sealing jaw knurling shall be considered as result pass.

8.0 REVISION HISTORY

Revision No.	00	Effective Date	06.07.2026	CC No.	NA
Details of revision: New SOP					

Prepared By:	Checked By:	Approved By:
		