1.0 SCOPE

1.1 This procedure describes three methods to determine the level of treatment transfer for treated copper foil.

2.0 APPLICABLE DOCUMENTS


ANSI/IPC-CF-152 “Composite Foil Specification,” current revision

3.0 DEFINITION

3.1 Treatment An electro-mechanical or chemical process applied to one or both sides of copper foil to enhance the adhesion of the foil to the base laminate.

3.2 Treatment Transfer Any visible bond enhancement that has transferred from the surface of the copper foil to the laminate substrate.

4.0 EQUIPMENT

4.1 For the Tape Transfer method a sample of the foil to tested 152 mm x 152 mm.

4.1.1 3M Scotch Brand #600 Tape 19 mm wide.

4.2 For the Strip Transfer method a representative sample of foil, pressed to four plies of 7628 FR-4 prepreg to produce a 0.028 ml laminate, or as agreed upon by user and supplier.

4.2.1 Etching system capable of removing copper foil from base laminate.

4.3 For the Weight and Filter Paper method a sample of treated foil at least 203 mm x 51 mm.

4.3.1 #2 Filter Paper strips at least 76 mm x 25 mm.

4.3.2 A standardized weight of 250 grams with a 3/4 inch surface

4.4 Visual Acceptance Standards

4.5 White Background

5.0 TEST PROCEDURE

5.1 Tape Transfer Method

5.1.1 Each copper sample being tested will have tape 19 mm x 102 mm applied to the treatment side in the machine direction of the foil. The tape should be firmly applied by hand.

5.1.2 Remove the tape by quickly pulling on one end at an acute angle.

5.1.3 The tape should then be reaffixed, adhesive side down on standard white paper.

5.2 Strip Transfer Method.

5.2.1 Image a line on the laminate to a minimum of 1/8 inch wide.

5.2.2 Etch, clean and process using standard industry practices and equipment. If preferred, a cut or sheared sample may be used.

5.2.3 Pull the strip of foil back 1 inch to expose the area directly under the foil.

5.2.4 Visually examine this area by placing the laminate strip against a white background and comparing the amount of transfer with the standard.

5.3 Weight and Filter and Paper Method

5.3.1 Place the copper foil sample on a firm, flat surface with the treatment side up.

5.3.2 Place the #2 filter paper on the copper foil sample with the rougher side of the paper against the foil.
5.3.3 Place the proper surface of the weight on the filter paper.

5.3.4 Grasping one end of the filter paper, pull the paper and the weight across the surface of the foil (going in the transverse direction, across the grain) for a distance of 6\".

6.0 EVALUATION

6.1 The specimen is evaluated for treatment transfer as follows:

1. No transfer
2. Very slight transfer
3. Slight transfer
4. Transfer

6.2 The grading scheme listed above will be based on visual comparison of an acceptance standard agreed upon by user and supplier.